第 1 组

列车票务管理

项目文档

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目录

[1. 概述 1](#_Toc24982793)

[1.1. 部门 1](#_Toc24982794)

[1.2. 岗位 1](#_Toc24982795)

[1.3. 用户群 3](#_Toc24982796)

[1.4. 业务功能列表 3](#_Toc24982797)

[1.4.1. 售票员业务 3](#_Toc24982798)

[1.4.2. 乘客业务 4](#_Toc24982799)

[1.4.3. 管理员业务 4](#_Toc24982800)

[1.5. 编程平台 4](#_Toc24982801)

[1.6. 集中式数据库平台 5](#_Toc24982802)

[1.7. 分布式数据库平台 5](#_Toc24982803)

[1.8. 编程用户 6](#_Toc24982804)

[1.9. 组长及局部用户 7](#_Toc24982805)

[1.10. 全局用户 7](#_Toc24982806)

[1.11. 分布用户 8](#_Toc24982807)

[1.12. 术语定义 8](#_Toc24982808)

[1.13. 命名规则 8](#_Toc24982809)

[2. 业务设计编程 10](#_Toc24982810)

[2.1. 售票员业务 11](#_Toc24982811)

[2.1.1. 程序流程图 11](#_Toc24982812)

[2.1.2. 单据数据描述 18](#_Toc24982813)

[2.1.3. 报表数据描述 20](#_Toc24982814)

[2.1.4. 表 22](#_Toc24982815)

[2.2. 乘客业务 47](#_Toc24982816)

[2.2.1. 程序流程图 47](#_Toc24982817)

[2.2.2. 单据数据描述 52](#_Toc24982818)

[2.2.3. 报表数据描述 54](#_Toc24982819)

[2.2.4. 表 56](#_Toc24982820)

[2.3. 管理员业务 74](#_Toc24982821)

[2.3.1. 程序流程图 74](#_Toc24982822)

[2.3.2. 单据数据描述 78](#_Toc24982823)

[2.3.3. 报表数据描述 79](#_Toc24982824)

[2.3.4. 表 79](#_Toc24982825)

[3. 业务数据分析 92](#_Toc24982826)

[3.1. 售票员业务 92](#_Toc24982827)

[3.1.1. 实体集 92](#_Toc24982828)

[3.1.2. 实体联系图 92](#_Toc24982829)

[3.1.3. 联系 93](#_Toc24982830)

[3.2. 乘客业务 93](#_Toc24982831)

[3.2.1. 实体集 93](#_Toc24982832)

[3.2.2. 实体联系图 94](#_Toc24982833)

[3.2.3. 联系 94](#_Toc24982834)

[3.3. 管理员业务 95](#_Toc24982835)

[3.3.1. 实体集 95](#_Toc24982836)

[3.3.2. 实体联系图 95](#_Toc24982837)

[3.3.3. 联系 95](#_Toc24982838)

[4. 业务数据设计 97](#_Toc24982839)

[4.1. 售票员业务 97](#_Toc24982840)

[4.1.1. 区域 97](#_Toc24982841)

[4.1.2. 铁路分公司 97](#_Toc24982842)

[4.1.3. 火车站 98](#_Toc24982843)

[4.1.4. 部门 98](#_Toc24982844)

[4.1.5. 岗位 98](#_Toc24982845)

[4.1.6. 员工 98](#_Toc24982846)

[4.1.7. 列车 99](#_Toc24982847)

[4.1.8. 车厢 99](#_Toc24982848)

[4.1.9. 乘客 99](#_Toc24982849)

[4.1.10. 从事 99](#_Toc24982850)

[4.1.11. 包含 99](#_Toc24982851)

[4.1.12. 经过 100](#_Toc24982852)

[4.1.13. 车票业务 100](#_Toc24982853)

[4.1.14. 字典 100](#_Toc24982854)

[4.2. 乘客业务 101](#_Toc24982855)

[4.2.1. 区域 101](#_Toc24982856)

[4.2.2. 分公司 101](#_Toc24982857)

[4.2.3. 列车 102](#_Toc24982858)

[4.2.4. 火车站 102](#_Toc24982859)

[4.2.5. 部门 102](#_Toc24982860)

[4.2.6. 车厢 102](#_Toc24982861)

[4.2.7. 网络售票终端 102](#_Toc24982862)

[4.2.8. 乘客 103](#_Toc24982863)

[4.2.9. 包含 103](#_Toc24982864)

[4.2.10. 自助操作 103](#_Toc24982865)

[4.2.11. 经过 104](#_Toc24982866)

[4.2.12. 票务服务 104](#_Toc24982867)

[4.2.13. 字典 104](#_Toc24982868)

[4.3. 管理员业务 105](#_Toc24982869)

[4.3.1. 区域 105](#_Toc24982870)

[4.3.2. 分公司 105](#_Toc24982871)

[4.3.3. 部门 106](#_Toc24982872)

[4.3.4. 火车站 106](#_Toc24982873)

[4.3.5. 列车 106](#_Toc24982874)

[4.3.6. 车厢 106](#_Toc24982875)

[4.3.7. 员工 106](#_Toc24982876)

[4.3.8. 岗位 107](#_Toc24982877)

[4.3.9. 拥有 107](#_Toc24982878)

[4.3.10. 从事 107](#_Toc24982879)

[4.3.11. 经过 107](#_Toc24982880)

[4.3.12. 上级 108](#_Toc24982881)

[4.3.13. 字典 108](#_Toc24982882)

[5. 局部数据实现1 109](#_Toc24982883)

[5.1. 售票员业务 109](#_Toc24982884)

[5.1.1. 序列 109](#_Toc24982885)

[5.1.2. 表 110](#_Toc24982886)

[5.1.3. 同义词 120](#_Toc24982887)

[5.1.4. 视图 120](#_Toc24982888)

[5.1.5. 函数 121](#_Toc24982889)

[5.1.6. 过程 122](#_Toc24982890)

[5.1.7. 触发器 122](#_Toc24982891)

[5.2. 乘客业务 123](#_Toc24982892)

[5.2.1. 序列 123](#_Toc24982893)

[5.2.2. 表 123](#_Toc24982894)

[5.2.3. 同义词 124](#_Toc24982895)

[5.2.4. 视图 124](#_Toc24982896)

[5.2.5. 函数 125](#_Toc24982897)

[5.2.6. 过程 126](#_Toc24982898)

[5.2.7. 触发器 126](#_Toc24982899)

[5.3. 管理员业务 127](#_Toc24982900)

[5.3.1. 序列 127](#_Toc24982901)

[5.3.2. 表 128](#_Toc24982902)

[5.3.3. 同义词 128](#_Toc24982903)

[5.3.4. 视图 129](#_Toc24982904)

[5.3.5. 函数 130](#_Toc24982905)

[5.3.6. 过程 130](#_Toc24982906)

[5.3.7. 触发器 131](#_Toc24982907)

[6. 局部数据实现2 132](#_Toc24982908)

[6.1. 售票员业务 132](#_Toc24982909)

[6.1.1. 序列 132](#_Toc24982910)

[6.1.2. 表 133](#_Toc24982911)

[6.1.3. 同义词 144](#_Toc24982912)

[6.1.4. 视图 144](#_Toc24982913)

[6.1.5. 函数 148](#_Toc24982914)

[6.1.6. 过程 149](#_Toc24982915)

[6.1.7. 触发器 149](#_Toc24982916)

[6.2. 乘客业务 150](#_Toc24982917)

[6.2.1. 序列 150](#_Toc24982918)

[6.2.2. 表 151](#_Toc24982919)

[6.2.3. 同义词 152](#_Toc24982920)

[6.2.4. 视图 152](#_Toc24982921)

[6.2.5. 函数 153](#_Toc24982922)

[6.2.6. 过程 154](#_Toc24982923)

[6.2.7. 触发器 154](#_Toc24982924)

[6.3. 管理员业务 155](#_Toc24982925)

[6.3.1. 序列 155](#_Toc24982926)

[6.3.2. 表 156](#_Toc24982927)

[6.3.3. 同义词 161](#_Toc24982928)

[6.3.4. 视图 161](#_Toc24982929)

[6.3.5. 函数 162](#_Toc24982930)

[6.3.6. 过程 163](#_Toc24982931)

[6.3.7. 触发器 163](#_Toc24982932)

[7. 局部数据实现3 165](#_Toc24982933)

[7.1. 售票员业务 165](#_Toc24982934)

[7.1.1. 序列 165](#_Toc24982935)

[7.1.2. 表 166](#_Toc24982936)

[7.1.3. 同义词 176](#_Toc24982937)

[7.1.4. 视图 176](#_Toc24982938)

[7.1.5. 普通函数 177](#_Toc24982939)

[7.1.6. 触发器函数 178](#_Toc24982940)

[7.1.7. 触发器 178](#_Toc24982941)

[7.2. 乘客业务 179](#_Toc24982942)

[7.2.1. 序列 179](#_Toc24982943)

[7.2.2. 表 179](#_Toc24982944)

[7.2.3. 同义词 180](#_Toc24982945)

[7.2.4. 视图 180](#_Toc24982946)

[7.2.5. 普通函数 181](#_Toc24982947)

[7.2.6. 触发器函数 182](#_Toc24982948)

[7.2.7. 触发器 182](#_Toc24982949)

[7.3. 管理员业务 183](#_Toc24982950)

[7.3.1. 序列 183](#_Toc24982951)

[7.3.2. 表 184](#_Toc24982952)

[7.3.3. 同义词 184](#_Toc24982953)

[7.3.4. 视图 185](#_Toc24982954)

[7.3.5. 普通函数 186](#_Toc24982955)

[7.3.6. 触发器函数 186](#_Toc24982956)

[7.3.7. 触发器 187](#_Toc24982957)

[8. 全局数据分析 188](#_Toc24982958)

[8.1. 实体集 188](#_Toc24982959)

[8.2. 实体联系图 189](#_Toc24982960)

[8.3. 联系 189](#_Toc24982961)

[9. 全局数据设计 191](#_Toc24982962)

[9.1. 区域 191](#_Toc24982963)

[9.2. 分公司 191](#_Toc24982964)

[9.3. 火车站 192](#_Toc24982965)

[9.4. 部门 192](#_Toc24982966)

[9.5. 岗位 192](#_Toc24982967)

[9.6. 员工 193](#_Toc24982968)

[9.7. 列车 193](#_Toc24982969)

[9.8. 车厢 193](#_Toc24982970)

[9.9. 乘客 193](#_Toc24982971)

[9.10. 网络售票终端 194](#_Toc24982972)

[9.11. 包含 194](#_Toc24982973)

[9.12. 从事 194](#_Toc24982974)

[9.13. 经过 194](#_Toc24982975)

[9.14. 车票业务 195](#_Toc24982976)

[9.15. 自助操作 195](#_Toc24982977)

[9.16. 上级 196](#_Toc24982978)

[9.17. 字典 196](#_Toc24982979)

[10. 全局数据实现 197](#_Toc24982980)

[10.1. 站点1 197](#_Toc24982981)

[10.1.1. 序列 197](#_Toc24982982)

[10.1.2. 表 197](#_Toc24982983)

[10.1.3. 视图 198](#_Toc24982984)

[10.1.4. 同义词 198](#_Toc24982985)

[10.1.5. 函数 198](#_Toc24982986)

[10.1.6. 过程 199](#_Toc24982987)

[10.1.7. 触发器 199](#_Toc24982988)

[10.1.8. 赋对象权限 200](#_Toc24982989)

[10.2. 站点2 200](#_Toc24982990)

[10.2.1. 序列 200](#_Toc24982991)

[10.2.2. 表 200](#_Toc24982992)

[10.2.3. 视图 201](#_Toc24982993)

[10.2.4. 同义词 201](#_Toc24982994)

[10.2.5. 函数 201](#_Toc24982995)

[10.2.6. 过程 202](#_Toc24982996)

[10.2.7. 触发器 202](#_Toc24982997)

[10.2.8. 赋对象权限 203](#_Toc24982998)

[10.3. 站点3 203](#_Toc24982999)

[10.3.1. 序列 203](#_Toc24983000)

[10.3.2. 表 203](#_Toc24983001)

[10.3.3. 视图 204](#_Toc24983002)

[10.3.4. 同义词 204](#_Toc24983003)

[10.3.5. 普通函数 205](#_Toc24983004)

[10.3.6. 触发器函数 205](#_Toc24983005)

[10.3.7. 触发器 206](#_Toc24983006)

[10.3.8. 赋对象权限 206](#_Toc24983007)

[11. 全局外模式的实现 207](#_Toc24983008)

[11.1. 业务大类1 207](#_Toc24983009)

[11.1.1. 站点1（Oracle） 207](#_Toc24983010)

[11.1.2. 站点2（SQL Server） 209](#_Toc24983011)

[11.1.3. 站点3（PostgreSQL） 211](#_Toc24983012)

[11.2. 业务大类2 213](#_Toc24983013)

[11.2.1. 站点1（Oracle） 213](#_Toc24983014)

[11.2.2. 站点2（SQL Server） 216](#_Toc24983015)

[11.2.3. 站点3（PostgreSQL） 218](#_Toc24983016)

[11.3. 业务大类3 220](#_Toc24983017)

[11.3.1. 站点1（Oracle） 220](#_Toc24983018)

[11.3.2. 站点2（SQL Server） 222](#_Toc24983019)

[11.3.3. 站点3（PostgreSQL） 224](#_Toc24983020)

[12. 分布设计 227](#_Toc24983021)

[12.1. 分片设计 227](#_Toc24983022)

[12.1.1. 水平分片 227](#_Toc24983023)

[12.1.2. 垂直分片 228](#_Toc24983024)

[12.1.3. 全部片段信息 229](#_Toc24983025)

[12.2. 分配设计 229](#_Toc24983026)

[12.2.1. 访问概率表 229](#_Toc24983027)

[12.2.2. 分布信息 229](#_Toc24983028)

[13. 分布数据实现 230](#_Toc24983029)

[13.1. 站点1 230](#_Toc24983030)

[13.1.1. 数据库链接 230](#_Toc24983031)

[13.1.2. 序列 230](#_Toc24983032)

[13.1.3. 表 230](#_Toc24983033)

[13.1.4. 视图 231](#_Toc24983034)

[13.1.5. 同义词 232](#_Toc24983035)

[13.1.6. 函数 233](#_Toc24983036)

[13.1.7. 过程 233](#_Toc24983037)

[13.1.8. 触发器 234](#_Toc24983038)

[13.1.9. 赋对象权限 234](#_Toc24983039)

[13.2. 站点2 234](#_Toc24983040)

[13.2.1. 数据库链接 234](#_Toc24983041)

[13.2.2. 序列 234](#_Toc24983042)

[13.2.3. 表 235](#_Toc24983043)

[13.2.4. 视图 235](#_Toc24983044)

[13.2.5. 同义词 236](#_Toc24983045)

[13.2.6. 函数 237](#_Toc24983046)

[13.2.7. 过程 238](#_Toc24983047)

[13.2.8. 触发器 238](#_Toc24983048)

[13.2.9. 赋对象权限 239](#_Toc24983049)

[13.3. 站点3 239](#_Toc24983050)

[13.3.1. 数据库链接 239](#_Toc24983051)

[13.3.2. 序列 239](#_Toc24983052)

[13.3.3. 表 239](#_Toc24983053)

[13.3.4. 视图 240](#_Toc24983054)

[13.3.5. 同义词 241](#_Toc24983055)

[13.3.6. 函数 242](#_Toc24983056)

[13.3.7. 过程 242](#_Toc24983057)

[13.3.8. 触发器 243](#_Toc24983058)

[13.3.9. 赋对象权限 243](#_Toc24983059)

[14. 分布外模式的实现 243](#_Toc24983060)

[14.1. 业务大类1 243](#_Toc24983061)

[14.1.1. 站点1 243](#_Toc24983062)

[14.1.2. 站点2 246](#_Toc24983063)

[14.1.3. 站点3 248](#_Toc24983064)

[14.2. 业务大类2 250](#_Toc24983065)

[14.2.1. 站点1 250](#_Toc24983066)

[14.2.2. 站点2 252](#_Toc24983067)

[14.2.3. 站点3 254](#_Toc24983068)

[14.3. 业务大类3 257](#_Toc24983069)

[14.3.1. 站点1 257](#_Toc24983070)

[14.3.2. 站点2 259](#_Toc24983071)

[14.3.3. 站点3 261](#_Toc24983072)

[15. 系统使用手册 263](#_Toc24983073)

[15.1. 系统安装配置 263](#_Toc24983074)

[15.1.1. 数据库服务器 263](#_Toc24983075)

[15.1.2. 应用服务器 263](#_Toc24983076)

[15.1.3. 客户端 265](#_Toc24983077)

[15.2. 系统使用说明 266](#_Toc24983078)

[15.2.1. 登录 266](#_Toc24983079)

[15.2.2. 售票员业务 270](#_Toc24983080)

[15.2.3. 乘客业务 274](#_Toc24983081)

[15.2.4. 管理员业务 275](#_Toc24983082)

# 概述

近年来,我国国民经济水平发展很快,人民百姓的生活水平也有了大幅度的提升,加上国家对于节假日旅游的各种刺激消费政策的出台,人们的出行需求日益增大,而火车则当仍不让的成为人们出行的首选交通工具,而与此出行量大量增长的现象对应的是火车售票管理工作的传统模式的业务处理过程复杂,数据量庞大但信息化处理手段单一等多种问题,这不可避免的造成了出行与出行管理之间的矛盾的存在。在这样的环境下,以先进的信息技术进行火车售票的管理成为了时代发展的必然。由此,开发一套火车票售票系统,对于缓解订票高峰时期的客运压力,为用户提供方便快捷的订票服务。实现各类购票客户的人员能够异地完成车票的数据查询和车票订票,为铁道运输提供一定的解决问题的工具筹码,此外,还能够起到一定的辅助打击非法贩卖火车票的行为,预防、减少和打击铁路沿线上的各种犯罪行为、保障乘客的人身安全、加强乘车管理等方面具有重要的意义价值。

## 部门

按广度优先的策略依次列出使用本系统的用户所属岗位所属的部门。

表1.1‑1部门列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 部门 | 上级部门 | 职责 |
| 1 | 中国国家铁路集团有限公司 |  | 承担国家规定的铁路运输经营、建设和安全等职责，负责铁路运输统一调度指挥，统筹安排路网性运力资源配置，承担国家规定的公益性运输任务，负责铁路行业运输收入清算和收入进款管理。 |
| 2 | 铁路局 | 中国国家铁路集团有限公司 | 负责管辖辖区的各车务段，满足客货运输市场需求、服务区域经济发展为己任。 |
| 3 | 中国铁道科学研究院 | 中国国家铁路集团有限公司 | 集科技创新、技术服务、成果转化、咨询监理、检测认证、人才培养等业务为一体的综合性研究机构。 |
| 4 | 电子计算技术研究所 | 中国铁道科学研究院 | 从事电子计算技术在铁路上应用的专业研究所。主要从事信息技术、智能系统技术、机电一体化技术和信息工程等的研究、设计、开发、实施、维护、监理与咨询等。 |
| 5 | 技术部 | 电子计算技术研究所 | 负责火车票网站的开发、维护等工作。 |
| 6 | 铁路车务段 | 铁路局 | 负责列车运营控制指挥，车务段管理车站货运等业务，管辖辖区内的各大小车站，货运和客运的计划和收入，列车的运行监控。保证客运、货运的正常运营，指挥列车、机车的运行，保证运营收入的正常回收。 |
| 7 | 火车站 | 车务段 | 供铁路部门办理客、货运输业务和列车技术作业。 |
| 8 | 客运处 | 火车站 | 负责站点道路旅客运输行业管理、指导和监督工作。 |

## 岗位

按表1.1-1中部门顺序依次列出所有部门的所有岗位。

表1.2‑1岗位列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 岗位 | 所属部门 | 职责 | 相关的业务 |
| 1 | 总公司董事长 | 中国国家铁路集团有限公司 | 全面负责公司重大经营方针、战略目标的制定与决策。 | 查询日售票量、查询月售票量、查询年售票量、查询日客流量、查询月客流量、查询年客流量 |
| 2 | 总公司总经理 | 中国国家铁路集团有限公司 | 负责公司的日常管理和开展业务。 | 查询日售票量、查询月售票量、查询年售票量、查询日客流量、查询月客流量、查询年客流量 |
| 3 | 分公司董事长 | 铁路局 | 在总公司的领导下，全面负责分公司重大经营方针、战略目标的制定与决策 | 查询日售票量、查询月售票量、查询年售票量、查询日客流量、查询月客流量、查询年客流量 |
| 4 | 分公司总经理 | 铁路局 | 负责分公司的日常管理和开展业务。 | 查询日售票量、查询月售票量、查询年售票量、查询日客流量、查询月客流量、查询年客流量 |
| 5 | 院长 | 中国铁道科学研究院 | 负责组织学术委员会会议、组织重大课题联合攻关、研究院内外的学术交流活动、主持院务会，负责研究院日常管理工作。 | 查询日浏览量、查询月浏览量、查询年浏览量 |
| 6 | 副院长 | 中国铁道科学研究院 | 根据分工协助院长开展研究院日常管理工作、研究开发管理工作。 | 查询日浏览量、查询月浏览量、查询年浏览量 |
| 7 | 所长 | 电子计算技术研究所 | 1. 负责制定研究所年度科研计划及具体实施方案工作。 2. 负责研究所新项目、新产品技术研究开发全面工作。 3. 负责研究所产品改进及完善管理工作。 | 查询日浏览量、查询月浏览量、查询年浏览量 |
| 8 | 副所长 | 电子计算技术研究所 | 根据分工协助所长开展研究所日常管理工作、研究开发工。 | 查询日浏览量、查询月浏览量、查询年浏览量 |
| 9 | 段长 | 车务段 | 管理管辖辖区内的各大小车站，货运和客运的计划、保证客运货运的正常运营。 | 查站点客流量、查站点售票量 |
| 10 | 副段长 | 车务段 | 协助段长开展车务段日常管理工作。 | 查站点客流量、查站点售票量 |
| 11 | 技术部主任 | 技术部 | 负责协调本部门日常业务和行政管理工作, 制订有关技术的愿景和战略，把握总体技术方向，监督技术研究与发展的活动。 | 查询日浏览量、查询月浏览量、查询年浏览量 |
| 12 | 管理员 | 技术部 | 负责车次、用户、信息及管理。 | 增加车次、修改车次、删除车次、查询车次、添加用户、删除用户、修改用户信息、查询用户、增加车站，删除车站、修改车站、查询车站、增加车型、修改车型、删除车型、查询车型 |
| 13 | 站长 | 火车站 | 负责车站全面工作。 | 查本站客流量、查本站售票量 |
| 14 | 副站长 | 火车站 | 在车站站长的领导下，负责客运安全生产工作。 | 查本站客流量、查本站售票量 |
| 15 | 客运主任 | 客运处 | 负责制定客运处工作计划和规章制度,抓好组织管理和职工培训工作。 | 查询售票员、查询计划员、查本站客流量 |
| 16 | 客运计划员 | 客运处 | 根据客流变化规律,按照旅客运输组织原则的票额分配,正确编制日班计划并组织实现,，均衡组织旅客运输。 | 查询车次 |
| 17 | 售票员 | 客运处 | 负责售票组织工作，按照作业程序迅速、准确地发售车票、退票和变更手续。 | 查询车次、销售车票、查询订单、退订车票、改签车票、查询售票量 |
| 18 | 火车乘客 |  | 通过火车购票网站自助购票、退票、改签。 | 查询车次、购买车票、查询订单、退订车票、改签车票、修改个人信息 |

## 用户群

将使用本目标系统的用户，根据访问权限特征分成几个群体，一般来讲，不同用户群不可调整。

表1.3‑1用户群列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 用户群 | 岗位列表 | 特征 |
| 1 | 乘客 | 火车乘客 | 通过火车购票网站自助购票、对尚未出票或者未发车的订单进行改签、退票操作 |
| 2 | 员工 | 总公司董事长、总公司总经理、分公司董事长、分公司总经理、院长、副院长、所长、副所长、段长、副段长、技术部主任、管理员、站长、副站长、客运主任、客运计划员、售票员 | 按照作业程序迅速、准确地发售车票、退票、变更手续和维护车次等信息 |

## 业务功能列表

### 售票员业务

表1.4‑1功能列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 名称 | 部门 | 岗位 | 用户群 | 描述 | 实现否 |
| 1 | 销售车票 | 客运处 | 售票员 | 员工 | 根据乘客所要求的车次、出发地、目的地、出发日期给乘客进行车票的购买业务。 | 是 |
| 2 | 退订车票 | 客运处 | 售票员 | 员工 | 根据乘客提供的身份信息以及车次信息查询用户的订单并做出退订车票业务。 | 是 |
| 3 | 改签车票 | 客运处 | 售票员 | 员工 | 根据乘客提供的身份信息以及车次信息查询用户的订单并做出改签车票业务票业务。 | 是 |
| 4 | 查询车次 | 客运处 | 售票员 | 员工 | 根据车次名称、出发地、目的地以及发车时间给乘客进行车次的查询业务。 |  |
| 5 | 查询订单 | 客运处 | 售票员 | 员工 | 根据乘客所提供的个人信息查询该乘客名下所有车票订单 |  |
| 6 | 查询售票量 | 客运处 | 售票员 | 员工 | 查询当日售票数量。 |  |

### 乘客业务

表1.4‑2功能列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 名称 | 部门 | 岗位 | 用户群 | 描述 | 实现否 |
| 1 | 购买车票 |  | 火车乘客 | 乘客 | 乘客购买需要车次的车票，生成订单。选择车次、出发时间及选择乘坐人购买指定车票。 | 是 |
| 2 | 退订车票 |  | 火车乘客 | 乘客 | 退订已生成的订单。 | 是 |
| 3 | 改签车票 |  | 火车乘客 | 乘客 | 修改车票订单中乘车站点、出发日期或车次等信息。 | 是 |
| 4 | 查询车次 |  | 火车乘客 | 乘客 | 查询相关车次信息。输入出发地、目的地地址和出发时间，查询出相应车次、余票。 |  |
| 5 | 查询订单 |  | 火车乘客 | 乘客 | 查询历史订单信息。 |  |
| 6 | 修改个人信息 |  | 火车乘客 | 乘客 | 修改绑定手机号、常用联系人、收件地址等信息。 |  |

### 管理员业务

表1.4‑3功能列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 名称 | 部门 | 岗位 | 用户群 | 描述 | 实现否 |
| 1 | 增加车次 | 技术部 | 管理员 | 员工 | 增加车次信息，包括车次号、始发站和终点站名称、经过站点及到站时间等。 | 是 |
| 2 | 修改车次 | 技术部 | 管理员 | 员工 | 修改车次信息，包括车次号、始发站和终点站名称、经过站点及到站时间等。 | 是 |
| 3 | 增加车站 | 技术部 | 管理员 | 员工 | 增加车站信息，如车站名称。 | 是 |
| 4 | 删除车次 | 技术部 | 管理员 | 员工 | 删除车次信息。 |  |
| 5 | 查询车次 | 技术部 | 管理员 | 员工 | 查询车次信息，包括车次号、始发站和终点站名称、经过站点及到站时间等。 |  |
| 6 | 增加车型 | 技术部 | 管理员 | 员工 | 增加车型信息。 |  |

## 编程平台

表1.5‑1编程平台信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 类别 | 信息名称 | | 信息内容 |
| 1 | 开发 | 编程1 | 操作系统 | Windows 8 |
| 2 | 开发工具 | IDEA |
| 3 | 使用语言 | Java，HTML,JavaScript，JSP |
| 4 | 编程2 | 操作系统 | Windows 7 |
| 5 | 开发工具 | IDEA |
| 6 | 使用语言 | Java，HTML,JavaScript，JSP |
| 7 | 编程3 | 操作系统 | Windows 10 |
| 8 | 开发工具 | IDEA |
| 9 | 使用语言 | Java，HTML,JavaScript，JSP |
| 10 | 应用服务器 | 操作系统 | | Windows server 2016 Standard |
| 11 | 应用服务软件 | | Tomcat8 |
| 12 | 程序存储文件夹 | | C:\Train |
| 13 | IP地址 | | 192.168.170.101 |
| 14 | 远程桌面访问地址 | | 183.175.14.199:6001 |
| 15 | 应用本地访问地址 | | http://192.168.170.101:80 |
| 16 | 应用远程访问地址 | | http://183.175.14.199:7101 |

## 集中式数据库平台

表1.6‑1集中式数据库基本信息

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 信息名称 | | 信息内容 |
| 1 | 站点1 | 操作系统 | windows server 2008 R2 Datacenter sp1 |
| 2 | 产品名称 | Oracle 12C 企业版- 12.2.0.1.0 |
| 3 | 数据库名称 | master11 |
| 4 | 数据库字符集 | AL32UTF8 |
| 5 | 本地访问地址 | 192.168.182.101:1521 |
| 6 | 远程访问地址 | 202.207.12.213:6100 |
| 7 | 站点2 | 操作系统 | windows server 2008 R2 Datacenter sp1 |
| 8 | 产品名称 | SQL Server 2014 - 12.0.2000.8 |
| 9 | 数据库名称 | master12 |
| 10 | 字符集 | GBK |
| 11 | 本地访问地址 | 192.168.182.102:1433 |
| 12 | 远程访问地址 | 202.207.12.213:6200 |
| 13 | 站点3 | 操作系统 | windows server 2008 R2 Datacenter sp1 |
| 14 | 产品名称 | PostgreSQL 社区版 - 11.5 |
| 15 | 数据库名称 | master13 |
| 16 | 字符集 | UTF-8 |
| 17 | 本地访问地址 | 192.168.182.103:5432 |
| 18 | 远程访问地址 | 202.207.12.213:6300 |

## 分布式数据库平台

表1.7‑1分布式数据库基本信息

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 信息名称 | | 信息内容 |
| 1 | 站点1 | 操作系统 | windows server 2008 R2 Datacenter sp1 |
| 2 | 产品名称 | Oracle 12C 企业版- 12.2.0.1.0 |
| 3 | 数据库名称 | master11 |
| 4 | 数据库字符集 | AL32UTF8 |
| 5 | 本地访问地址 | 192.168.182.101:1521 |
| 6 | 远程访问地址 | 202.207.12.213:6101 |
| 7 | 站点2 | 操作系统 | windows server 2008 R2 Datacenter sp1 |
| 8 | 产品名称 | Oracle 12C 企业版- 12.2.0.1.0 |
| 9 | 数据库名称 | master12 |
| 10 | 数据库字符集 | AL32UTF8 |
| 11 | 本地访问地址 | 192.168.182.102:1521 |
| 12 | 远程访问地址 | 202.207.12.213:6202 |
| 13 | 站点3 | 操作系统 | windows server 2008 R2 Datacenter sp1 |
| 14 | 产品名称 | Oracle 12C 企业版- 12.2.0.1.0 |
| 15 | 数据库名称 | master13 |
| 16 | 数据库字符集 | AL32UTF8 |
| 17 | 本地访问地址 | 192.168.182.103:1521 |
| 18 | 远程访问地址 | 202.207.12.213:6303 |

## 编程用户

表1.8‑1 编程用户信息

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 分工 | 明细 | | 用户名 | 权限 |
| 1 | 业务大类1 | 开发 | 站点1 | y\_1\_4\_1\_1 | 创建表 |
| 2 | 站点2 | y\_1\_4\_1\_2 | 创建表 |
| 3 | 站点3 | y\_1\_4\_1\_3 | 创建表 |
| 4 | 测试 | 站点1 | y\_1\_1\_1\_1 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 5 | 站点2 | y\_1\_1\_1\_2 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 6 | 站点3 | y\_1\_1\_1\_3 | 创建序列、表、视图、函数、触发器函数、触发器 |
| 7 | 全局运行 | 站点1 | y\_1\_7\_1\_1 | 创建同义词、视图、函数、过程、触发器 |
| 8 | 站点2 | y\_1\_7\_1\_2 | 创建同义词、视图、函数、过程、触发器 |
| 9 | 站点3 | y\_1\_7\_1\_3 | 创建视图、函数、触发器函数、触发器 |
| 10 | 分布运行 | 站点1 | y\_1\_3\_1\_1 | 创建同义词、视图、函数、过程、触发器 |
| 11 | 站点2 | y\_1\_3\_1\_2 | 创建同义词、视图、函数、过程、触发器 |
| 12 | 站点3 | y\_1\_3\_1\_3 | 创建视图、函数、触发器函数、触发器 |
| 13 | 业务大类2 | 开发 | 站点1 | y\_1\_4\_2\_1 | 创建表 |
| 14 | 站点2 | y\_1\_4\_2\_2 | 创建表 |
| 15 | 站点3 | y\_1\_4\_2\_3 | 创建表 |
| 16 | 测试 | 站点1 | y\_1\_1\_2\_1 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 17 | 站点2 | y\_1\_1\_2\_2 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 18 | 站点3 | y\_1\_1\_2\_3 | 创建序列、表、视图、函数、触发器函数、触发器 |
| 19 | 全局运行 | 站点1 | y\_1\_7\_2\_1 | 创建同义词、视图、函数、过程、触发器 |
| 20 | 站点2 | y\_1\_7\_2\_2 | 创建同义词、视图、函数、过程、触发器 |
| 21 | 站点3 | y\_1\_7\_2\_3 | 创建视图、函数、触发器函数、触发器 |
| 22 | 分布运行 | 站点1 | y\_1\_3\_2\_1 | 创建同义词、视图、函数、过程、触发器 |
| 23 | 站点2 | y\_1\_3\_2\_2 | 创建同义词、视图、函数、过程、触发器 |
| 24 | 站点3 | y\_1\_3\_2\_3 | 创建视图、函数、触发器函数、触发器 |
| 25 | 业务大类3 | 开发 | 站点1 | y\_1\_4\_3\_1 | 创建表 |
| 26 | 站点2 | y\_1\_4\_3\_2 | 创建表 |
| 27 | 站点3 | y\_1\_4\_3\_3 | 创建表 |
| 28 | 测试 | 站点1 | y\_1\_1\_3\_1 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 29 | 站点2 | y\_1\_1\_3\_2 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 30 | 站点3 | y\_1\_1\_3\_3 | 创建序列、表、视图、函数、触发器函数、触发器 |
| 31 | 全局运行 | 站点1 | y\_1\_7\_3\_1 | 创建同义词、视图、函数、过程、触发器 |
| 32 | 站点2 | y\_1\_7\_3\_2 | 创建同义词、视图、函数、过程、触发器 |
| 33 | 站点3 | y\_1\_7\_3\_3 | 创建视图、函数、触发器函数、触发器 |
| 34 | 分布运行 | 站点1 | y\_1\_3\_3\_1 | 创建同义词、视图、函数、过程、触发器 |
| 35 | 站点2 | y\_1\_3\_3\_2 | 创建同义词、视图、函数、过程、触发器 |
| 36 | 站点3 | y\_1\_3\_3\_3 | 创建视图、函数、触发器函数、触发器 |

## 组长及局部用户

表1.9‑1 组长及局部用户信息

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 分工 | | | 明细 | | 用户名 | 权限 |
| 1 | | 组长 | | 查对象 | 站点1 | y\_1\_5\_0\_1 | 查看数据库中数据字典信息 |
| 2 | | 站点2 | y\_1\_5\_0\_2 | 查看数据库中数据字典信息 |
| 3 | | 站点3 | y\_1\_5\_0\_3 | 查看数据库中数据字典信息 |
| 4 | | 局 部 数 据 实 现 | 站点1 | 大类1 | | y\_1\_1\_1\_1 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 5 | | 大类2 | | y\_1\_1\_2\_1 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 6 | | 大类3 | | y\_1\_1\_3\_1 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 7 | | 站点2 | 大类1 | | y\_1\_1\_1\_2 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 8 | | 大类2 | | y\_1\_1\_2\_2 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 9 | | 大类3 | | y\_1\_1\_3\_2 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 10 | | 站点3 | 大类1 | | y\_1\_1\_1\_3 | 创建序列、表、视图、函数、触发器函数、触发器 |
| 11 | | 大类2 | | y\_1\_1\_2\_3 | 创建序列、表、视图、函数、触发器函数、触发器 |
| 12 | | 大类3 | | y\_1\_1\_3\_3 | 创建序列、表、视图、函数、触发器函数、触发器 |

## 全局用户

表1.10‑1 全局用户信息

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 分工 | | | 明细 | | 用户名 | 权限 |
| 1 | | 全 局 数 据 实 现 | 站点1 | 总体 | | y\_1\_6\_0\_1 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 2 | | 外模式 | 大类1 | y\_1\_7\_1\_1 | 创建同义词、视图、函数、过程、触发器 |
| 3 | | 大类2 | y\_1\_7\_2\_1 | 创建同义词、视图、函数、过程、触发器 |
| 4 | | 大类3 | y\_1\_7\_3\_1 | 创建同义词、视图、函数、过程、触发器 |
| 5 | | 站点2 | 总体 | | y\_1\_6\_0\_2 | 创建序列、表、视图、同义词、函数、过程、触发器 |
| 6 | | 外模式 | 大类1 | y\_1\_7\_1\_2 | 创建同义词、视图、函数、过程、触发器 |
| 7 | | 大类2 | y\_1\_7\_2\_2 | 创建同义词、视图、函数、过程、触发器 |
| 8 | | 大类3 | y\_1\_7\_3\_2 | 创建同义词、视图、函数、过程、触发器 |
| 9 | | 站点3 | 总体 | | y\_1\_6\_0\_3 | 创建序列、表、视图、函数、触发器函数、触发器 |
| 10 | | 外模式 | 大类1 | y\_1\_7\_1\_3 | 创建视图、函数、触发器函数、触发器 |
| 11 | | 大类2 | y\_1\_7\_2\_3 | 创建视图、函数、触发器函数、触发器 |
| 12 | | 大类3 | y\_1\_7\_3\_3 | 创建视图、函数、触发器函数、触发器 |

## 分布用户

表1.11‑1 分布用户信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 分工 | | 明细 | | 用户名 | 权限 |
| 1 | 全 局 数 据 实 现 | 站点1 | 总体 | | y\_1\_2\_0\_1 | 创建序列、表、视图、同义词、函数、过程、触发器、数据库链接 |
| 2 | 外模式 | 大类1 | y\_1\_3\_1\_1 | 创建同义词、视图、函数、过程、触发器 |
| 3 | 大类2 | y\_1\_3\_2\_1 | 创建同义词、视图、函数、过程、触发器 |
| 4 | 大类3 | y\_1\_3\_3\_1 | 创建同义词、视图、函数、过程、触发器 |
| 5 | 站点2 | 总体 | | y\_1\_2\_0\_2 | 创建序列、表、视图、同义词、函数、过程、触发器、数据库链接 |
| 6 | 外模式 | 大类1 | y\_1\_3\_1\_2 | 创建同义词、视图、函数、过程、触发器 |
| 7 | 大类2 | y\_1\_3\_2\_2 | 创建同义词、视图、函数、过程、触发器 |
| 8 | 大类3 | y\_1\_3\_3\_2 | 创建同义词、视图、函数、过程、触发器 |
| 9 | 站点3 | 总体 | | y\_1\_2\_0\_3 | 创建序列、表、视图、同义词、函数、过程、触发器、数据库链接 |
| 10 | 外模式 | 大类1 | y\_1\_3\_1\_3 | 创建同义词、视图、函数、过程、触发器 |
| 11 | 大类2 | y\_1\_3\_2\_3 | 创建同义词、视图、函数、过程、触发器 |
| 12 | 大类3 | y\_1\_3\_3\_3 | 创建同义词、视图、函数、过程、触发器 |

## 术语定义

表1.12‑1术语列表

|  |  |  |
| --- | --- | --- |
| 编号 | 术语 | 解释 |
| 1 | 出票 | 指兑换纸质车票。 |
| 2 | 改签 | 指购买火车票后，更改日期、车次时办理提前或改晚乘车的签证手续。 |
| 3 | 站点 | 指某个车次途径的火车车站 |
| 4 | 车站 | 指火车车站 |

## 命名规则

表1.13‑1命名规则信息

|  |  |  |
| --- | --- | --- |
| 编号 | 类别 | 规则 |
| 1 | 关系英文名 | 不使用汉字及特殊字符，不超过30个，用英文单词或其缩写，彼此用下划线连接，全局关系英文名前加g\_ |
| 2 | 字段名 | 不使用汉字及特殊字符，不超过30个，用英文单词或其缩写，彼此用下划线连接 |
| 3 | 关系的片段名 | fr\_<关系英文名>\_<片段编号> |
| 4 | 关系的片段补充信息名 | fr\_<关系英文名>\_mes \_<片段编号> |
| 5 | 关系在某站点的所有片段组合名 | <关系英文名>\_<站点号> |
| 6 | 关系在某站点的所有片段组合补充信息名 | <关系英文名>\_mes\_<站点号> |
| 7 | 关系在所有站点的所有片段组合名 | g\_<关系英文名> |
| 8 | 关系在所有站点的所有片段组合补充信息名 | g\_<关系英文名>\_mes |
| 9 | 序列名 | seq\_<关系名>\_<字段名> |
| 10 | 数据库链接名 | dl\_<数据库名> |
| 11 | 主键约束名 | pk\_<表名>\_<字段名> |
| 12 | 外键约束名 | rk\_<表名>\_<字段名> |
| 13 | 唯一键约束名 | uk\_<表名>\_<字段名> |
| 14 | 非空约束名 | nk\_<表名>\_<字段名> |
| 15 | 其它约束名 | ck\_<表名>\_<字段名> |
| 16 | 索引名 | ind\_<表名>\_<字段名> |
| 17 | 表的字段的外键触发器名 | t\_<表名>\_<字段> |
| 18 | 包名 | 包名是全小写的名词，中间可以由点分隔开，例如：java.awt.event |
| 19 | 类名 | 首字母大写，通常由多个单词合成一个类名，要求每个单词的首字母也要大写，例如：class HelloWorld |
| 20 | 常量名 | 基本数据类型的常量名为全大写，例如 int YEAR |
| 21 | 变量名 | 全小写，一般为名词，例如：length |
| 22 | 方法名 | 往往由多个单词合成，第一个单词通常为动词，首字母小写，中间的每个单词的首字母都要大写，例如：isButtonPressed |
| 23 | 视图、单据、报表名 | 在表命名的基础上加前缀v\_ |

# 业务设计编程

表2‑1业务大类

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 业务大类 | 功能名称列表 | | |
|  |  | 1 | 2 | 3 |
| 1 | 售票员业务 | 销售车票 | 退订车票 | 改签车票 |
| 2 | 乘客业务 | 购买车票 | 退订车票 | 改签车票 |
| 3 | 管理员业务 | 增加车次 | 修改车次 | 增加车站 |

## 售票员业务

### 程序流程图

#### 销售车票

开始

输入乘客信息

是否有其他车票订单？

结束

出票失败

查询车次信息

选择对应车次

查询乘客车票订单

出票成功

是

否

显示所有符合要求的车次信息和余票和票价信息

提交订单

比较该订单信息与其他订单的车次信息

是否有相同的车次编号或者出发时间间隔不超过40分钟？

是

否

输入车次信息

显示乘客车票订单

图2.1.1‑1 销售车票程序流程图

#### 退订车票

开始

输入乘客信息

大于15天？

结束

查询乘客车票订单

计算当日距离开车时间的时间差

大于48小时？

大于24小时？

收取票价20%的退票费

收取票价5%的退票费

收取票价10%的退票费

是否改签过？

计算当日距离未改签前开车时间的时间差

是否过了开车时间？

显示退票状态信息

是

否

否

是

是

否

否

是

是

否

显示乘客车票订单

处理退票

退款

存入退票详细信息

选择对应车票订单

修改乘客车票订单状态

修改余票信息

图2.1.1‑2 退订车票程序流程图

#### 改签车票

开始

输入乘客信息

是否改签过？

结束

显示预售期内的车次

查询乘客车票订单

预定车票

显示开车前或开车后24小时内的车次

显示只能改签一次

是否办理过变更到站？

是

否

显示已经办理“变更到站”的车票不再办理改签

否

是

计算当前时间距离开车时间的时间差

大于48小时？次？

是

否

新票价是否等于原票价？

是

否

是

新票价是否高于原票价？

支付新车票票款原车票退款

显示改签状态信息

退还差价

否

显示乘客车票订单

处理改签

存入改签详细信息

修改乘客订单状态

修改余票信息

选择对应车票订单

图2.1.1‑3 改签车票程序流程图

### 单据数据描述

表2.1‑1所有单据数据描述列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 单据名称 | 所属功能 | 使用频度 | 备注 |
| 1 | 乘客车票订单 | 销售车票，退订车票，改签车票 | 1200万次/天 |  |
| 2 | 退票详细信息 | 退订车票 | 800万次/天 |  |
| 3 | 改签详细信息 | 改签车票 | 800万次/天 |  |
| 4 | 余票信息 | 销售车票，退订车票，改签车票 | 1500万次/天 |  |

#### 乘客车票订单

表2.1.2‑1 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 订单号 | 是 | 数值型，12位有效数字 | 否 |  |  |
| 2 | 乘客号 |  | 字符型，固定长度，18个英文数字字符 | 否 |  | 身份证号 |
| 3 | 编号 |  | 数值型，12位有效数字，无小数 | 否 |  | 对应车次信息表中的编号字段 |
| 4 | 乘客出发站 |  | 字符型，可变长度，10个汉字、61个英文字符 | 否 |  | 汉字和英文字符用半角逗号隔开 |
| 5 | 乘客到达站 |  | 字符型，可变长度，10个汉字、61个英文字符 | 否 |  | 汉字和英文字符用半角逗号隔开 |
| 6 | 车厢号 |  | 数值型，2位有效数字，无小数 | 否 |  |  |
| 7 | 座位号 |  | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符。 | 否 |  | 如硬卧车厢“13上”、动车“16F”。 |
| 8 | 发车时间 |  | 日期时间型 | 否 |  |  |
| 9 | 到达时间 |  | 日期时间型 | 否 |  |  |
| 10 | 订购时间 |  | 日期时间型 | 否 |  |  |
| 11 | 票价 |  | 数值型，5位有效数字，2位小数 | 否 |  |  |
| 12 | 订单状态 |  | 字符型，固定长度， 1个英文数字字符，1个半角的连字字符和3个汉字 | 否 |  | 1-待支付，2-已出票，3-已退订，4-已改签。用半角“-”分隔 |
| 13 | 车座种类 |  | 字符型，可变长度，2个英文数字字符，1个半角的连字字符，6个汉字。 | 否 |  | 车座种类分为“01-商务座特等座”、“02-一等座”、“03-二等座”、“04-高级软卧”、 “05-软卧一等卧”、“06-动卧”、“07-硬卧二等卧”、“08-软座”、“09-硬座”、“10-无座”。用半角“-”分隔 |
| 14 | 售票员号 |  | 数值型，12位有效数字，无小数 | 否 |  |  |
| 15 | 车次编号 |  | 字符型，可变长度，5个英文数字字符 | 否 |  | 对应车次信息表中的车次编号 |

#### 退票详细信息

表2.1.2‑2 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 退票号 | 是 | 与2.1.2-1项中第1项相同 | 否 |  |  |
| 2 | 订单号 |  | 与2.1.2-1项中第1项相同 | 否 |  |  |
| 3 | 乘客号 |  | 与2.1.2-1项中第2项相同 | 否 |  | 身份证号 |
| 4 | 车次编号 |  | 字符型，可变长度，5个英文数字字符 | 否 |  |  |
| 5 | 票价 |  | 与2.1.2-1中第11项相同 | 否 |  |  |
| 6 | 退款金额 |  | 与2.1.2-1中第11项相同 | 否 |  |  |
| 7 | 退票时间 |  | 与2.1.2-1中第8项相同 | 否 |  |  |
| 8 | 售票员号 |  | 与2.1.2-1中第14项相同 | 否 |  |  |

#### 改签详细信息

表2.1.2‑3 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 改签号 | 是 | 与2.1.2-1项中第1项相同 | 否 |  |  |
| 2 | 订单号 |  | 与2.1.2-1项中第1项相同 | 否 |  |  |
| 3 | 乘客号 |  | 与2.1.2-1中第2项相同 | 否 |  | 身份证号 |
| 4 | 原车次编号 |  | 与2.1.2-2中第4项相同 | 否 |  |  |
| 5 | 改签车次编号 |  | 与2.1.2-2中第4项相同 | 否 |  |  |
| 6 | 原票价 |  | 与2.1.2-1中第11项相同 | 否 |  |  |
| 7 | 新票价 |  | 与2.1.2-1中第11项相同 | 否 |  |  |
| 8 | 改签时间 |  | 与2.1.2-1中第8项相同 | 否 |  |  |
| 9 | 原车厢号 |  | 与2.1.2‑1中第6项相同 | 否 |  |  |
| 10 | 改签车厢号 |  | 与2.1.2‑1中第6项相同 | 否 |  |  |
| 11 | 原座位种类 |  | 与2.1.2‑1中第13项相同 | 否 |  |  |
| 12 | 改签座位种类 |  | 与2.1.2‑1中第13项相同 | 否 |  |  |
| 13 | 原座位号 |  | 与2.1.2‑1中第7项相同 | 否 |  |  |
| 14 | 改签座位号 |  | 与2.1.2‑1中第7项相同 | 否 |  |  |
| 15 | 售票员号 |  | 与2.1.2-1中第14项相同 | 否 |  |  |
| 16 | 编号 |  | 与2.1.2‑4中第3项相同 | 否 |  |  |
| 17 | 原发车时间 |  | 与2.1.2-1中第8项相同 | 否 |  |  |
| 18 | 改签发车时间 |  | 与2.1.2-1中第8项相同 | 否 |  |  |

#### 余票信息

表2.1.2‑5 数据项的详细描述信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 余票编号 | 是 | 数值型，12位有效数字，无小数 | 否 |  |  |
| 2 | 车次编号 |  | 与2.1.2-2中第4项相同 | 否 |  |  |
| 3 | 编号 |  | 与2.1.2‑6中第1项相同 | 否 |  | 车次信息表中的编号 |
| 4 | 站点名 |  | 与表2.1.2‑1第4项相同 | 否 |  |  |
| 5 | 车厢号 |  | 与2.1.2‑1中第6项相同 | 否 |  |  |
| 6 | 车厢类别 |  | 字符型，可变长度，3个英文数字字符，6个汉字。 | 否 |  | 车厢种类分为“01-商务座特等座”、“02-一等座”、“03-二等座”、“04-高级软卧”、 “05-软卧一等卧”、“06-动卧”、“07-硬卧二等卧”、“08-软座”、“09-硬座”、“10-无座”。 |
| 7 | 座位总数 |  | 数值型，三位有效数字，无小数。 | 否 |  |  |
| 8 | 当前正售座位号 |  | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符。， | 否 |  |  |
| 9 | 余票 |  | 数值型，3位有效数字，无小数。 | 否 |  |  |

### 报表数据描述

表2.1‑2所有报表描述列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 报表名称 | 所属功能 | 使用频度 | 备注 |
| 1 | 乘客信息 | 销售车票，退订车票，改签车票 | 1200万次/天 |  |
| 2 | 车次信息 | 销售车票，退订车票，改签车票 | 1200万次/天 |  |
| 3 | 票价信息 | 销售车票 | 1200万次/天 |  |
| 4 | 售票员信息 | 销售车票 | 1200万次/天 |  |

#### 乘客信息

表2.1.3‑1 数据项的详细描述信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 算法 | 备注 |
| 1 | 乘客号 | 是 | 与2.1.2-1中第2项相同 | 否 |  | 身份证号 |
| 2 | 姓名 |  | 字符型，可变长度，15个汉字 | 否 |  |  |
| 3 | 性别 |  | 字符型，固定长度，一个英文数字字符，1个半角连字字符，1个汉字 | 否 |  | 1-男，2-女 |
| 4 | 手机号码 |  | 字符型，固定长度，11个数字 | 否 |  |  |

#### 车次信息

表2.1.3‑2数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 算法 | 备注 |
| 1 | 编号 | 是 | 数值型，12位有效数字，无小数 | 否 |  |  |
| 2 | 站点名 |  | 与2.1.2-1中第4相同 | 否 |  |  |
| 3 | 站点次序 |  | 数值型，2位有效数字，无小数 | 否 | >0 |  |
| 4 | 车次编号 |  | 与2.1.2-2中第4项相同 | 否 |  |  |
| 5 | 车厢数 |  | 数值型，2位有效数字，无小数 | 否 | >0 |  |
| 6 | 发车时间 |  | 与2.1.2-1中第8项相同 | 否 |  |  |
| 7 | 到达时间 |  | 与2.1.2-1中第8项相同 | 否 |  |  |
| 8 | 车次始发站 |  | 与2.1.2-1中第4相同 | 否 |  |  |
| 9 | 车次终点站 |  | 与2.1.2-1中第4相同 | 否 |  |  |
| 10 | 经过站点数 |  | 数值型，2位有效数字，无小数 | 否 | >0 |  |

#### 票价信息

表2.1.3‑3 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 算法 | 备注 |
| 1 | 票价编号 | 是 | 与2.1.3‑4中的第1项相同 | 否 |  |  |
| 2 | 编号 |  | 与2.1.3‑5中的第1项相同 | 否 |  | 车次信息表中的编号 |
| 3 | 站点名 |  | 与2.1.2-1中第4相同 | 否 |  |  |
| 4 | 站点次序 |  | 与2.1.2-1中第3相同 | 否 |  | 车次信息表中的站点次序 |
| 5 | 车厢类别 |  | 与2.1.32‑6中第6项相同 | 否 |  |  |
| 6 | 铺位类别 |  | 字符型，可变长度，2个英文数字字符，1个半角连字字符，5个汉字 | 否 |  | 01-商务座，02-一等座，03-二等座，04-高级软卧上，05-高级软卧下，06-软卧上，07-软卧下，08-动卧上，09-动卧下，10-硬卧上，11-硬卧中，12-硬卧下，13-软座，14-硬座，15-无座。‘-’为半角符号。 |
| 7 | 站点区间基础票价 |  | 数值型，6位有效数字，2位小数 | 否 |  |  |
| 8 | 票价上浮比率 |  | 数值型，6有效数字，4位小数。 | 否 |  |  |
| 9 | 站点区间总票价 |  | 与2.1.2-1中第11项相同 | 否 | 总票价=基础票价+基础票价×票价上浮比率 |  |

#### 售票员信息

表2.1.3‑4 数据项的详细描述信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 算法 | 备注 |
| 1 | 售票员号 | 是 | 数值型，12位有效数字，无小数 | 否 |  |  |
| 2 | 姓名 |  | 与2.1.3‑7中第2项相同 | 否 |  |  |
| 3 | 性别 |  | 与2.1.3‑8中第3项相同 | 否 |  |  |
| 4 | 手机号码 |  | 与2.1.3‑9中第4项相同 | 否 |  |  |
| 5 | 密码 |  | 字符型，可变长度，20个英文字符 | 否 |  |  |

### 表

表2.1.4‑1表名列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 类别 | 来自 | 备注 |
| 1 | 乘客车票订单 | order\_info | 单据 | 乘客车票订单 |  |
| 2 | 退票详细信息 | refund\_info | 单据 | 退票详细信息 |  |
| 3 | 改签详细信息 | rebook\_info | 单据 | 改签详细信息 |  |
| 4 | 余票信息 | ticketleft\_info | 单据 | 余票信息 |  |
| 5 | 乘客信息 | passenger\_info | 报表 | 乘客信息 |  |
| 6 | 车次信息 | train\_info | 报表 | 车次信息 |  |
| 7 | 票价信息 | price\_info | 报表 | 票价信息 |  |
| 8 | 售票员信息 | conductor\_info | 报表 | 售票员信息 |  |

#### 站点1

##### 乘客车票订单

表2.1.4.1‑1 order\_info（order\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 订单号 | order\_id | number(12,0) | n |  |  |  |
| 2 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 3 | 编号 | id | number(12,0) | n |  |  |  |
| 4 | 乘客出发站 | origin\_station | varchar2 (91) | n |  |  |  |
| 5 | 乘客到达站 | destination\_station | varchar2 (91) | n |  |  |  |
| 6 | 车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 7 | 座位号 | seat\_number | varchar2 (5) | n |  |  |  |
| 8 | 发车时间 | start\_time | date | n |  |  |  |
| 9 | 到达时间 | arrive\_time | date | n |  |  |  |
| 10 | 订购时间 | order\_time | date | n | sysdate |  |  |
| 11 | 票价 | price | number(5,2) | n |  |  |  |
| 12 | 订单状态 | order\_status | char (11) | n | 1-待支付 |  |  |
| 13 | 车座种类 | seat\_type | varchar2 (21) | n |  |  |  |
| 14 | 售票员号 | conductor\_id | number(12,0) | n |  |  |  |
| 15 | 车次编号 | train\_id | varchar2 (5) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：乘客车票订单  create table y\_1\_4\_1\_1.order\_info  (  order\_id number(12,0) not null ,  passenger\_id char(18) not null ,  id number(12,0) not null ,  origin\_station varchar2 (91) not null ,  destination\_station varchar2 (91) not null ,  carriage\_number number(2,0) not null ,  seat\_number varchar2 (5) not null ,  start\_time date not null ,  arrive\_time date not null ,  order\_time date default (sysdate) not null ,  price number(5,2) not null ,  order\_status char (11) default ('1-待支付') not null ,  seat\_type varchar2 (21) not null ,  conductor\_id number(12,0) not null ,  train\_id varchar2 (5) not null ,  primary key(order\_id)  )  ;  comment on table y\_1\_4\_1\_1.order\_info is '乘客车票订单';  comment on column y\_1\_4\_1\_1.order\_info.order\_id is '订单号';  comment on column y\_1\_4\_1\_1.order\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_1.order\_info.id is '编号';  comment on column y\_1\_4\_1\_1.order\_info.origin\_station is '乘客出发站';  comment on column y\_1\_4\_1\_1.order\_info.destination\_station is '乘客到达站';  comment on column y\_1\_4\_1\_1.order\_info.carriage\_number is '车厢号';  comment on column y\_1\_4\_1\_1.order\_info.seat\_number is '座位号';  comment on column y\_1\_4\_1\_1.order\_info.start\_time is '发车时间';  comment on column y\_1\_4\_1\_1.order\_info.arrive\_time is '到达时间';  comment on column y\_1\_4\_1\_1.order\_info.order\_time is '订购时间';  comment on column y\_1\_4\_1\_1.order\_info.price is '票价';  comment on column y\_1\_4\_1\_1.order\_info.order\_status is '订单状态';  comment on column y\_1\_4\_1\_1.order\_info.seat\_type is '车座种类';  comment on column y\_1\_4\_1\_1.order\_info.conductor\_id is '售票员号';  comment on column y\_1\_4\_1\_1.order\_info.train\_id is '车次编号'; |

##### 退票详细信息

表2.1.4.1‑2 refund\_info（refund\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 退票号 | refund\_id | number(12,0) | n |  |  |  |
| 2 | 订单号 | order\_id | number(12,0) | n |  |  |  |
| 3 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 4 | 车次编号 | train\_id | varchar2(5) | n |  |  |  |
| 5 | 票价 | price | number(5,2) | n |  |  |  |
| 6 | 退款金额 | refund\_money | number(5,2) | n |  |  |  |
| 7 | 退票时间 | refund\_time | date | n | sysdate |  |  |
| 8 | 售票员号 | conductor\_id | number(12,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：退票详细信息  create table y\_1\_4\_1\_1.refund\_info  (  refund\_id number(12,0) not null ,  order\_id number(12,0) not null ,  passenger\_id char(18) not null ,  train\_id varchar2(5) not null ,  price number(5,2) not null ,  refund\_money number(5,2) not null ,  refund\_time date default (sysdate) not null ,  conductor\_id number(12,0) not null ,  primary key(refund\_id)  )  ;  comment on table y\_1\_4\_1\_1.refund\_info is '退票详细信息';  comment on column y\_1\_4\_1\_1.refund\_info.refund\_id is '退票号';  comment on column y\_1\_4\_1\_1.refund\_info.order\_id is '订单号';  comment on column y\_1\_4\_1\_1.refund\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_1.refund\_info.train\_id is '车次编号';  comment on column y\_1\_4\_1\_1.refund\_info.price is '票价';  comment on column y\_1\_4\_1\_1.refund\_info.refund\_money is '退款金额';  comment on column y\_1\_4\_1\_1.refund\_info.refund\_time is '退票时间';  comment on column y\_1\_4\_1\_1.refund\_info.conductor\_id is '售票员号'; |

##### 改签详细信息

表2.1.4.1‑3 rebook\_info（rebook\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 改签号 | rebook\_id | number(12,0) | n |  |  |  |
| 2 | 订单号 | order\_id | number(12,0) | n |  |  |  |
| 3 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 4 | 原车次编号 | train\_id | varchar2 (5) | n |  |  |  |
| 5 | 改签车次编号 | al\_train\_id | varchar2 (5) | n |  |  |  |
| 6 | 原票价 | price | number(5,2) | n |  |  |  |
| 7 | 新票价 | al\_price | number(5,2) | n |  |  |  |
| 8 | 改签时间 | refund\_time | date | n | sysdate |  |  |
| 9 | 原车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 10 | 改签车厢号 | al\_carriage\_number | number(2,0) | n |  |  |  |
| 11 | 原座位种类 | seat\_type | varchar2 (21) | n |  |  |  |
| 12 | 改签座位种类 | al\_seat\_type | varchar2 (21) | n |  |  |  |
| 13 | 原座位号 | seat\_number | varchar2 (5) | n |  |  |  |
| 14 | 改签座位号 | al\_seat\_number | varchar2 (5) | n |  |  |  |
| 15 | 售票员号 | conductor\_id | number(12,0) | n |  |  |  |
| 16 | 编号 | id | number(12,0) | n |  |  |  |
| 17 | 原发车时间 | start\_time | date | n |  |  |  |
| 18 | 改签发车时间 | arrive\_time | date | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：改签详细信息  create table y\_1\_4\_1\_1.rebook\_info  (  rebook\_id number(12,0) not null ,  order\_id number(12,0) not null ,  passenger\_id char(18) not null ,  train\_id varchar2 (5) not null ,  al\_train\_id varchar2 (5) not null ,  price number(5,2) not null ,  al\_price number(5,2) not null ,  refund\_time date default (sysdate) not null ,  carriage\_number number(2,0) not null ,  al\_carriage\_number number(2,0) not null ,  seat\_type varchar2 (21) not null ,  al\_seat\_type varchar2 (21) not null ,  seat\_number varchar2 (5) not null ,  al\_seat\_number varchar2 (5) not null ,  conductor\_id number(12,0) not null ,  id number(12,0) not null ,  start\_time date not null ,  arrive\_time date not null ,  primary key(rebook\_id)  )  ;  comment on table y\_1\_4\_1\_1.rebook\_info is '改签详细信息';  comment on column y\_1\_4\_1\_1.rebook\_info.rebook\_id is '改签号';  comment on column y\_1\_4\_1\_1.rebook\_info.order\_id is '订单号';  comment on column y\_1\_4\_1\_1.rebook\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_1.rebook\_info.train\_id is '原车次编号';  comment on column y\_1\_4\_1\_1.rebook\_info.al\_train\_id is '改签车次编号';  comment on column y\_1\_4\_1\_1.rebook\_info.price is '原票价';  comment on column y\_1\_4\_1\_1.rebook\_info.al\_price is '新票价';  comment on column y\_1\_4\_1\_1.rebook\_info.refund\_time is '改签时间';  comment on column y\_1\_4\_1\_1.rebook\_info.carriage\_number is '原车厢号';  comment on column y\_1\_4\_1\_1.rebook\_info.al\_carriage\_number is '改签车厢号';  comment on column y\_1\_4\_1\_1.rebook\_info.seat\_type is '原座位种类';  comment on column y\_1\_4\_1\_1.rebook\_info.al\_seat\_type is '改签座位种类';  comment on column y\_1\_4\_1\_1.rebook\_info.seat\_number is '原座位号';  comment on column y\_1\_4\_1\_1.rebook\_info.al\_seat\_number is '改签座位号';  comment on column y\_1\_4\_1\_1.rebook\_info.conductor\_id is '售票员号';  comment on column y\_1\_4\_1\_1.rebook\_info.id is '编号';  comment on column y\_1\_4\_1\_1.rebook\_info.start\_time is '原发车时间';  comment on column y\_1\_4\_1\_1.rebook\_info.arrive\_time is '改签发车时间'; |

##### 余票信息

表2.1.4.1‑4 ticketleft\_info（ticketleft\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 余票编号 | ticketleft\_id | number(12,0) | n |  |  |  |
| 2 | 车次编号 | train\_id | varchar2 (5) | n |  |  |  |
| 3 | 编号 | id | number(12,0) | n |  |  |  |
| 4 | 站点名 | station\_name | varchar2 (91) | n |  |  |  |
| 5 | 车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 6 | 车厢类别 | carriage\_type | varchar2 (21) | n |  |  |  |
| 7 | 座位总数 | seat\_total | number(3,0) | n |  |  |  |
| 8 | 当前正售座位号 | seat\_number | varchar2 (5) | n |  |  |  |
| 9 | 余票 | ticketleft\_total | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：余票信息  create table y\_1\_4\_1\_1.ticketleft\_info  (  ticketleft\_id number(12,0) not null ,  train\_id varchar2 (5) not null ,  id number(12,0) not null ,  station\_name varchar2 (91) not null ,  carriage\_number number(2,0) not null ,  carriage\_type varchar2 (21) not null ,  seat\_total number(3,0) not null ,  seat\_number varchar2 (5) not null ,  ticketleft\_total number(3,0) not null ,  primary key(ticketleft\_id)  )  ;  comment on table y\_1\_4\_1\_1.ticketleft\_info is '余票信息';  comment on column y\_1\_4\_1\_1.ticketleft\_info.ticketleft\_id is '余票编号';  comment on column y\_1\_4\_1\_1.ticketleft\_info.train\_id is '车次编号';  comment on column y\_1\_4\_1\_1.ticketleft\_info.id is '编号';  comment on column y\_1\_4\_1\_1.ticketleft\_info.station\_name is '站点名';  comment on column y\_1\_4\_1\_1.ticketleft\_info.carriage\_number is '车厢号';  comment on column y\_1\_4\_1\_1.ticketleft\_info.carriage\_type is '车厢类别';  comment on column y\_1\_4\_1\_1.ticketleft\_info.seat\_total is '座位总数';  comment on column y\_1\_4\_1\_1.ticketleft\_info.seat\_number is '当前正售座位号';  comment on column y\_1\_4\_1\_1.ticketleft\_info.ticketleft\_total is '余票'; |

##### 乘客信息

表2.1.4.1‑5 passenger\_info（passenger\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | passenger\_id | char(18) | n |  |  | 身份证号 |
| 2 | 姓名 | name | varchar2 (45) | n |  |  |  |
| 3 | 性别 | gender | char(5) | n |  |  |  |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：乘客信息  create table y\_1\_4\_1\_1.passenger\_info  (  passenger\_id char(18) not null ,  name varchar2 (45) not null ,  gender char(5) not null ,  phone char(11) not null ,  primary key(passenger\_id)  )  ;  comment on table y\_1\_4\_1\_1.passenger\_info is '乘客信息';  comment on column y\_1\_4\_1\_1.passenger\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_1.passenger\_info.name is '姓名';  comment on column y\_1\_4\_1\_1.passenger\_info.gender is '性别';  comment on column y\_1\_4\_1\_1.passenger\_info.phone is '手机号码'; |

##### 车次信息

表2.1.4.1‑6 train\_info（id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | id | number(12,0) | n |  |  |  |
| 2 | 站点名 | station\_name | varchar2 (91) | n |  |  |  |
| 3 | 站点次序 | station\_order | number(2,0) | n |  |  |  |
| 4 | 车次编号 | train\_id | varchar2 (5) | n |  |  |  |
| 5 | 车厢数 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_total | number(2,0) | n |  |  |  |
| 6 | 发车时间 | start\_time | date | n |  |  |  |
| 7 | 到达时间 | arrive\_time | date | n |  |  |  |
| 8 | 车次始发站 | orgion\_station | varchar2 (91) | n |  |  |  |
| 9 | 车次终点站 | destination\_station | varchar2 (91) | n |  |  |  |
| 10 | 经过站点数 | pass\_num | number(2,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_1\_1.train\_info  (  id number(12,0) not null ,  station\_name varchar2 (91) not null ,  station\_order number(2,0) not null ,  train\_id varchar2 (5) not null ,  carriage\_total number(2,0) not null ,  start\_time date not null ,  arrive\_time date not null ,  orgion\_station varchar2 (91) not null ,  destination\_station varchar2 (91) not null ,  pass\_num number(2,0) not null ,  primary key(id)  )  ;  comment on table y\_1\_4\_1\_1.train\_info is '车次信息';  comment on column y\_1\_4\_1\_1.train\_info.id is '编号';  comment on column y\_1\_4\_1\_1.train\_info.station\_name is '站点名';  comment on column y\_1\_4\_1\_1.train\_info.station\_order is '站点次序';  comment on column y\_1\_4\_1\_1.train\_info.train\_id is '车次编号';  comment on column y\_1\_4\_1\_1.train\_info.carriage\_total is '车厢数';  comment on column y\_1\_4\_1\_1.train\_info.start\_time is '发车时间';  comment on column y\_1\_4\_1\_1.train\_info.arrive\_time is '到达时间';  comment on column y\_1\_4\_1\_1.train\_info.orgion\_station is '车次始发站';  comment on column y\_1\_4\_1\_1.train\_info.destination\_station is '车次终点站';  comment on column y\_1\_4\_1\_1.train\_info.pass\_num is '经过站点数'; |

##### 票价信息

表2.1.4.1‑7 price\_info（price\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 票价编号 | price\_id | number(12,0) | n |  |  |  |
| 2 | 编号 | id | number(12,0) | n |  |  |  |
| 3 | 站点名 | station\_name | varchar2 (91) | n |  |  |  |
| 4 | 站点次序 | station\_order | number(2,0) | n |  |  |  |
| 5 | 车厢类别 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_type | varchar2 (21) | n |  |  |  |
| 6 | 铺位类别 | seat\_type | varchar2 (18) | n |  |  | “06-软卧上” |
| 7 | 站点区间基础票价 | base\_price | number(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | number(6,4) | n |  |  |  |
| 9 | 站点区间总票价 | total\_price | number(5,2) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：票价信息  create table y\_1\_4\_1\_1.price\_info  (  price\_id number(12,0) not null ,  id number(2,0) not null ,  station\_name varchar2 (91) not null ,  station\_order number(2,0) not null ,  carriage\_type varchar2 (21) not null ,  seat\_type varchar2 (18) not null ,  base\_price number(6,2) not null ,  up\_rate number(6,4) not null ,  total\_price number(5,2) not null ,  primary key(price\_id)  )  ;  comment on table y\_1\_4\_1\_1.price\_info is '票价信息';  comment on column y\_1\_4\_1\_1.price\_info.price\_id is '票价编号';  comment on column y\_1\_4\_1\_1.price\_info.id is '编号';  comment on column y\_1\_4\_1\_1.price\_info.station\_name is '站点名';  comment on column y\_1\_4\_1\_1.price\_info.station\_order is '站点次序';  comment on column y\_1\_4\_1\_1.price\_info.carriage\_type is '车厢类别';  comment on column y\_1\_4\_1\_1.price\_info.seat\_type is '铺位类别';  comment on column y\_1\_4\_1\_1.price\_info.base\_price is '站点区间基础票价';  comment on column y\_1\_4\_1\_1.price\_info.up\_rate is '票价上浮比率';  comment on column y\_1\_4\_1\_1.price\_info.total\_price is '站点区间总票价'; |

##### 售票员信息

表2.1.4.1‑8 conductor\_info（conductor\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 售票员号 | conductor\_id | number(12,0) | n |  |  |  |
| 2 | 姓名 | name | varchar2 (45) | n |  |  |  |
| 3 | 性别 | gender | char(5) | n |  |  |  |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |
| 5 | 密码 | password | varchar2(20) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：售票员信息  create table y\_1\_4\_1\_1.conductor\_info  (  conductor\_id number(12,0) not null ,  name varchar2 (45) not null ,  gender char(5) not null ,  phone char(11) not null ,  password varchar2(20) not null ,  primary key(conductor\_id)  )  ;  comment on table y\_1\_4\_1\_1.conductor\_info is '售票员信息';  comment on column y\_1\_4\_1\_1.conductor\_info.conductor\_id is '售票员号';  comment on column y\_1\_4\_1\_1.conductor\_info.name is '姓名';  comment on column y\_1\_4\_1\_1.conductor\_info.gender is '性别';  comment on column y\_1\_4\_1\_1.conductor\_info.phone is '手机号码';  comment on column y\_1\_4\_1\_1.conductor\_info.password is '密码'; |

#### 站点2

##### 乘客车票订单

表2.1.4.2‑1 order\_info（order\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 订单号 | order\_id | dec(12,0) | n |  |  |  |
| 2 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 3 | 编号 | id | dec(12,0) | n |  |  |  |
| 4 | 乘客出发站 | origin\_station | varchar(81) | n |  |  |  |
| 5 | 乘客到达站 | destination\_station | varchar(81) | n |  |  |  |
| 6 | 车厢号 | carriage\_number | dec(2,0) | n |  |  |  |
| 7 | 座位号 | seat\_number | varchar(5) | n |  |  |  |
| 8 | 发车时间 | start\_time | datetime | n |  |  |  |
| 9 | 到达时间 | arrive\_time | datetime | n |  |  |  |
| 10 | 订购时间 | order\_time | datetime | n | getdate() |  |  |
| 11 | 票价 | price | dec(5,2) | n |  |  |  |
| 12 | 订单状态 | order\_status | char(8) | n | 1-待支付 |  |  |
| 13 | 车座种类 | seat\_type | varchar(15) | n |  |  |  |
| 14 | 售票员号 | conductor\_id | dec(12,0) | n |  |  |  |
| 15 | 车次编号 | train\_id | varchar(5) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_2）

|  |
| --- |
| -- 创建表：乘客车票订单  create table y\_1\_4\_1\_2.order\_info  (  order\_id dec(12,0) not null ,  passenger\_id char(18) not null ,  id dec(12,0) not null ,  origin\_station varchar(81) not null ,  destination\_station varchar(81) not null ,  carriage\_number dec(2,0) not null ,  seat\_number varchar(5) not null ,  start\_time datetime not null ,  arrive\_time datetime not null ,  order\_time datetime default (getdate()) not null ,  price dec(5,2) not null ,  order\_status char(8) default ('1-待支付') not null ,  seat\_type varchar(15) not null ,  conductor\_id dec(12,0) not null ,  train\_id varchar(5) not null ,  primary key(order\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','乘客车票订单','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','order\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','订购时间','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','order\_time'  exec sp\_addextendedproperty 'MS\_Description','票价','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','price'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','order\_status'  exec sp\_addextendedproperty 'MS\_Description','车座种类','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','conductor\_id'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_4\_1\_2','TABLE','order\_info','COLUMN','train\_id' |

##### 退票详细信息

表2.1.4.2‑2 refund\_info（refund\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 退票号 | refund\_id | dec(12,0) | n |  |  |  |
| 2 | 订单号 | order\_id | dec(12,0) | n |  |  |  |
| 3 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 4 | 车次编号 | train\_id | varchar(5) | n |  |  |  |
| 5 | 票价 | price | dec(5,2) | n |  |  |  |
| 6 | 退款金额 | refund\_money | dec(5,2) | n |  |  |  |
| 7 | 退票时间 | refund\_time | datetime | n | getdate() |  |  |
| 8 | 售票员号 | conductor\_id | dec(12,0) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_2）

|  |
| --- |
| -- 创建表：退票详细信息  create table y\_1\_4\_1\_2.refund\_info  (  refund\_id dec(12,0) not null ,  order\_id dec(12,0) not null ,  passenger\_id char(18) not null ,  train\_id varchar(5) not null ,  price dec(5,2) not null ,  refund\_money dec(5,2) not null ,  refund\_time datetime default (getdate()) not null ,  conductor\_id dec(12,0) not null ,  primary key(refund\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','退票详细信息','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info'  exec sp\_addextendedproperty 'MS\_Description','退票号','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','refund\_id'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','order\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','票价','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','price'  exec sp\_addextendedproperty 'MS\_Description','退款金额','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','refund\_money'  exec sp\_addextendedproperty 'MS\_Description','退票时间','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','refund\_time'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_4\_1\_2','TABLE','refund\_info','COLUMN','conductor\_id' |

##### 改签详细信息

表2.1.4.2‑3 rebook\_info（rebook\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 改签号 | rebook\_id | dec(12,0) | n |  |  |  |
| 2 | 订单号 | order\_id | dec(12,0) | n |  |  |  |
| 3 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 4 | 原车次编号 | train\_id | varchar(5) | n |  |  |  |
| 5 | 改签车次编号 | al\_train\_id | varchar(5) | n |  |  |  |
| 6 | 原票价 | price | decimal(5,2) | n |  |  |  |
| 7 | 新票价 | al\_price | decimal (5,2) | n |  |  |  |
| 8 | 改签时间 | refund\_time | datetime | n | getdate() |  |  |
| 9 | 原车厢号 | carriage\_number | dec(2,0) | n |  |  |  |
| 10 | 改签车厢号 | al\_carriage\_number | dec(2,0) | n |  |  |  |
| 11 | 原座位种类 | seat\_type | varchar(15) | n |  |  |  |
| 12 | 改签座位种类 | al\_seat\_type | varchar(15) | n |  |  |  |
| 13 | 原座位号 | seat\_number | varchar(4) | n |  |  |  |
| 14 | 改签座位号 | al\_seat\_number | varchar(4) | n |  |  |  |
| 15 | 售票员号 | conductor\_id | dec(12,0) | n |  |  |  |
| 16 | 编号 | id | dec(12,0) | n |  |  |  |
| 17 | 原发车时间 | start\_time | datetime | n |  |  |  |
| 18 | 改签发车时间 | al\_start\_time | datetime | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_2）

|  |
| --- |
| -- 创建表：改签详细信息  create table y\_1\_4\_1\_2.rebook\_info  (  rebook\_id dec(12,0) not null ,  order\_id dec(12,0) not null ,  passenger\_id char(18) not null ,  train\_id varchar(5) not null ,  al\_train\_id varchar(5) not null ,  price decimal(5,2) not null ,  al\_price decimal (5,2) not null ,  refund\_time datetime default (getdate()) not null ,  carriage\_number dec(2,0) not null ,  al\_carriage\_number dec(2,0) not null ,  seat\_type varchar(15) not null ,  al\_seat\_type varchar(15) not null ,  seat\_number varchar(4) not null ,  al\_seat\_number varchar(4) not null ,  conductor\_id dec(12,0) not null ,  id dec(12,0) not null ,  start\_time datetime not null ,  al\_start\_time datetime not null ,  primary key(rebook\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','改签详细信息','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info'  exec sp\_addextendedproperty 'MS\_Description','改签号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','rebook\_id'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','order\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','原车次编号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','改签车次编号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','al\_train\_id'  exec sp\_addextendedproperty 'MS\_Description','原票价','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','price'  exec sp\_addextendedproperty 'MS\_Description','新票价','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','al\_price'  exec sp\_addextendedproperty 'MS\_Description','改签时间','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','refund\_time'  exec sp\_addextendedproperty 'MS\_Description','原车厢号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','改签车厢号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','al\_carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','原座位种类','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','改签座位种类','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','al\_seat\_type'  exec sp\_addextendedproperty 'MS\_Description','原座位号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','改签座位号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','al\_seat\_number'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','conductor\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','原发车时间','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','改签发车时间','SCHEMA','y\_1\_4\_1\_2','TABLE','rebook\_info','COLUMN','al\_start\_time' |

##### 余票信息

表2.1.4.2‑4 ticketleft\_info（ticketleft\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 余票编号 | ticketleft\_id | dec(12,0) | n |  |  |  |
| 2 | 车次编号 | train\_id | varchar(5) | n |  |  |  |
| 3 | 编号 | id | dec(12,0) | n |  |  |  |
| 4 | 站点名 | station\_name | varchar(81) | n |  |  |  |
| 5 | 车厢号 | carriage\_number | dec(2,0) | n |  |  |  |
| 6 | 车厢类别 | carriage\_type | varchar(15) | n |  |  |  |
| 7 | 座位总数 | seat\_total | dec(3,0) | n |  |  |  |
| 8 | 当前正售座位号 | seat\_number | varchar(4) | n |  |  |  |
| 9 | 余票 | ticketleft\_total | dec(3,0) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_2）

|  |
| --- |
| -- 创建表：余票信息  create table y\_1\_4\_1\_2.ticketleft\_info  (  ticketleft\_id dec(12,0) not null ,  train\_id varchar(5) not null ,  id dec(12,0) not null ,  station\_name varchar(81) not null ,  carriage\_number dec(2,0) not null ,  carriage\_type varchar(15) not null ,  seat\_total dec(3,0) not null ,  seat\_number varchar(4) not null ,  ticketleft\_total dec(3,0) not null ,  primary key(ticketleft\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','余票信息','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info'  exec sp\_addextendedproperty 'MS\_Description','余票编号','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','ticketleft\_id'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','seat\_total'  exec sp\_addextendedproperty 'MS\_Description','当前正售座位号','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','余票','SCHEMA','y\_1\_4\_1\_2','TABLE','ticketleft\_info','COLUMN','ticketleft\_total' |

##### 乘客信息

表2.1.4.2‑5 passenger\_info（passenger\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | passenger\_id | char(18) | n |  |  | 身份证号 |
| 2 | 姓名 | name | varchar(30) | n |  |  |  |
| 3 | 性别 | gender | char(4) | n |  |  |  |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_2）

|  |
| --- |
| -- 创建表：乘客信息  create table y\_1\_4\_1\_2.passenger\_info  (  passenger\_id char(18) not null ,  name varchar(30) not null ,  gender char(4) not null ,  phone char(11) not null ,  primary key(passenger\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','乘客信息','SCHEMA','y\_1\_4\_1\_2','TABLE','passenger\_info'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_4\_1\_2','TABLE','passenger\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_4\_1\_2','TABLE','passenger\_info','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_4\_1\_2','TABLE','passenger\_info','COLUMN','gender'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_4\_1\_2','TABLE','passenger\_info','COLUMN','phone' |

##### 车次信息

表2.1.4.2‑6 train\_info（id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | id | dec(12,0) | n |  |  |  |
| 2 | 站点名 | station\_name | varchar(82) | n |  |  |  |
| 3 | 站点次序 | station\_order | dec(2,0) | n |  |  |  |
| 4 | 车次编号 | train\_id | varchar(5) | n |  |  |  |
| 5 | 车厢数 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_total | dec(2,0) | n |  |  |  |
| 6 | 发车时间 | start\_time | datetime | n |  |  |  |
| 7 | 到达时间 | arrive\_time | datetime | n |  |  |  |
| 8 | 车次始发站 | orgion\_station | varchar(81) | n |  |  |  |
| 9 | 车次终点站 | destination\_station | varchar(81) | n |  |  |  |
| 10 | 经过站点数 | pass\_num | dec(2,0) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_2）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_1\_2.train\_info  (  id dec(12,0) not null ,  station\_name varchar(82) not null ,  station\_order dec(2,0) not null ,  train\_id varchar(5) not null ,  carriage\_total dec(2,0) not null ,  start\_time datetime not null ,  arrive\_time datetime not null ,  orgion\_station varchar(81) not null ,  destination\_station varchar(81) not null ,  pass\_num dec(2,0) not null ,  primary key(id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车次信息','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','车厢数','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','carriage\_total'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','车次始发站','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','orgion\_station'  exec sp\_addextendedproperty 'MS\_Description','车次终点站','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','经过站点数','SCHEMA','y\_1\_4\_1\_2','TABLE','train\_info','COLUMN','pass\_num' |

##### 票价信息

表2.1.4.2‑7 price\_info（price\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 票价编号 | price\_id | dec(12,0) | n |  |  |  |
| 2 | 编号 | id | dec(12,0) | n |  |  |  |
| 3 | 站点名 | station\_name | varchar(81) | n |  |  |  |
| 4 | 站点次序 | station\_order | dec(2,0) | n |  |  |  |
| 5 | 车厢类别 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_type | varchar(15) | n |  |  |  |
| 6 | 铺位类别 | seat\_type | varchar(13) | n |  |  | “06-软卧上” |
| 7 | 站点区间基础票价 | base\_price | dec(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | dec(6,4) | n |  |  |  |
| 9 | 站点区间总票价 | total\_price | dec(5,2) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_2）

|  |
| --- |
| -- 创建表：票价信息  create table y\_1\_4\_1\_2.price\_info  (  price\_id dec(12,0) not null ,  id dec(12,0) not null ,  station\_name varchar(81) not null ,  station\_order dec(2,0) not null ,  carriage\_type varchar(15) not null ,  seat\_type varchar(13) not null ,  base\_price dec(6,2) not null ,  up\_rate dec(6,4) not null ,  total\_price dec(5,2) not null ,  primary key(price\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','票价信息','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info'  exec sp\_addextendedproperty 'MS\_Description','票价编号','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','price\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','铺位类别','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','站点区间基础票价','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','base\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','up\_rate'  exec sp\_addextendedproperty 'MS\_Description','站点区间总票价','SCHEMA','y\_1\_4\_1\_2','TABLE','price\_info','COLUMN','total\_price' |

##### 售票员信息

表2.1.4.2‑8 conductor\_info（conductor\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 售票员号 | conductor\_id | dec(12,0) | n |  |  |  |
| 2 | 姓名 | name | varchar(30) | n |  |  |  |
| 3 | 性别 | gender | char(4) | n |  |  |  |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |
| 5 | 密码 | password | varchar(20) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_1\_1）

|  |
| --- |
| -- 创建表：售票员信息  create table y\_1\_4\_1\_1.conductor\_info  (  conductor\_id dec(12,0) not null ,  name varchar(30) not null ,  gender char(4) not null ,  phone char(11) not null ,  password varchar(20) not null ,  primary key(conductor\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','售票员信息','SCHEMA','y\_1\_4\_1\_1','TABLE','conductor\_info'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_4\_1\_1','TABLE','conductor\_info','COLUMN','conductor\_id'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_4\_1\_1','TABLE','conductor\_info','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_4\_1\_1','TABLE','conductor\_info','COLUMN','gender'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_4\_1\_1','TABLE','conductor\_info','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_4\_1\_1','TABLE','conductor\_info','COLUMN','password' |

#### 站点3

##### 乘客车票订单

表2.1.4.3‑1 order\_info（order\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 订单号 | order\_id | dec(12,0) | n |  |  |  |
| 2 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 3 | 编号 | id | dec(12,0) | n |  |  |  |
| 4 | 乘客出发站 | origin\_station | varchar(71) | n |  |  |  |
| 5 | 乘客到达站 | destination\_station | varchar(71) | n |  |  |  |
| 6 | 车厢号 | carriage\_number | dec(2,0) | n |  |  |  |
| 7 | 座位号 | seat\_number | varchar(3) | n |  |  |  |
| 8 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 9 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 10 | 订购时间 | order\_time | timestamp | n | current\_timestamp |  |  |
| 11 | 票价 | price | dec(5,2) | n |  |  |  |
| 12 | 订单状态 | order\_status | char(5) | n | 1-待支付 |  |  |
| 13 | 车座种类 | seat\_type | varchar(9) | n |  |  |  |
| 14 | 售票员号 | conductor\_id | dec(12,0) | n |  |  |  |
| 15 | 车次编号 | train\_id | varchar(5) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：乘客车票订单  create table y\_1\_4\_1\_3.order\_info  (  order\_id dec(12,0) not null ,  passenger\_id char(18) not null ,  id dec(12,0) not null ,  origin\_station varchar(71) not null ,  destination\_station varchar(71) not null ,  carriage\_number dec(2,0) not null ,  seat\_number varchar(3) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  order\_time timestamp default (current\_timestamp) not null ,  price dec(5,2) not null ,  order\_status char(5) default ('1-待支付') not null ,  seat\_type varchar(9) not null ,  conductor\_id dec(12,0) not null ,  train\_id varchar(5) not null ,  primary key(order\_id)  )  ;  comment on table y\_1\_4\_1\_3.order\_info is '乘客车票订单';  comment on column y\_1\_4\_1\_3.order\_info.order\_id is '订单号';  comment on column y\_1\_4\_1\_3.order\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_3.order\_info.id is '编号';  comment on column y\_1\_4\_1\_3.order\_info.origin\_station is '乘客出发站';  comment on column y\_1\_4\_1\_3.order\_info.destination\_station is '乘客到达站';  comment on column y\_1\_4\_1\_3.order\_info.carriage\_number is '车厢号';  comment on column y\_1\_4\_1\_3.order\_info.seat\_number is '座位号';  comment on column y\_1\_4\_1\_3.order\_info.start\_time is '发车时间';  comment on column y\_1\_4\_1\_3.order\_info.arrive\_time is '到达时间';  comment on column y\_1\_4\_1\_3.order\_info.order\_time is '订购时间';  comment on column y\_1\_4\_1\_3.order\_info.price is '票价';  comment on column y\_1\_4\_1\_3.order\_info.order\_status is '订单状态';  comment on column y\_1\_4\_1\_3.order\_info.seat\_type is '车座种类';  comment on column y\_1\_4\_1\_3.order\_info.conductor\_id is '售票员号';  comment on column y\_1\_4\_1\_3.order\_info.train\_id is '车次编号'; |

##### 退票详细信息

表2.1.4.3‑2 refund\_info（refund\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 退票号 | refund\_id | dec(12,0) | n |  |  |  |
| 2 | 订单号 | order\_id | dec(12,0) | n |  |  |  |
| 3 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 4 | 车次编号 | train\_id | varchar(5) | n |  |  |  |
| 5 | 票价 | price | dec(5,2) | n |  |  |  |
| 6 | 退款金额 | refund\_money | dec(5,2) | n |  |  |  |
| 7 | 退票时间 | refund\_time | timestamp | n | current\_timestamp |  |  |
| 8 | 售票员号 | conductor\_id | varchar(18) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：退票详细信息  create table y\_1\_4\_1\_3.refund\_info  (  refund\_id dec(12,0) not null ,  order\_id dec(12,0) not null ,  passenger\_id char(18) not null ,  train\_id varchar(5) not null ,  price dec(5,2) not null ,  refund\_money dec(5,2) not null ,  refund\_time timestamp default (current\_timestamp) not null ,  conductor\_id varchar(18) not null ,  primary key(refund\_id)  )  ;  comment on table y\_1\_4\_1\_3.refund\_info is '退票详细信息';  comment on column y\_1\_4\_1\_3.refund\_info.refund\_id is '退票号';  comment on column y\_1\_4\_1\_3.refund\_info.order\_id is '订单号';  comment on column y\_1\_4\_1\_3.refund\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_3.refund\_info.train\_id is '车次编号';  comment on column y\_1\_4\_1\_3.refund\_info.price is '票价';  comment on column y\_1\_4\_1\_3.refund\_info.refund\_money is '退款金额';  comment on column y\_1\_4\_1\_3.refund\_info.refund\_time is '退票时间';  comment on column y\_1\_4\_1\_3.refund\_info.conductor\_id is '售票员号'; |

##### 改签详细信息

表2.1.4.3‑3 rebook\_info（rebook\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 改签号 | rebook\_id | dec(12,0) | n |  |  |  |
| 2 | 订单号 | order\_id | dec(12,0) | n |  |  |  |
| 3 | 乘客号 | passenger\_id | char(18) | n |  |  |  |
| 4 | 原车次编号 | train\_id | varchar(5) | n |  |  |  |
| 5 | 改签车次编号 | al\_train\_id | varchar(5) | n |  |  |  |
| 6 | 原票价 | price | dec(5,2) | n |  |  |  |
| 7 | 新票价 | al\_price | dec(5,2) | n |  |  |  |
| 8 | 改签时间 | refund\_time | timestamp | n | current\_timestamp |  |  |
| 9 | 原车厢号 | carriage\_number | dec(2,0) | n |  |  |  |
| 10 | 改签车厢号 | al\_carriage\_number | dec(2,0) | n |  |  |  |
| 11 | 原座位种类 | seat\_type | varchar(9) | n |  |  |  |
| 12 | 改签座位种类 | al\_seat\_type | varchar(9) | n |  |  |  |
| 13 | 原座位号 | seat\_number | varchar(3) | n |  |  |  |
| 14 | 改签座位号 | al\_seat\_number | varchar(3) | n |  |  |  |
| 15 | 售票员号 | conductor\_id | dec(12,0) | n |  |  |  |
| 16 | 编号 | id | dec(12,0) | n |  |  |  |
| 17 | 原发车时间 | start\_time | timestamp | n |  |  |  |
| 18 | 改签发车时间 | arrive\_time | timestamp | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：改签详细信息  create table y\_1\_4\_1\_3.rebook\_info  (  rebook\_id dec(12,0) not null ,  order\_id dec(12,0) not null ,  passenger\_id char(18) not null ,  train\_id varchar(5) not null ,  al\_train\_id varchar(5) not null ,  price dec(5,2) not null ,  al\_price dec(5,2) not null ,  refund\_time timestamp default (current\_timestamp) not null ,  carriage\_number dec(2,0) not null ,  al\_carriage\_number dec(2,0) not null ,  seat\_type varchar(9) not null ,  al\_seat\_type varchar(9) not null ,  seat\_number varchar(3) not null ,  al\_seat\_number varchar(3) not null ,  conductor\_id dec(12,0) not null ,  id dec(12,0) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  primary key(rebook\_id)  )  ;  comment on table y\_1\_4\_1\_3.rebook\_info is '改签详细信息';  comment on column y\_1\_4\_1\_3.rebook\_info.rebook\_id is '改签号';  comment on column y\_1\_4\_1\_3.rebook\_info.order\_id is '订单号';  comment on column y\_1\_4\_1\_3.rebook\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_3.rebook\_info.train\_id is '原车次编号';  comment on column y\_1\_4\_1\_3.rebook\_info.al\_train\_id is '改签车次编号';  comment on column y\_1\_4\_1\_3.rebook\_info.price is '原票价';  comment on column y\_1\_4\_1\_3.rebook\_info.al\_price is '新票价';  comment on column y\_1\_4\_1\_3.rebook\_info.refund\_time is '改签时间';  comment on column y\_1\_4\_1\_3.rebook\_info.carriage\_number is '原车厢号';  comment on column y\_1\_4\_1\_3.rebook\_info.al\_carriage\_number is '改签车厢号';  comment on column y\_1\_4\_1\_3.rebook\_info.seat\_type is '原座位种类';  comment on column y\_1\_4\_1\_3.rebook\_info.al\_seat\_type is '改签座位种类';  comment on column y\_1\_4\_1\_3.rebook\_info.seat\_number is '原座位号';  comment on column y\_1\_4\_1\_3.rebook\_info.al\_seat\_number is '改签座位号';  comment on column y\_1\_4\_1\_3.rebook\_info.conductor\_id is '售票员号';  comment on column y\_1\_4\_1\_3.rebook\_info.id is '编号';  comment on column y\_1\_4\_1\_3.rebook\_info.start\_time is '原发车时间';  comment on column y\_1\_4\_1\_3.rebook\_info.arrive\_time is '改签发车时间'; |

##### 余票信息

表2.1.4.3‑4 ticketleft\_info（ticketleft\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 余票编号 | ticketleft\_id | dec(12,0) | n |  |  |  |
| 2 | 车次编号 | train\_id | varchar(5) | n |  |  |  |
| 3 | 编号 | id | dec(12,0) | n |  |  |  |
| 4 | 站点名 | station\_name | varchar(71) | n |  |  |  |
| 5 | 车厢号 | carriage\_number | dec(2,0) | n |  |  |  |
| 6 | 车厢类别 | carriage\_type | varchar(9) | n |  |  |  |
| 7 | 座位总数 | seat\_total | dec(3,0) | n |  |  |  |
| 8 | 当前正售座位号 | seat\_number | varchar(3) | n |  |  |  |
| 9 | 余票 | ticketleft\_total | dec(3,0) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：余票信息  create table y\_1\_4\_1\_3.ticketleft\_info  (  ticketleft\_id dec(12,0) not null ,  train\_id varchar(5) not null ,  id dec(12,0) not null ,  station\_name varchar(71) not null ,  carriage\_number dec(2,0) not null ,  carriage\_type varchar(9) not null ,  seat\_total dec(3,0) not null ,  seat\_number varchar(3) not null ,  ticketleft\_total dec(3,0) not null ,  primary key(ticketleft\_id)  )  ;  comment on table y\_1\_4\_1\_3.ticketleft\_info is '余票信息';  comment on column y\_1\_4\_1\_3.ticketleft\_info.ticketleft\_id is '余票编号';  comment on column y\_1\_4\_1\_3.ticketleft\_info.train\_id is '车次编号';  comment on column y\_1\_4\_1\_3.ticketleft\_info.id is '编号';  comment on column y\_1\_4\_1\_3.ticketleft\_info.station\_name is '站点名';  comment on column y\_1\_4\_1\_3.ticketleft\_info.carriage\_number is '车厢号';  comment on column y\_1\_4\_1\_3.ticketleft\_info.carriage\_type is '车厢类别';  comment on column y\_1\_4\_1\_3.ticketleft\_info.seat\_total is '座位总数';  comment on column y\_1\_4\_1\_3.ticketleft\_info.seat\_number is '当前正售座位号';  comment on column y\_1\_4\_1\_3.ticketleft\_info.ticketleft\_total is '余票'; |

##### 乘客信息

表2.1.4.3‑5 passenger\_info（passenger\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | passenger\_id | char(18) | n |  |  | 身份证号 |
| 2 | 姓名 | name | varchar(15) | n |  |  |  |
| 3 | 性别 | gender | char(3) | n |  |  |  |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：乘客信息  create table y\_1\_4\_1\_3.passenger\_info  (  passenger\_id char(18) not null ,  name varchar(15) not null ,  gender char(3) not null ,  phone char(11) not null ,  primary key(passenger\_id)  )  ;  comment on table y\_1\_4\_1\_3.passenger\_info is '乘客信息';  comment on column y\_1\_4\_1\_3.passenger\_info.passenger\_id is '乘客号';  comment on column y\_1\_4\_1\_3.passenger\_info.name is '姓名';  comment on column y\_1\_4\_1\_3.passenger\_info.gender is '性别';  comment on column y\_1\_4\_1\_3.passenger\_info.phone is '手机号码'; |

##### 车次信息

表2.1.4.3‑6 train\_info（id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | id | dec(12,0) | n |  |  |  |
| 2 | 站点名 | station\_name | varchar(71) | n |  |  |  |
| 3 | 站点次序 | station\_order | dec(2,0) | n |  |  |  |
| 4 | 车次编号 | train\_id | varchar(5) | n |  |  |  |
| 5 | 车厢数 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_total | dec(2,0) | n |  |  |  |
| 6 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 7 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 8 | 始发站 | orgion\_station | varchar(71) | n |  |  |  |
| 9 | 终点站 | destination\_station | varchar(71) | n |  |  |  |
| 10 | 经过站点数 | pass\_num | dec(2,0) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_1\_3.train\_info  (  id dec(12,0) not null ,  station\_name varchar(71) not null ,  station\_order dec(2,0) not null ,  train\_id varchar(5) not null ,  carriage\_total dec(2,0) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  orgion\_station varchar(71) not null ,  destination\_station varchar(71) not null ,  pass\_num dec(2,0) not null ,  primary key(id)  )  ;  comment on table y\_1\_4\_1\_3.train\_info is '车次信息';  comment on column y\_1\_4\_1\_3.train\_info.id is '编号';  comment on column y\_1\_4\_1\_3.train\_info.station\_name is '站点名';  comment on column y\_1\_4\_1\_3.train\_info.station\_order is '站点次序';  comment on column y\_1\_4\_1\_3.train\_info.train\_id is '车次编号';  comment on column y\_1\_4\_1\_3.train\_info.carriage\_total is '车厢数';  comment on column y\_1\_4\_1\_3.train\_info.start\_time is '发车时间';  comment on column y\_1\_4\_1\_3.train\_info.arrive\_time is '到达时间';  comment on column y\_1\_4\_1\_3.train\_info.orgion\_station is '始发站';  comment on column y\_1\_4\_1\_3.train\_info.destination\_station is '终点站';  comment on column y\_1\_4\_1\_3.train\_info.pass\_num is '经过站点数'; |

##### 票价信息

表2.1.4.3‑7 price\_info（price\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 票价编号 | price\_id | dec(12,0) | n |  |  |  |
| 2 | 编号 | id | dec(12,0) | n |  |  |  |
| 3 | 站点名 | station\_name | varchar(71) | n |  |  |  |
| 4 | 站点次序 | station\_order | dec(2,0) | n |  |  |  |
| 5 | 车厢类别 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_type | varchar(9) | n |  |  |  |
| 6 | 铺位类别 | seat\_type | varchar(8) | n |  |  | “06-软卧上” |
| 7 | 站点区间基础票价 | base\_price | dec(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | dec(6,4) | n |  |  |  |
| 9 | 站点区间总票价 | total\_price | dec(5,2) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：票价信息  create table y\_1\_4\_1\_3.price\_info  (  price\_id dec(12,0) not null ,  id dec(12,0) not null ,  station\_name varchar(71) not null ,  station\_order dec(2,0) not null ,  carriage\_type varchar(9) not null ,  seat\_type varchar(8) not null ,  base\_price dec(6,2) not null ,  up\_rate dec(6,4) not null ,  total\_price dec(5,2) not null ,  primary key(price\_id)  )  ;  comment on table y\_1\_4\_1\_3.price\_info is '票价信息';  comment on column y\_1\_4\_1\_3.price\_info.price\_id is '票价编号';  comment on column y\_1\_4\_1\_3.price\_info.id is '编号';  comment on column y\_1\_4\_1\_3.price\_info.station\_name is '站点名';  comment on column y\_1\_4\_1\_3.price\_info.station\_order is '站点次序';  comment on column y\_1\_4\_1\_3.price\_info.carriage\_type is '车厢类别';  comment on column y\_1\_4\_1\_3.price\_info.seat\_type is '铺位类别';  comment on column y\_1\_4\_1\_3.price\_info.base\_price is '站点区间基础票价';  comment on column y\_1\_4\_1\_3.price\_info.up\_rate is '票价上浮比率';  comment on column y\_1\_4\_1\_3.price\_info.total\_price is '站点区间总票价'; |

##### 售票员信息

表2.1.4.3‑8 conductor\_info（conductor\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 售票员号 | conductor\_id | dec(12,0) | n |  |  |  |
| 2 | 姓名 | name | varchar(15) | n |  |  |  |
| 3 | 性别 | gender | char(3) | n |  |  |  |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |
| 5 | 密码 | password | varchar(20) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_1\_3）

|  |
| --- |
| -- 创建表：售票员信息  create table y\_1\_4\_1\_3.conductor\_info  (  conductor\_id dec(12,0) not null ,  name varchar(15) not null ,  gender char(3) not null ,  phone char(11) not null ,  password varchar(20) not null ,  primary key(conductor\_id)  )  ;  comment on table y\_1\_4\_1\_3.conductor\_info is '售票员信息';  comment on column y\_1\_4\_1\_3.conductor\_info.conductor\_id is '售票员号';  comment on column y\_1\_4\_1\_3.conductor\_info.name is '姓名';  comment on column y\_1\_4\_1\_3.conductor\_info.gender is '性别';  comment on column y\_1\_4\_1\_3.conductor\_info.phone is '手机号码';  comment on column y\_1\_4\_1\_3.conductor\_info.password is '密码'; |

## 乘客业务

### 程序流程图

#### 购买车票

开始

输入查询车次信息

输入信息符合要求

结束

查询信息

否

是

生成订单信息

是否预定该车次车票

否

是

显示车次信息及余票信息

选定车次

是否有符合条件的车次

票款支付

是

否

查询并显示车次信息、票价信息、余票信息

添加乘客信息

显示订单信息

是否支付成功

是

否

修改订单状态及余票信息

图2.2.1‑1 购买车票程序流程图

#### 退订车票

开始

查询并显示订单信息

是否已经出票

结束

选择订单

是

否

修改订单信息及余票信息

显示退订成功

是否退订车票

是

否

显示退票说明并按规定退费

显示不可退票

图2.2.1‑2 退订车票程序流程图

#### 改签车票

开始

查询并显示订单信息

是否已经出票或办理过变更到站

结束

显示改签界面

选择订单

是

否

补差额收取费用

新票价是否等于原票价

选择欲改签车次

否

是

退差额并核实退票费

否

是

新票价是否大于原票价

该车次是否有余票

当前时间距离开车时间的时间是否大于48小时

选择出发日期

显示车次信息

显示车次信息

显示订单信息

修改订单信息及余票信息

显示改签成功

是

否

是

否

查询余票信息

图2.2.1‑3 改签车票程序流程图

### 单据数据描述

表2.2‑1所有单据数据描述列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 单据名称 | 所属功能 | 使用频度 | 备注 |
| 1 | 订单信息 | 购买车票，退订车票，改签车票 | 1200万次/天 |  |
| 2 | 余票信息 | 购买车票，退订车票，改签车票 | 1500万次/天 |  |

#### 订单信息

表2.2.2‑1 数据项的详细描述信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 订单号 | 是 | 字符型，固定长度，10个英文数字字符，大写英文字母开头 | 否 |  |  |
| 2 | 车次编号 |  | 字符型，可变长度，5个英文数字字符 | 否 |  | 例如：T4206 |
| 3 | 车号 |  | 数值型，12位有效数字，无小数 |  |  | 车次的唯一标识号码 |
| 4 | 乘客出发站 |  | 字符型，可变长度，10个汉字、61个英文字符 | 否 |  | 汉字和英文字符用半角逗号隔开 |
| 5 | 乘客到达站 |  | 字符型，可变长度，10个汉字、61个英文字符 | 否 |  | 汉字和英文字符用半角逗号隔开 |
| 6 | 身份证号 |  | 字符型，固定长度，18位英文数字字符 | 否 |  |  |
| 7 | 乘客姓名 |  | 字符型，可变长度，15个汉字 | 否 |  |  |
| 8 | 票价 |  | 数值型，6位有效数字，2位小数 | 否 |  |  |
| 9 | 车厢号 |  | 数值型，2位有效数字，无小数 | 否 |  |  |
| 10 | 车座种类 |  | 字符型，可变长度，2个英文数字字符，1个半角连字字符，6个汉字。 | 否 |  | 车座种类分为“01-商务座特等座”、“02-一等座”、“03-二等座”、“04-高级软卧”、 “05-软卧一等卧”、“06-动卧”、“07-硬卧二等卧”、“08-软座”、“09-硬座”、“10-无座”。‘-’为半角符号。 |
| 11 | 座位号 |  | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符。 | 否 |  | 如硬卧车厢“13上”、动车“16F”。 |
| 12 | 订票日期 |  | 日期时间型，取系统日期时间 | 否 |  |  |
| 13 | 到达时间 |  | 日期时间型 | 否 |  |  |
| 14 | 发车时间 |  | 日期时间型 | 否 |  |  |
| 15 | 订单状态 |  | 字符型，固定长度，1位数字字符，1个半角连字字符，3个汉字 | 否 |  | 1-待支付，2-已退订，3-已改签。‘-’为半角符号。 |
| 16 | 出票状态 |  | 字符型，固定长度，1位数字字符，1个半角连字字符，3个汉字 | 否 |  | 1-未出票，2-已出票。‘-’为半角符号。 |
| 17 | 变更到站状态 |  | 字符型，固定长度，1位数字字符，1个半角连字字符，7个汉字 | 否 |  | 1-未办理变更到站，2-已办理变更到站。‘-’为半角符号。 |

#### 余票信息

表2.2.2‑2 数据项的详细描述信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 余票编号 | 是 | 数值型，12位有效数字，无小数 | 否 |  |  |
| 2 | 编号 |  | 数值型，12位有效数字，无小数 | 否 |  |  |
| 3 | 车次编号 |  | 字符型，可变长度，5个英文数字字符 | 否 |  |  |
| 4 | 站点名 |  | 与表2.2.2‑1中第3项相同 | 否 |  |  |
| 5 | 车厢号 |  | 与表2.2.2‑1中第8项相同 | 否 |  |  |
| 6 | 车厢类别 |  | 字符型，可变长度，2个英文数字字符，1个半角连字字符，6个汉字。 | 否 |  | 车厢种类分为“01-商务座特等座”、“02-一等座”、“03-二等座”、“04-高级软卧”、 “05-软卧一等卧”、“06-动卧”、“07-硬卧二等卧”、“08-软座”、“09-硬座”、“10-无座”。‘-’为半角符号。 |
| 7 | 座位总数 |  | 数值型，三位有效数字，无小数。 | 否 |  |  |
| 8 | 当前正售座位号 |  | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符。， |  |  |  |
| 9 | 余票 |  | 数值型，3位有效数字，无小数。 |  |  |  |

### 报表数据描述

表2.2‑2所有报表描述列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 报表名称 | 所属功能 | 使用频度 | 备注 |
| 1 | 乘客信息 | 购买车票 | 1000万次/天 |  |
| 2 | 车次信息 | 购买车票，改签车票 | 1500万次/天 |  |
| 3 | 票价信息 | 购买车票，改签车票 | 1000万次/天 |  |

#### 乘客信息

表2.2.3‑1 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 算法 | 备注 |
| 1 | 身份证号 | 是 | 字符型，固定长度，18位英文数字字符 | 否 |  |  |
| 2 | 乘客姓名 |  | 字符型，可变长度，15个汉字 | 否 |  |  |
| 3 | 性别 |  | 字符型，固定长度，1个数字字符，1个半角连字字符，1个汉字 |  |  | 1-男，2-女. ‘-’为半角符号。 |
| 4 | 手机号码 |  | 字符型，固定长度，11位英文数字字符 | 否 |  |  |
| 5 | 登录密码 |  | 字符型，可变长度，20位英文数字字符。 | 否 |  | 不能少于6位字符；  必须且只能包含字母，数字，下划线中的两种或两种以上。 |

#### 车次信息

表2.2.3‑2 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 算法 | 备注 |
| 1 | 编号 | 是 | 数值型，12位有效数字，无小数 | 否 |  |  |
| 2 | 站点名 |  | 字符型，可变长度，10个汉字 | 否 |  |  |
| 3 | 站点次序 |  | 数值型，2位有效数字，无小数 | 否 | >0 |  |
| 4 | 车次编号 |  | 字符型，可变长度，5个英文数字字符 | 否 |  |  |
| 5 | 车厢数 |  | 数值型，2位有效数字，无小数 | 否 | >0 |  |
| 6 | 发车时间 |  | 日期时间型 | 否 |  |  |
| 7 | 到达时间 |  | 日期时间型 | 否 |  |  |
| 8 | 车次始发站 |  | 与2.2.2-1中第3项相同 | 否 |  |  |
| 9 | 车次终点站 |  | 与2.2.2-1中第3项相同 | 否 |  |  |
| 10 | 经过站点数 |  | 数值型，2位有效数字，无小数 | 否 | >0 |  |
| 11 | 票价比率 |  | 数值型，3位有效数字，2个小数 | 否 |  |  |

#### 票价信息

表2.2.3‑3 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 算法 | 备注 |
| 1 | 票价编号 | 是 | 字符型，固定字符，14位数字字符 | 否 |  |  |
| 2 | 站点名 |  | 与2.2.2-1中第4项相同 | 否 |  |  |
| 3 | 车厢类别 |  | 与2.2.2-2中第6项相同 | 否 |  |  |
| 4 | 铺位类别 |  | 字符型，固定长度，2个英文数字字符，1个半角连字字符，5个汉字 | 否 |  | 01-商务座，02-一等座，03-二等座，04-高级软卧上，05-高级软卧下，06-软卧上，07-软卧下，08-动卧上，09-动卧下，10-硬卧上，11-硬卧中，12-硬卧下，13-软座，14-硬座，15-无座。‘-’为半角符号。 |
| 5 | 站点区间基础票价 |  | 数值型，6位有效数字，2位小数 | 否 |  |  |
| 6 | 票价上浮比率 |  | 数值型，6有效数字，4位小数。 | 否 |  |  |
| 7 | 站点区间总票价 |  | 与2.2.2-1中第8项相同， | 否 | 总票价=基础票价+基础票价×票价上浮比率 |  |
| 8 | 车次号 |  | 与2.2.2-1中第3项相同 | 否 |  | 标识车次的唯一编号 |
| 9 | 站点序号 |  | 与2.2.3-2中第3项相同 | 否 |  |  |

### 表

表2.2.4‑1表名列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 类别 | 来自 | 备注 |
| 1 | 订单信息 | order\_mes | 单据 | 订单信息 |  |
| 2 | 余票信息 | surplus\_ticket\_mes | 单据 | 余票信息 |  |
| 3 | 乘客信息 | passenger\_mes | 报表 | 乘客信息 |  |
| 4 | 车次信息 | train\_num\_mes | 报表 | 车次信息 |  |
| 5 | 票价信息 | ticket\_price\_mes | 报表 | 票价信息 |  |

#### 站点1

##### 订单信息

表2.2.4.1‑1 order\_mes（order\_number）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 订单号 | order\_number | char(10) | n |  |  |  |
| 2 | 车次编号 | train\_number | varchar2(5) | n |  |  |  |
| 3 | 车号 | train\_id\_num | number(12,0) |  |  |  |  |
| 4 | 乘客出发站 | pa\_start\_sta | varchar2(91) | n |  |  |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | varchar2(91) | n |  |  |  |
| 6 | 身份证号 | pa\_id | char(18) | n |  |  |  |
| 7 | 乘客姓名 | pa\_name | varchar2(45) | n |  |  |  |
| 8 | 票价 | ticket\_price | number(6,2) | n |  |  |  |
| 9 | 车厢号 | carr\_num | number(2,0) | n |  |  |  |
| 10 | 车座种类 | seat\_type | varchar2(21) | n |  |  |  |
| 11 | 座位号 | seat\_number | varchar2(5) | n |  |  |  |
| 12 | 订票日期 | reser\_date | date | n | sysdate |  |  |
| 13 | 到达时间 | arri\_time | date | n |  |  |  |
| 14 | 发车时间 | str\_time | date | n |  |  |  |
| 15 | 订单状态 | order\_status | char(11) | n |  |  |  |
| 16 | 出票状态 | ticket\_out\_if | char(11) | n |  |  |  |
| 17 | 变更到站状态 | change\_sta\_if | char(23) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_2\_1）

|  |
| --- |
| -- 创建表：订单信息  create table y\_1\_4\_2\_1.order\_mes  (  order\_number char(10) not null ,  train\_number varchar2(5) not null ,  train\_id\_num number(12,0) ,  pa\_start\_sta varchar2(91) not null ,  pa\_arrive\_sta varchar2(91) not null ,  pa\_id char(18) not null ,  pa\_name varchar2(45) not null ,  ticket\_price number(6,2) not null ,  carr\_num number(2,0) not null ,  seat\_type varchar2(21) not null ,  seat\_number varchar2(5) not null ,  reser\_date date default (sysdate) not null ,  arri\_time date not null ,  str\_time date not null ,  order\_status char(11) not null ,  ticket\_out\_if char(11) not null ,  change\_sta\_if char(23) not null ,  primary key(order\_number)  )  ;  comment on table y\_1\_4\_2\_1.order\_mes is '订单信息';  comment on column y\_1\_4\_2\_1.order\_mes.order\_number is '订单号';  comment on column y\_1\_4\_2\_1.order\_mes.train\_number is '车次编号';  comment on column y\_1\_4\_2\_1.order\_mes.train\_id\_num is '车号';  comment on column y\_1\_4\_2\_1.order\_mes.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_4\_2\_1.order\_mes.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_4\_2\_1.order\_mes.pa\_id is '身份证号';  comment on column y\_1\_4\_2\_1.order\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_4\_2\_1.order\_mes.ticket\_price is '票价';  comment on column y\_1\_4\_2\_1.order\_mes.carr\_num is '车厢号';  comment on column y\_1\_4\_2\_1.order\_mes.seat\_type is '车座种类';  comment on column y\_1\_4\_2\_1.order\_mes.seat\_number is '座位号';  comment on column y\_1\_4\_2\_1.order\_mes.reser\_date is '订票日期';  comment on column y\_1\_4\_2\_1.order\_mes.arri\_time is '到达时间';  comment on column y\_1\_4\_2\_1.order\_mes.str\_time is '发车时间';  comment on column y\_1\_4\_2\_1.order\_mes.order\_status is '订单状态';  comment on column y\_1\_4\_2\_1.order\_mes.ticket\_out\_if is '出票状态';  comment on column y\_1\_4\_2\_1.order\_mes.change\_sta\_if is '变更到站状态'; |

##### 余票信息

表2.2.4.1‑2 surplus\_ticket\_mes（surplus\_ticket\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 余票编号 | surplus\_ticket\_id | number(12,0) | n |  |  |  |
| 2 | 编号 | train\_id\_num | number(12,0) | n |  |  |  |
| 3 | 车次编号 | train\_num | varchar2(5) | n |  |  |  |
| 4 | 站点名 | station\_name | varchar2(91) | n |  |  |  |
| 5 | 车厢号 | carr\_num | number(2,0) | n |  |  |  |
| 6 | 车厢类别 | carr\_type | varchar2(21) | n |  |  |  |
| 7 | 座位总数 | total\_seats | number(3,0) | n |  |  |  |
| 8 | 当前正售座位号 | cur\_seat\_num | varchar2(5) |  |  |  |  |
| 9 | 余票 | sur\_tick\_num | number(3,0) |  |  |  |  |

执行脚本（Oracle，y\_1\_4\_2\_1）

|  |
| --- |
| -- 创建表：余票信息  create table y\_1\_4\_2\_1.surplus\_ticket\_mes  (  surplus\_ticket\_id number(12,0) not null ,  train\_id\_num number(12,0) not null ,  train\_num varchar2(5) not null ,  station\_name varchar2(91) not null ,  carr\_num number(2,0) not null ,  carr\_type varchar2(21) not null ,  total\_seats number(3,0) not null ,  cur\_seat\_num varchar2(5) ,  sur\_tick\_num number(3,0) ,  primary key(surplus\_ticket\_id)  )  ;  comment on table y\_1\_4\_2\_1.surplus\_ticket\_mes is '余票信息';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.surplus\_ticket\_id is '余票编号';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.train\_id\_num is '编号';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.train\_num is '车次编号';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.station\_name is '站点名';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.carr\_num is '车厢号';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.carr\_type is '车厢类别';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.total\_seats is '座位总数';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.cur\_seat\_num is '当前正售座位号';  comment on column y\_1\_4\_2\_1.surplus\_ticket\_mes.sur\_tick\_num is '余票'; |

##### 乘客信息

表2.2.4.1‑3 passenger\_mes（pa\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 身份证号 | pa\_id | char(18) | n |  |  |  |
| 2 | 乘客姓名 | pa\_name | varchar2(45) | n |  |  |  |
| 3 | 性别 | pa\_sex | char(5) |  |  |  | 1-男，2-女. ‘-’为半角符号。 |
| 4 | 手机号码 | phone\_num | char(11) | n |  |  |  |
| 5 | 登录密码 | password | varchar2(20) | n |  |  | 不能少于6位字符；  必须且只能包含字母，数字，下划线中的两种或两种以上。 |

执行脚本（Oracle，y\_1\_4\_2\_1）

|  |
| --- |
| -- 创建表：乘客信息  create table y\_1\_4\_2\_1.passenger\_mes  (  pa\_id char(18) not null ,  pa\_name varchar2(45) not null ,  pa\_sex char(5) ,  phone\_num char(11) not null ,  password varchar2(20) not null ,  primary key(pa\_id)  )  ;  comment on table y\_1\_4\_2\_1.passenger\_mes is '乘客信息　　';  comment on column y\_1\_4\_2\_1.passenger\_mes.pa\_id is '身份证号';  comment on column y\_1\_4\_2\_1.passenger\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_4\_2\_1.passenger\_mes.pa\_sex is '性别';  comment on column y\_1\_4\_2\_1.passenger\_mes.phone\_num is '手机号码';  comment on column y\_1\_4\_2\_1.passenger\_mes.password is '登录密码'; |

##### 车次信息

表2.2.4.1‑4 train\_num\_mes（train\_id\_num）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | train\_id\_num | number(12,0) | n |  |  |  |
| 2 | 站点名 | train\_name | varchar2(30) | n |  |  |  |
| 3 | 站点次序 | train\_sequ | number(2,0) | n |  |  |  |
| 4 | 车次编号 | train\_num | varchar2(5) | n |  |  |  |
| 5 | 车厢数 | carr\_sum | number(2,0) | n |  |  |  |
| 6 | 发车时间 | depart\_time | date | n |  |  |  |
| 7 | 到达时间 | arri\_time | date | n |  |  |  |
| 8 | 车次始发站 | depart\_stat | varchar2(91) | n |  |  |  |
| 9 | 车次终点站 | arri\_stat | varchar2(91) | n |  |  |  |
| 10 | 经过站点数 | pass\_stat\_sum | number(2,0) | n |  |  |  |
| 11 | 票价比率 | price\_ratio | number(3,2) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_2\_1）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_2\_1.train\_num\_mes  (  train\_id\_num number(12,0) not null ,  train\_name varchar2(30) not null ,  train\_sequ number(2,0) not null ,  train\_num varchar2(5) not null ,  carr\_sum number(2,0) not null ,  depart\_time date not null ,  arri\_time date not null ,  depart\_stat varchar2(91) not null ,  arri\_stat varchar2(91) not null ,  pass\_stat\_sum number(2,0) not null ,  price\_ratio number(3,2) not null ,  primary key(train\_id\_num)  )  ;  comment on table y\_1\_4\_2\_1.train\_num\_mes is '车次信息';  comment on column y\_1\_4\_2\_1.train\_num\_mes.train\_id\_num is '编号';  comment on column y\_1\_4\_2\_1.train\_num\_mes.train\_name is '站点名';  comment on column y\_1\_4\_2\_1.train\_num\_mes.train\_sequ is '站点次序';  comment on column y\_1\_4\_2\_1.train\_num\_mes.train\_num is '车次编号';  comment on column y\_1\_4\_2\_1.train\_num\_mes.carr\_sum is '车厢数';  comment on column y\_1\_4\_2\_1.train\_num\_mes.depart\_time is '发车时间';  comment on column y\_1\_4\_2\_1.train\_num\_mes.arri\_time is '到达时间';  comment on column y\_1\_4\_2\_1.train\_num\_mes.depart\_stat is '车次始发站';  comment on column y\_1\_4\_2\_1.train\_num\_mes.arri\_stat is '车次终点站';  comment on column y\_1\_4\_2\_1.train\_num\_mes.pass\_stat\_sum is '经过站点数';  comment on column y\_1\_4\_2\_1.train\_num\_mes.price\_ratio is '票价比率'; |

##### 票价信息

表2.2.4.1‑5 ticket\_price\_mes（ticket\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 票价编号 | ticket\_id | char(14) | n |  |  |  |
| 2 | 站点名 | stat\_name | varchar2(91) | n |  |  |  |
| 3 | 车厢类别 | carr\_type | varchar2(21) | n |  |  |  |
| 4 | 铺位类别 | seat\_type | char(18) | n |  |  |  |
| 5 | 站点区间基础票价 | basic\_price | number(6,2) | n |  |  |  |
| 6 | 票价上浮比率 | price\_ratio | number(6,4) | n |  |  |  |
| 7 | 站点区间总票价 | ticket\_price | number(6,2) | n |  |  |  |
| 8 | 车次号 | train\_id\_num | number(12,0) | n |  |  |  |
| 9 | 站点序号 | stat\_sequ | number(2,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_2\_1）

|  |
| --- |
| -- 创建表：票价信息  create table y\_1\_4\_2\_1.ticket\_price\_mes  (  ticket\_id char(14) not null ,  stat\_name varchar2(91) not null ,  carr\_type varchar2(21) not null ,  seat\_type char(18) not null ,  basic\_price number(6,2) not null ,  price\_ratio number(6,4) not null ,  ticket\_price number(6,2) not null ,  train\_id\_num number(12,0) not null ,  stat\_sequ number(2,0) not null ,  primary key(ticket\_id)  )  ;  comment on table y\_1\_4\_2\_1.ticket\_price\_mes is '票价信息';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.ticket\_id is '票价编号';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.stat\_name is '站点名';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.carr\_type is '车厢类别';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.seat\_type is '铺位类别';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.basic\_price is '站点区间基础票价';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.price\_ratio is '票价上浮比率';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.ticket\_price is '站点区间总票价';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.train\_id\_num is '车次号';  comment on column y\_1\_4\_2\_1.ticket\_price\_mes.stat\_sequ is '站点序号'; |

#### 站点2

##### 订单信息

表2.2.4.2‑1 order\_mes（order\_number）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 订单号 | order\_number | char(10) | n |  |  |  |
| 2 | 车次编号 | train\_number | varchar(5) | n |  |  |  |
| 3 | 车号 | train\_id\_num | dec(12,0) |  |  |  |  |
| 4 | 乘客出发站 | pa\_start\_sta | varchar(81) | n |  |  |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | varchar(81) | n |  |  |  |
| 6 | 身份证号 | pa\_id | char(18) | n |  |  |  |
| 7 | 乘客姓名 | pa\_name | varchar(30) | n |  |  |  |
| 8 | 票价 | ticket\_price | dec(6,2) | n |  |  |  |
| 9 | 车厢号 | carr\_num | dec(2,0) | n |  |  |  |
| 10 | 车座种类 | seat\_type | varchar(15) | n |  |  |  |
| 11 | 座位号 | seat\_number | varchar(4) | n |  |  |  |
| 12 | 订票日期 | reser\_date | datetime | n | getdate() |  |  |
| 13 | 到达时间 | arri\_time | datetime | n |  |  |  |
| 14 | 发车时间 | str\_time | datetime | n |  |  |  |
| 15 | 订单状态 | order\_status | char(8) | n |  |  |  |
| 16 | 出票状态 | ticket\_out\_if | char(8) | n |  |  |  |
| 17 | 变更到站状态 | change\_sta\_if | char(16) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_2\_2）

|  |
| --- |
| -- 创建表：订单信息  create table y\_1\_4\_2\_2.order\_mes  (  order\_number char(10) not null ,  train\_number varchar(5) not null ,  train\_id\_num dec(12,0) ,  pa\_start\_sta varchar(81) not null ,  pa\_arrive\_sta varchar(81) not null ,  pa\_id char(18) not null ,  pa\_name varchar(30) not null ,  ticket\_price dec(6,2) not null ,  carr\_num dec(2,0) not null ,  seat\_type varchar(15) not null ,  seat\_number varchar(4) not null ,  reser\_date datetime default (getdate()) not null ,  arri\_time datetime not null ,  str\_time datetime not null ,  order\_status char(8) not null ,  ticket\_out\_if char(8) not null ,  change\_sta\_if char(16) not null ,  primary key(order\_number)  )  ;  exec sp\_addextendedproperty 'MS\_Description','订单信息','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','order\_number'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','train\_number'  exec sp\_addextendedproperty 'MS\_Description','车号','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','pa\_start\_sta'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','pa\_arrive\_sta'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','pa\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','pa\_name'  exec sp\_addextendedproperty 'MS\_Description','票价','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','ticket\_price'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','carr\_num'  exec sp\_addextendedproperty 'MS\_Description','车座种类','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','订票日期','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','reser\_date'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','arri\_time'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','str\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','order\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','ticket\_out\_if'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_4\_2\_2','TABLE','order\_mes','COLUMN','change\_sta\_if' |

##### 余票信息

表2.2.4.2‑2 surplus\_ticket\_mes（surplus\_ticket\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 余票编号 | surplus\_ticket\_id | dec(12,0) | n |  |  |  |
| 2 | 编号 | train\_id\_num | dec(12,0) | n |  |  |  |
| 3 | 车次编号 | train\_num | varchar(5) | n |  |  |  |
| 4 | 站点名 | station\_name | varchar(81) | n |  |  |  |
| 5 | 车厢号 | carr\_num | dec(2,0) | n |  |  |  |
| 6 | 车厢类别 | carr\_type | varchar(15) | n |  |  |  |
| 7 | 座位总数 | total\_seats | dec(3,0) | n |  |  |  |
| 8 | 当前正售座位号 | cur\_seat\_num | varchar(4) |  |  |  |  |
| 9 | 余票 | sur\_tick\_num | dec(3,0) |  |  |  |  |

执行脚本（SQL Server，y\_1\_4\_2\_2）

|  |
| --- |
| -- 创建表：余票信息  create table y\_1\_4\_2\_2.surplus\_ticket\_mes  (  surplus\_ticket\_id dec(12,0) not null ,  train\_id\_num dec(12,0) not null ,  train\_num varchar(5) not null ,  station\_name varchar(81) not null ,  carr\_num dec(2,0) not null ,  carr\_type varchar(15) not null ,  total\_seats dec(3,0) not null ,  cur\_seat\_num varchar(4) ,  sur\_tick\_num dec(3,0) ,  primary key(surplus\_ticket\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','余票信息','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes'  exec sp\_addextendedproperty 'MS\_Description','余票编号','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','surplus\_ticket\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','carr\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','carr\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','total\_seats'  exec sp\_addextendedproperty 'MS\_Description','当前正售座位号','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','cur\_seat\_num'  exec sp\_addextendedproperty 'MS\_Description','余票','SCHEMA','y\_1\_4\_2\_2','TABLE','surplus\_ticket\_mes','COLUMN','sur\_tick\_num' |

##### 乘客信息

表2.2.4.2‑3 passenger\_mes（pa\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 身份证号 | pa\_id | char(18) | n |  |  |  |
| 2 | 乘客姓名 | pa\_name | varchar(30) | n |  |  |  |
| 3 | 性别 | pa\_sex | char(4) |  |  |  | 1-男，2-女. ‘-’为半角符号。 |
| 4 | 手机号码 | phone\_num | char(11) | n |  |  |  |
| 5 | 登录密码 | password | varchar(20) | n |  |  | 不能少于6位字符；  必须且只能包含字母，数字，下划线中的两种或两种以上。 |

执行脚本（SQL Server，y\_1\_4\_2\_2）

|  |
| --- |
| -- 创建表：乘客信息  create table y\_1\_4\_2\_2.passenger\_mes  (  pa\_id char(18) not null ,  pa\_name varchar(30) not null ,  pa\_sex char(4) ,  phone\_num char(11) not null ,  password varchar(20) not null ,  primary key(pa\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','乘客信息','SCHEMA','y\_1\_4\_2\_2','TABLE','passenger\_mes'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_4\_2\_2','TABLE','passenger\_mes','COLUMN','pa\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_4\_2\_2','TABLE','passenger\_mes','COLUMN','pa\_name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_4\_2\_2','TABLE','passenger\_mes','COLUMN','pa\_sex'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_4\_2\_2','TABLE','passenger\_mes','COLUMN','phone\_num'  exec sp\_addextendedproperty 'MS\_Description','登录密码','SCHEMA','y\_1\_4\_2\_2','TABLE','passenger\_mes','COLUMN','password' |

##### 车次信息

表2.2.4.2‑4 train\_num\_mes（train\_id\_num）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | train\_id\_num | dec(12,0) | n |  |  |  |
| 2 | 站点名 | train\_name | varchar(20) | n |  |  |  |
| 3 | 站点次序 | train\_sequ | dec(2,0) | n |  |  |  |
| 4 | 车次编号 | train\_num | varchar(5) | n |  |  |  |
| 5 | 车厢数 | carr\_sum | dec(2,0) | n |  |  |  |
| 6 | 发车时间 | depart\_time | datetime | n |  |  |  |
| 7 | 到达时间 | arri\_time | datetime | n |  |  |  |
| 8 | 车次始发站 | depart\_stat | varchar(81) | n |  |  |  |
| 9 | 车次终点站 | arri\_stat | varchar(81) | n |  |  |  |
| 10 | 经过站点数 | pass\_stat\_sum | dec(2,0) | n |  |  |  |
| 11 | 票价比率 | price\_ratio | dec(3,2) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_2\_2）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_2\_2.train\_num\_mes  (  train\_id\_num dec(12,0) not null ,  train\_name varchar(20) not null ,  train\_sequ dec(2,0) not null ,  train\_num varchar(5) not null ,  carr\_sum dec(2,0) not null ,  depart\_time datetime not null ,  arri\_time datetime not null ,  depart\_stat varchar(81) not null ,  arri\_stat varchar(81) not null ,  pass\_stat\_sum dec(2,0) not null ,  price\_ratio dec(3,2) not null ,  primary key(train\_id\_num)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车次信息','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','train\_name'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','train\_sequ'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢数','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','carr\_sum'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','depart\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','arri\_time'  exec sp\_addextendedproperty 'MS\_Description','车次始发站','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','depart\_stat'  exec sp\_addextendedproperty 'MS\_Description','车次终点站','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','arri\_stat'  exec sp\_addextendedproperty 'MS\_Description','经过站点数','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','pass\_stat\_sum'  exec sp\_addextendedproperty 'MS\_Description','票价比率','SCHEMA','y\_1\_4\_2\_2','TABLE','train\_num\_mes','COLUMN','price\_ratio' |

##### 票价信息

表2.2.4.2‑5 ticket\_price\_mes（ticket\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 票价编号 | ticket\_id | char(14) | n |  |  |  |
| 2 | 站点名 | stat\_name | varchar(81) | n |  |  |  |
| 3 | 车厢类别 | carr\_type | varchar(15) | n |  |  |  |
| 4 | 铺位类别 | seat\_type | char(13) | n |  |  |  |
| 5 | 站点区间基础票价 | basic\_price | dec(6,2) | n |  |  |  |
| 6 | 票价上浮比率 | price\_ratio | dec(6,4) | n |  |  |  |
| 7 | 站点区间总票价 | ticket\_price | dec(6,2) | n |  |  |  |
| 8 | 车次号 | train\_id\_num | dec(12,0) | n |  |  |  |
| 9 | 站点序号 | stat\_sequ | dec(2,0) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_2\_2）

|  |
| --- |
| -- 创建表：票价信息  create table y\_1\_4\_2\_2.ticket\_price\_mes  (  ticket\_id char(14) not null ,  stat\_name varchar(81) not null ,  carr\_type varchar(15) not null ,  seat\_type char(13) not null ,  basic\_price dec(6,2) not null ,  price\_ratio dec(6,4) not null ,  ticket\_price dec(6,2) not null ,  train\_id\_num dec(12,0) not null ,  stat\_sequ dec(2,0) not null ,  primary key(ticket\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','票价信息','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes'  exec sp\_addextendedproperty 'MS\_Description','票价编号','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','ticket\_id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','stat\_name'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','carr\_type'  exec sp\_addextendedproperty 'MS\_Description','铺位类别','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','站点区间基础票价','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','basic\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','price\_ratio'  exec sp\_addextendedproperty 'MS\_Description','站点区间总票价','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','ticket\_price'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','站点序号','SCHEMA','y\_1\_4\_2\_2','TABLE','ticket\_price\_mes','COLUMN','stat\_sequ' |

#### 站点3

##### 订单信息

表2.2.4.3‑1 order\_mes（order\_number）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 订单号 | order\_number | char(10) | n |  |  |  |
| 2 | 车次编号 | train\_number | varchar(5) | n |  |  |  |
| 3 | 车号 | train\_id\_num | dec(12,0) |  |  |  |  |
| 4 | 乘客出发站 | pa\_start\_sta | varchar(71) | n |  |  |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | varchar(71) | n |  |  |  |
| 6 | 身份证号 | pa\_id | char(18) | n |  |  |  |
| 7 | 乘客姓名 | pa\_name | varchar(15) | n |  |  |  |
| 8 | 票价 | ticket\_price | dec(6,2) | n |  |  |  |
| 9 | 车厢号 | carr\_num | dec(2,0) | n |  |  |  |
| 10 | 车座种类 | seat\_type | varchar(9) | n |  |  |  |
| 11 | 座位号 | seat\_number | varchar(3) | n |  |  |  |
| 12 | 订票日期 | reser\_date | timestamp | n | current\_timestamp |  |  |
| 13 | 到达时间 | arri\_time | timestamp | n |  |  |  |
| 14 | 发车时间 | str\_time | timestamp | n |  |  |  |
| 15 | 订单状态 | order\_status | char(5) | n |  |  |  |
| 16 | 出票状态 | ticket\_out\_if | char(5) | n |  |  |  |
| 17 | 变更到站状态 | change\_sta\_if | char(9) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_2\_3）

|  |
| --- |
| -- 创建表：订单信息  create table y\_1\_4\_2\_3.order\_mes  (  order\_number char(10) not null ,  train\_number varchar(5) not null ,  train\_id\_num dec(12,0) ,  pa\_start\_sta varchar(71) not null ,  pa\_arrive\_sta varchar(71) not null ,  pa\_id char(18) not null ,  pa\_name varchar(15) not null ,  ticket\_price dec(6,2) not null ,  carr\_num dec(2,0) not null ,  seat\_type varchar(9) not null ,  seat\_number varchar(3) not null ,  reser\_date timestamp default (current\_timestamp) not null ,  arri\_time timestamp not null ,  str\_time timestamp not null ,  order\_status char(5) not null ,  ticket\_out\_if char(5) not null ,  change\_sta\_if char(9) not null ,  primary key(order\_number)  )  ;  comment on table y\_1\_4\_2\_3.order\_mes is '订单信息';  comment on column y\_1\_4\_2\_3.order\_mes.order\_number is '订单号';  comment on column y\_1\_4\_2\_3.order\_mes.train\_number is '车次编号';  comment on column y\_1\_4\_2\_3.order\_mes.train\_id\_num is '车号';  comment on column y\_1\_4\_2\_3.order\_mes.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_4\_2\_3.order\_mes.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_4\_2\_3.order\_mes.pa\_id is '身份证号';  comment on column y\_1\_4\_2\_3.order\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_4\_2\_3.order\_mes.ticket\_price is '票价';  comment on column y\_1\_4\_2\_3.order\_mes.carr\_num is '车厢号';  comment on column y\_1\_4\_2\_3.order\_mes.seat\_type is '车座种类';  comment on column y\_1\_4\_2\_3.order\_mes.seat\_number is '座位号';  comment on column y\_1\_4\_2\_3.order\_mes.reser\_date is '订票日期';  comment on column y\_1\_4\_2\_3.order\_mes.arri\_time is '到达时间';  comment on column y\_1\_4\_2\_3.order\_mes.str\_time is '发车时间';  comment on column y\_1\_4\_2\_3.order\_mes.order\_status is '订单状态';  comment on column y\_1\_4\_2\_3.order\_mes.ticket\_out\_if is '出票状态';  comment on column y\_1\_4\_2\_3.order\_mes.change\_sta\_if is '变更到站状态'; |

##### 余票信息

表2.2.4.3‑2 surplus\_ticket\_mes（surplus\_ticket\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 余票编号 | surplus\_ticket\_id | dec(12,0) | n |  |  |  |
| 2 | 编号 | train\_id\_num | dec(12,0) | n |  |  |  |
| 3 | 车次编号 | train\_num | varchar(5) |  |  |  |  |
| 4 | 站点名 | station\_name | varchar(71) | n |  |  |  |
| 5 | 车厢号 | carr\_num | dec(2,0) | n |  |  |  |
| 6 | 车厢类别 | carr\_type | varchar(9) | n |  |  |  |
| 7 | 座位总数 | total\_seats | dec(3,0) | n | 0 |  |  |
| 8 | 当前正售座位号 | cur\_seat\_num | varchar(3) |  |  |  |  |
| 9 | 余票 | sur\_tick\_num | dec(3,0) |  |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_2\_3）

|  |
| --- |
| -- 创建表：余票信息  create table y\_1\_4\_2\_3.surplus\_ticket\_mes  (  surplus\_ticket\_id dec(12,0) not null ,  train\_id\_num dec(12,0) not null ,  train\_num varchar(5) ,  station\_name varchar(71) not null ,  carr\_num dec(2,0) not null ,  carr\_type varchar(9) not null ,  total\_seats dec(3,0) default (0) not null ,  cur\_seat\_num varchar(3) ,  sur\_tick\_num dec(3,0) ,  primary key(surplus\_ticket\_id)  )  ;  comment on table y\_1\_4\_2\_3.surplus\_ticket\_mes is '余票信息';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.surplus\_ticket\_id is '余票编号';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.train\_id\_num is '编号';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.train\_num is '车次编号';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.station\_name is '站点名';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.carr\_num is '车厢号';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.carr\_type is '车厢类别';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.total\_seats is '座位总数';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.cur\_seat\_num is '当前正售座位号';  comment on column y\_1\_4\_2\_3.surplus\_ticket\_mes.sur\_tick\_num is '余票'; |

##### 乘客信息

表2.2.4.3‑3 passenger\_mes（pa\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 身份证号 | pa\_id | char(18) | n |  |  |  |
| 2 | 乘客姓名 | pa\_name | varchar(15) | n |  |  |  |
| 3 | 性别 | pa\_sex | char(3) |  |  |  | 1-男，2-女. ‘-’为半角符号。 |
| 4 | 手机号码 | phone\_num | char(11) | n |  |  |  |
| 5 | 登录密码 | password | varchar(20) | n |  |  | 不能少于6位字符；  必须且只能包含字母，数字，下划线中的两种或两种以上。 |

执行脚本（PostgreSQL，y\_1\_4\_2\_3）

|  |
| --- |
| -- 创建表：乘客信息  create table y\_1\_4\_2\_3.passenger\_mes  (  pa\_id char(18) not null ,  pa\_name varchar(15) not null ,  pa\_sex char(3) ,  phone\_num char(11) not null ,  password varchar(20) not null ,  primary key(pa\_id)  )  ;  comment on table y\_1\_4\_2\_3.passenger\_mes is '乘客信息';  comment on column y\_1\_4\_2\_3.passenger\_mes.pa\_id is '身份证号';  comment on column y\_1\_4\_2\_3.passenger\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_4\_2\_3.passenger\_mes.pa\_sex is '性别';  comment on column y\_1\_4\_2\_3.passenger\_mes.phone\_num is '手机号码';  comment on column y\_1\_4\_2\_3.passenger\_mes.password is '登录密码'; |

##### 车次信息

表2.2.4.3‑4 train\_num\_mes（train\_id\_num）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | train\_id\_num | dec(12,0) | n |  |  |  |
| 2 | 站点名 | train\_name | varchar(10) | n |  |  |  |
| 3 | 站点次序 | train\_sequ | dec(2,0) | n |  |  |  |
| 4 | 车次编号 | train\_num | varchar(5) | n |  |  |  |
| 5 | 车厢数 | carr\_sum | dec(2,0) | n |  |  |  |
| 6 | 发车时间 | depart\_time | timestamp | n |  |  |  |
| 7 | 到达时间 | arri\_time | timestamp | n |  |  |  |
| 8 | 车次始发站 | depart\_stat | varchar(71) | n |  |  |  |
| 9 | 车次终点站 | arri\_stat | varchar(71) | n |  |  |  |
| 10 | 经过站点数 | pass\_stat\_sum | dec(2,0) | n |  |  |  |
| 11 | 票价比率 | price\_ratio | dec(3,2) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_2\_3）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_2\_3.train\_num\_mes  (  train\_id\_num dec(12,0) not null ,  train\_name varchar(10) not null ,  train\_sequ dec(2,0) not null ,  train\_num varchar(5) not null ,  carr\_sum dec(2,0) not null ,  depart\_time timestamp not null ,  arri\_time timestamp not null ,  depart\_stat varchar(71) not null ,  arri\_stat varchar(71) not null ,  pass\_stat\_sum dec(2,0) not null ,  price\_ratio dec(3,2) not null ,  primary key(train\_id\_num)  )  ;  comment on table y\_1\_4\_2\_3.train\_num\_mes is '车次信息';  comment on column y\_1\_4\_2\_3.train\_num\_mes.train\_id\_num is '编号';  comment on column y\_1\_4\_2\_3.train\_num\_mes.train\_name is '站点名';  comment on column y\_1\_4\_2\_3.train\_num\_mes.train\_sequ is '站点次序';  comment on column y\_1\_4\_2\_3.train\_num\_mes.train\_num is '车次编号';  comment on column y\_1\_4\_2\_3.train\_num\_mes.carr\_sum is '车厢数';  comment on column y\_1\_4\_2\_3.train\_num\_mes.depart\_time is '发车时间';  comment on column y\_1\_4\_2\_3.train\_num\_mes.arri\_time is '到达时间';  comment on column y\_1\_4\_2\_3.train\_num\_mes.depart\_stat is '车次始发站';  comment on column y\_1\_4\_2\_3.train\_num\_mes.arri\_stat is '车次终点站';  comment on column y\_1\_4\_2\_3.train\_num\_mes.pass\_stat\_sum is '经过站点数';  comment on column y\_1\_4\_2\_3.train\_num\_mes.price\_ratio is '票价比率'; |

##### 票价信息

表2.2.4.3‑5 ticket\_price\_mes（ticket\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 票价编号 | ticket\_id | char(14) | n |  |  |  |
| 2 | 站点名 | stat\_name | varchar(71) | n |  |  |  |
| 3 | 车厢类别 | carr\_type | varchar(9) | n |  |  |  |
| 4 | 铺位类别 | seat\_type | char(8) | n |  |  |  |
| 5 | 站点区间基础票价 | basic\_price | dec(6,2) | n |  |  |  |
| 6 | 票价上浮比率 | price\_ratio | dec(6,4) | n |  |  |  |
| 7 | 站点区间总票价 | ticket\_price | dec(6,2) | n |  |  |  |
| 8 | 车次号 | train\_id\_num | dec(12,0) | n |  |  |  |
| 9 | 站点序号 | stat\_sequ | dec(2,0) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_2\_3）

|  |
| --- |
| -- 创建表：票价信息  create table y\_1\_4\_2\_3.ticket\_price\_mes  (  ticket\_id char(14) not null ,  stat\_name varchar(71) not null ,  carr\_type varchar(9) not null ,  seat\_type char(8) not null ,  basic\_price dec(6,2) not null ,  price\_ratio dec(6,4) not null ,  ticket\_price dec(6,2) not null ,  train\_id\_num dec(12,0) not null ,  stat\_sequ dec(2,0) not null ,  primary key(ticket\_id)  )  ;  comment on table y\_1\_4\_2\_3.ticket\_price\_mes is '票价信息';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.ticket\_id is '票价编号';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.stat\_name is '站点名';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.carr\_type is '车厢类别';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.seat\_type is '铺位类别';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.basic\_price is '站点区间基础票价';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.price\_ratio is '票价上浮比率';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.ticket\_price is '站点区间总票价';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.train\_id\_num is '车次号';  comment on column y\_1\_4\_2\_3.ticket\_price\_mes.stat\_sequ is '站点序号'; |

## 管理员业务

### 程序流程图

#### 增加车次

是否存在

是

输入车次号

开始

输入站点名

输入车次经过的站点总数

站点是否存在

格式是否正确

录入车次信息和车次其他信息和车厢信息

查询同日期车次号

结束

否

否

是

否

是

否

是

输入停车时间

输入开车时间

开车时间>=

停车时间

是

否

显示车次信息、车次其他信息和车厢信息

输入车次信息

输入车厢信息

输入发车日期

输入的站点数<经过的站点总数

图2.3.1‑1 增加站点程序流程图

#### 修改车次

否

否

是

是

否

修改车次基本信息

输入车次号

显示车次基本信息

是否存在

选择修改或者删除操作

选择修改内容

开始

否

是

是

是

修改站点信息

是

否

是

修改

删除

是否有相关站点信息或车厢信息

进行修改/删除操作

输入车次号

结束

是否有相关站点

是否存在

输入发车日期

是否存在

显示站点信息

提示不能修改/删除

否

进行修改/删除操作

否

修改站点信息

输入车次号

是否存在

输入发车日期

是否存在

显车厢信息

进行修改/删除操作

图2.3.1‑2 修改车次程序流程图

#### 增加车站

是否存在

输入车站名称

开始

是

否

结束

输入车站次序

输入车站等级

输入车站所属铁路局

输入车站所属车务段

是否保存

录入车站信息

是

否

选择是否为供给站

图2.3.1‑3 增加车站程序流程图

### 单据数据描述

表2.3‑1所有单据数据描述列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 单据名称 | 所属功能 | 使用频度 | 备注 |
| 1 | 车次信息 | 增加车次、修改车次 | 100次/年 |  |
| 2 | 车次其他信息 | 增加车次、修改车次 | 2000次/年 |  |
| 3 | 车站信息 | 增加车站 | 30次/年 |  |
| 4 | 车厢信息 | 增加车次、修改车次 | 20000次/年 |  |

#### 车次信息

表2.3.2‑1 数据项的详细描述信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 车次号 | 是 | 字符型，可变长度，5个英文数字字符 | 否 |  |  |
| 2 | 经过站点数 |  | 数值型，2位有效数字，无小数 | 否 |  |  |
| 3 | 运行时间 |  | 日期时间间隔 | 否 |  |  |
| 4 | 全程里程数 |  | 数值型，7位有效数字，2位小数 | 否 |  | 量纲：公里 |
| 5 | 票价上浮比率 |  | 字符型，固定长度，60个英文数字字符 | 否 |  |  |

#### 车次其他信息

表2.3.2‑2 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 编号 | 是 | 字符型，可变长度，12位数字 | 否 |  | 车次号后三位+日期+站次 |
| 2 | 站次 |  | 数值型，2位有效数字，无小数 | 否 |  |  |
| 3 | 车次号 |  | 与表2.3.2-1中第1项相同 | 否 |  |  |
| 4 | 站点名 |  | 字符型，可变长度，10个汉字+60个英文+1个半角逗号 | 否 |  |  |
| 5 | 停车时间 |  | 日期时间型 |  |  |  |
| 6 | 发车时间 |  | 日期时间型 |  |  |  |
| 7 | 里程数 |  | 数值型，7位有效数字，2位小数 | 否 |  | 量纲：公里 |
| 8 | 前序站点 |  | 数值型，2位有效数字，无小数 | 否 |  |  |
| 9 | 后继站点 |  | 数值型，2位有效数字，无小数 | 否 |  |  |
| 10 | 站点区间基础票价 |  | 数值型，5位有效数字，1位小数 | 否 |  |  |

#### 车站信息

表2.3.2‑3 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 车站名 | 是 | 与表2.3.2-2中第4项相同 | 否 |  |  |
| 2 | 所属铁路局 |  | 字符型，可变长度，10个汉字 | 否 |  |  |
| 3 | 所属车务段 |  | 字符型，可变长度，10个汉字 | 否 |  |  |
| 4 | 车站等级 |  | 字符型，固定长度，1个数字+1个半角斜杠+1个汉字 | 否 |  |  |
| 5 | 车站次序 |  | 数值型，4位有效数字，无小数 | 否 |  |  |
| 6 | 供给站标志 |  | 字符型，固定长度，1个数字+1个半角横杠 +1个汉字 | 否 |  |  |

#### 车厢信息

表2.3.2‑4 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 编号 | 是 | 字符型，可变长度，12位数字 | 否 |  | 车次号后三位+日期+车厢号 |
| 2 | 车次号 |  | 与表2.3.2-1中第1项相同 | 否 |  |  |
| 3 | 车厢号 |  | 数值型，2位有效数字，无小数 | 否 |  |  |
| 4 | 车厢类型 |  | 字符型，可变长度，3个英文数字字符，4个汉字 | 否 |  |  |
| 5 | 座位总数 |  | 数值型，3位有效数字，无小数 | 否 |  |  |

### 报表数据描述

表2.3‑2所有报表描述列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 报表名称 | 所属功能 | 使用频度 | 备注 |
| 1 | 用户信息 | 无 |  |  |

#### 用户信息

表2.3.3‑1 数据项的详细信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 数据项名 | 主键 | 特征 | 空否 | 取值范围 | 备注 |
| 1 | 用户名 | 是 | 字符型，可变长度，20个英文字符 | 否 |  |  |
| 2 | 密码 |  | 字符型，可变长度，20个英文字符 | 否 |  |  |
| 3 | 用户类型 |  | 字符型，可变长度，3个汉字 | 否 |  |  |

### 表

表2.3.4‑1表名列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 类别 | 来自 | 备注 |
| 1 | 车次信息 | train\_info | 单据 | 车次信息 |  |
| 2 | 站点信息 | train\_other\_info | 单据 | 车次其他信息 |  |
| 3 | 车站信息 | station\_info | 单据 | 车站信息 |  |
| 4 | 车厢信息 | compartment\_info | 单据 | 车厢信息 |  |
| 5 | 管理员信息 | administer\_info | 报表 | 管理员信息 |  |

#### 站点1

##### 车次信息

表2.3.4.1‑1 train\_info（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar2(5) | n |  |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | number(2,0) | n |  |  |  |
| 3 | 运行时间 | train\_runtime | interval day(1) to second(2) | n |  |  |  |
| 4 | 全程里程数 | train\_runmile | number(7,2) | n |  |  |  |
| 5 | 票价上浮比率 | fare\_rate | char(60) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_3\_1）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_3\_1.train\_info  (  train\_id varchar2(5) not null ,  train\_passstatin\_num number(2,0) default (0) not null ,  train\_runtime interval day(1) to second(2) not null ,  train\_runmile number(7,2) default (0) not null ,  fare\_rate char(60) not null ,  primary key(train\_id)  )  ;  comment on table y\_1\_4\_3\_1.train\_info is '车次信息';  comment on column y\_1\_4\_3\_1.train\_info.train\_id is '车次号';  comment on column y\_1\_4\_3\_1.train\_info.train\_passstatin\_num is '经过站点数';  comment on column y\_1\_4\_3\_1.train\_info.train\_runtime is '运行时间';  comment on column y\_1\_4\_3\_1.train\_info.train\_runmile is '全程里程数';  comment on column y\_1\_4\_3\_1.train\_info.fare\_rate is '票价上浮比率'; |

##### 站点信息

表2.3.4.1‑2 train\_other\_info（train\_other\_info\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | train\_other\_info\_id | varchar2(12) | n |  |  |  |
| 2 | 站次 | train\_station\_order | number(2,0) | n |  |  |  |
| 3 | 车次号 | train\_num | varchar2(5) | n |  |  | 参考车次信息表 |
| 4 | 站点名 | station\_name | varchar2(91) | n |  |  | 参考车站信息表 |
| 5 | 停车时间 | train\_stoptime | date |  |  |  |  |
| 6 | 发车时间 | train\_starttime | date |  |  |  |  |
| 7 | 里程数 | train\_station\_runmile | number(7,2) | n |  |  |  |
| 8 | 前序站点 | station\_p\_id | number(2,0) | n |  |  | 始发站的为0 |
| 9 | 后继站点 | station\_n\_id | number(2,0) | n |  |  | 终点站的为0 |
| 10 | 站点区间基础票价 | station\_base\_fare | number(5,1) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_3\_1）

|  |
| --- |
| -- 创建表：站点信息  create table y\_1\_4\_3\_1.train\_other\_info  (  train\_other\_info\_id varchar2(12) not null ,  train\_station\_order number(2,0) not null ,  train\_num varchar2(5) not null ,  station\_name varchar2(91) not null ,  train\_stoptime date not null ,  train\_starttime date not null ,  train\_station\_runmile number(7,2) not null ,  station\_p\_id number(2,0) not null ,  station\_n\_id number(2,0) not null ,  station\_base\_fare number(5,1) not null ,  primary key(train\_other\_info\_id)  )  ;  comment on table y\_1\_4\_3\_1.train\_other\_info is '站点信息';  comment on column y\_1\_4\_3\_1.train\_other\_info.train\_other\_info\_id is '编号';  comment on column y\_1\_4\_3\_1.train\_other\_info.train\_station\_order is '站次';  comment on column y\_1\_4\_3\_1.train\_other\_info.train\_num is '车次号';  comment on column y\_1\_4\_3\_1.train\_other\_info.station\_name is '站点名';  comment on column y\_1\_4\_3\_1.train\_other\_info.train\_stoptime is '停车时间';  comment on column y\_1\_4\_3\_1.train\_other\_info.train\_starttime is '发车时间';  comment on column y\_1\_4\_3\_1.train\_other\_info.train\_station\_runmile is '里程数';  comment on column y\_1\_4\_3\_1.train\_other\_info.station\_p\_id is '前序站点';  comment on column y\_1\_4\_3\_1.train\_other\_info.station\_n\_id is '后继站点';  comment on column y\_1\_4\_3\_1.train\_other\_info.station\_base\_fare is '站点区间基础票价'; |

##### 车站信息

表2.3.4.1‑3 station\_info（station\_name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车站名 | station\_name | varchar2(91) | n |  |  |  |
| 2 | 所属铁路局 | station\_railwayadmin | varchar2(30) | n |  |  |  |
| 3 | 所属车务段 | station\_railwaymaster | varchar2(30) | n |  |  |  |
| 4 | 车站等级 | station\_level | char(5) | n |  |  |  |
| 5 | 车站次序 | station\_order | number(4,0) | n |  |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | char(5) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_3\_1）

|  |
| --- |
| -- 创建表：车站信息  create table y\_1\_4\_3\_1.station\_info  (  station\_name varchar2(91) not null ,  station\_railwayadmin varchar2(30) not null ,  station\_railwaymaster varchar2(30) not null ,  station\_level char(5) not null ,  station\_order number(4,0) not null ,  statin\_provide\_flag char(5) not null ,  primary key(station\_name)  )  ;  comment on table y\_1\_4\_3\_1.station\_info is '车站信息';  comment on column y\_1\_4\_3\_1.station\_info.station\_name is '车站名';  comment on column y\_1\_4\_3\_1.station\_info.station\_railwayadmin is '所属铁路局';  comment on column y\_1\_4\_3\_1.station\_info.station\_railwaymaster is '所属车务段';  comment on column y\_1\_4\_3\_1.station\_info.station\_level is '车站等级';  comment on column y\_1\_4\_3\_1.station\_info.station\_order is '车站次序';  comment on column y\_1\_4\_3\_1.station\_info.statin\_provide\_flag is '供给站标志'; |

##### 车厢信息

表2.3.4.1‑4 compart\_info（compart\_info\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | compart\_info\_id | varchar2(12) | n |  |  |  |
| 2 | 车次号 | train\_num | varchar2(5) | n |  |  | 参考车次信息表 |
| 3 | 车厢号 | compart\_num | number(2,0) | n |  |  |  |
| 4 | 车厢类型 | compart\_type | varchar2(15) | n |  |  |  |
| 5 | 座位总数 | compart\_siteamount | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_3\_1）

|  |
| --- |
| -- 创建表：车厢信息  create table y\_1\_4\_3\_1.compart\_info  (  compart\_info\_id varchar2(12) not null ,  train\_num varchar2(5) not null ,  compart\_num number(2,0) not null ,  compart\_type varchar2(15) not null ,  compart\_siteamount number(3,0) not null ,  primary key(compart\_info\_id)  )  ;  comment on table y\_1\_4\_3\_1.compart\_info is '车厢信息';  comment on column y\_1\_4\_3\_1.compart\_info.compart\_info\_id is '编号';  comment on column y\_1\_4\_3\_1.compart\_info.train\_num is '车次号';  comment on column y\_1\_4\_3\_1.compart\_info.compart\_num is '车厢号';  comment on column y\_1\_4\_3\_1.compart\_info.compart\_type is '车厢类型';  comment on column y\_1\_4\_3\_1.compart\_info.compart\_siteamount is '座位总数'; |

##### 用户信息

表2.3.4.1‑5 user\_info（user\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 用户名 | user\_name | varchar2(20) | n |  |  |  |
| 2 | 密码 | user\_pw | varchar2(20) | n |  |  |  |
| 3 | 用户类型 | user\_name | varchar2(9) | n |  |  |  |

执行脚本（Oracle，y\_1\_4\_3\_1）

|  |
| --- |
| -- 创建表：用户信息  create table y\_1\_4\_3\_1.user\_info  (  user\_name varchar2(20) not null ,  user\_pw varchar2(20) not null ,  user\_name varchar2(9) not null ,  primary key(user\_id)  )  ;  comment on table y\_1\_4\_3\_1.user\_info is '用户信息';  comment on column y\_1\_4\_3\_1.user\_info.user\_name is '用户名';  comment on column y\_1\_4\_3\_1.user\_info.user\_pw is '密码';  comment on column y\_1\_4\_3\_1.user\_info.user\_name is '用户类型'; |

#### 站点2

##### 车次信息

表2.3.4.2‑1 train\_info（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar(5) | n |  |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | dec(2,0) | n |  |  |  |
| 3 | 运行时间 | train\_runtime | nvarchar(10) | n |  |  |  |
| 4 | 全程里程数 | train\_runmile | dec(7,2) | n |  |  |  |
| 5 | 票价上浮比率 | fare\_rate | char(60) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_3\_2）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_3\_2.train\_info  (  train\_id varchar(5) not null ,  train\_passstatin\_num dec(2,0) not null ,  train\_runtime nvarchar(10) not null ,  train\_runmile dec(7,2) not null ,  fare\_rate char(60) not null ,  primary key(train\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车次信息','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_info'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','经过站点数','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_info','COLUMN','train\_passstatin\_num'  exec sp\_addextendedproperty 'MS\_Description','运行时间','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_info','COLUMN','train\_runtime'  exec sp\_addextendedproperty 'MS\_Description','全程里程数','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_info','COLUMN','train\_runmile'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_info','COLUMN','fare\_rate' |

##### 站点信息

表2.3.4.2‑2 train\_other\_info（train\_other\_info\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | train\_other\_info\_id | varchar(12) | n |  |  |  |
| 2 | 站次 | train\_station\_order | dec(2,0) | n |  |  |  |
| 3 | 车次号 | train\_num | varchar(5) | n |  |  | 参考车次信息表 |
| 4 | 站点名 | station\_name | varchar(81) | n |  |  | 参考车站信息表 |
| 5 | 停车时间 | train\_stoptime | datetime |  |  |  |  |
| 6 | 发车时间 | train\_starttime | datetime |  |  |  |  |
| 7 | 里程数 | train\_station\_runmile | dec(7,2) | n |  |  |  |
| 8 | 前序站点 | station\_p\_id | dec(2,0) | n |  |  | 始发站的为0 |
| 9 | 后继站点 | station\_n\_id | dec(2,0) | n |  |  | 终点站的为0 |
| 10 | 站点区间基础票价 | station\_base\_fare | dec(5,1) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_3\_2）

|  |
| --- |
| -- 创建表：站点信息  create table y\_1\_4\_3\_2.train\_other\_info  (  train\_other\_info\_id varchar(12) not null ,  train\_station\_order dec(2,0) not null ,  train\_num varchar(5) not null ,  station\_name varchar(81) not null ,  train\_stoptime datetime not null ,  train\_starttime datetime not null ,  train\_station\_runmile dec(7,2) not null ,  station\_p\_id dec(2,0) not null ,  station\_n\_id dec(2,0) not null ,  station\_base\_fare dec(5,1) not null ,  primary key(train\_other\_info\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','站点信息','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','train\_other\_info\_id'  exec sp\_addextendedproperty 'MS\_Description','站次','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','train\_station\_order'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','停车时间','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','train\_stoptime'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','train\_starttime'  exec sp\_addextendedproperty 'MS\_Description','里程数','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','train\_station\_runmile'  exec sp\_addextendedproperty 'MS\_Description','前序站点','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','station\_p\_id'  exec sp\_addextendedproperty 'MS\_Description','后继站点','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','station\_n\_id'  exec sp\_addextendedproperty 'MS\_Description','站点区间基础票价','SCHEMA','y\_1\_4\_3\_2','TABLE','train\_other\_info','COLUMN','station\_base\_fare' |

##### 车站信息

表2.3.4.2‑3 station\_info（station\_name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车站名 | station\_name | varchar(81) | n |  |  |  |
| 2 | 所属铁路局 | station\_railwayadmin | varchar(20) | n |  |  |  |
| 3 | 所属车务段 | station\_railwaymaster | varchar(20) | n |  |  |  |
| 4 | 车站等级 | station\_level | char(4) | n |  |  |  |
| 5 | 车站次序 | station\_order | dec(4,0) | n |  |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | char(4) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_3\_2）

|  |
| --- |
| -- 创建表：车站信息  create table y\_1\_4\_3\_2.station\_info  (  station\_name varchar(81) not null ,  station\_railwayadmin varchar(20) not null ,  station\_railwaymaster varchar(20) not null ,  station\_level char(4) not null ,  station\_order dec(4,0) not null ,  statin\_provide\_flag char(4) not null ,  primary key(station\_name)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车站信息','SCHEMA','y\_1\_4\_3\_2','TABLE','station\_info'  exec sp\_addextendedproperty 'MS\_Description','车站名','SCHEMA','y\_1\_4\_3\_2','TABLE','station\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','所属铁路局','SCHEMA','y\_1\_4\_3\_2','TABLE','station\_info','COLUMN','station\_railwayadmin'  exec sp\_addextendedproperty 'MS\_Description','所属车务段','SCHEMA','y\_1\_4\_3\_2','TABLE','station\_info','COLUMN','station\_railwaymaster'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_4\_3\_2','TABLE','station\_info','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','车站次序','SCHEMA','y\_1\_4\_3\_2','TABLE','station\_info','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_4\_3\_2','TABLE','station\_info','COLUMN','statin\_provide\_flag' |

##### 车厢信息

表2.3.4.2‑4 compart\_info（compart\_info\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | compart\_info\_id | varchar(12) | n |  |  |  |
| 2 | 车次号 | train\_num | varchar(5) | n |  |  | 参考车次信息表 |
| 3 | 车厢号 | compart\_num | dec(2,0) | n |  |  |  |
| 4 | 车厢类型 | compart\_type | varchar(11) | n |  |  |  |
| 5 | 座位总数 | compart\_siteamount | dec(3,0) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_3\_2）

|  |
| --- |
| -- 创建表：车厢信息  create table y\_1\_4\_3\_2.compart\_info  (  compart\_info\_id varchar(12) not null ,  train\_num varchar(5) not null ,  compart\_num dec(2,0) not null ,  compart\_type varchar(11) not null ,  compart\_siteamount dec(3,0) not null ,  primary key(compart\_info\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车厢信息','SCHEMA','y\_1\_4\_3\_2','TABLE','compart\_info'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_4\_3\_2','TABLE','compart\_info','COLUMN','compart\_info\_id'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_4\_3\_2','TABLE','compart\_info','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_4\_3\_2','TABLE','compart\_info','COLUMN','compart\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢类型','SCHEMA','y\_1\_4\_3\_2','TABLE','compart\_info','COLUMN','compart\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_4\_3\_2','TABLE','compart\_info','COLUMN','compart\_siteamount' |

##### 用户信息

表2.3.4.2‑5 user\_info（user\_name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 用户名 | user\_name | varchar(20) | n |  |  |  |
| 2 | 密码 | user\_pw | varchar(20) | n |  |  |  |
| 3 | 用户类型 | user\_type | varchar(6) | n |  |  |  |

执行脚本（SQL Server，y\_1\_4\_3\_2）

|  |
| --- |
| -- 创建表：用户信息  create table y\_1\_4\_3\_2.user\_info  (  user\_name varchar(20) not null ,  user\_pw varchar(20) not null ,  user\_type varchar(6) not null ,  primary key(user\_name)  )  ;  exec sp\_addextendedproperty 'MS\_Description','用户信息','SCHEMA','y\_1\_4\_3\_2','TABLE','user\_info'  exec sp\_addextendedproperty 'MS\_Description','用户名','SCHEMA','y\_1\_4\_3\_2','TABLE','user\_info','COLUMN','user\_name'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_4\_3\_2','TABLE','user\_info','COLUMN','user\_pw'  exec sp\_addextendedproperty 'MS\_Description','用户类型','SCHEMA','y\_1\_4\_3\_2','TABLE','user\_info','COLUMN','user\_type' |

#### 站点3

##### 车次信息

表2.3.4.3‑1 train\_info（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar(5) | n |  |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | dec(2,0) | n |  |  |  |
| 3 | 运行时间 | train\_runtime | interval | n |  |  |  |
| 4 | 全程里程数 | train\_runmile | dec (7,2) | n |  |  |  |
| 5 | 票价上浮比率 | fare\_rate | char(60) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_3\_3）

|  |
| --- |
| -- 创建表：车次信息  create table y\_1\_4\_3\_3.train\_info  (  train\_id varchar(5) not null ,  train\_passstatin\_num dec(2,0) not null ,  train\_runtime varchar(10) not null ,  train\_runmile dec (7,2) not null ,  fare\_rate char(60) not null ,  primary key(train\_id)  )  ;  comment on table y\_1\_4\_3\_3.train\_info is '车次信息';  comment on column y\_1\_4\_3\_3.train\_info.train\_id is '车次号';  comment on column y\_1\_4\_3\_3.train\_info.train\_passstatin\_num is '经过站点数';  comment on column y\_1\_4\_3\_3.train\_info.train\_runtime is '运行时间';  comment on column y\_1\_4\_3\_3.train\_info.train\_runmile is '全程里程数';  comment on column y\_1\_4\_3\_3.train\_info.fare\_rate is '票价上浮比率'; |

##### 站点信息

表2.3.4.3‑2 train\_other\_info（train\_other\_info\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | train\_other\_info\_id | varchar(12) | n |  |  |  |
| 2 | 站次 | train\_station\_order | dec (2,0) | n |  |  |  |
| 3 | 车次号 | train\_num | varchar(5) | n |  |  |  |
| 4 | 站点名 | station\_name | varchar(71) | n |  |  |  |
| 5 | 停车时间 | train\_stoptime | timestamp |  |  |  |  |
| 6 | 发车时间 | train\_starttime | timestamp |  |  |  |  |
| 7 | 里程数 | train\_station\_runmile | dec (7,2) | n |  |  |  |
| 8 | 前序站点 | station\_p\_id | dec (2,0) | n |  |  | 始发站的为0 |
| 9 | 后继站点 | station\_n\_id | dec (2,0) | n |  |  | 终点站的为0 |
| 10 | 站点区间基础票价 | station\_base\_fare | dec (5,1) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_3\_3）

|  |
| --- |
| -- 创建表：站点信息  create table y\_1\_4\_3\_3.train\_other\_info  (  train\_other\_info\_id varchar(12) not null ,  train\_station\_order dec (2,0) not null ,  train\_num varchar(5) not null ,  station\_name varchar(71) not null ,  train\_stoptime timestamp not null ,  train\_starttime timestamp not null ,  train\_station\_runmile dec (7,2) not null ,  station\_p\_id dec (2,0) not null ,  station\_n\_id dec (2,0) not null ,  station\_base\_fare dec (5,1) not null ,  primary key(train\_other\_info\_id)  )  ;  comment on table y\_1\_4\_3\_3.train\_other\_info is '站点信息';  comment on column y\_1\_4\_3\_3.train\_other\_info.train\_other\_info\_id is '编号';  comment on column y\_1\_4\_3\_3.train\_other\_info.train\_station\_order is '站次';  comment on column y\_1\_4\_3\_3.train\_other\_info.train\_num is '车次号';  comment on column y\_1\_4\_3\_3.train\_other\_info.station\_name is '站点名';  comment on column y\_1\_4\_3\_3.train\_other\_info.train\_stoptime is '停车时间';  comment on column y\_1\_4\_3\_3.train\_other\_info.train\_starttime is '发车时间';  comment on column y\_1\_4\_3\_3.train\_other\_info.train\_station\_runmile is '里程数';  comment on column y\_1\_4\_3\_3.train\_other\_info.station\_p\_id is '前序站点';  comment on column y\_1\_4\_3\_3.train\_other\_info.station\_n\_id is '后继站点';  comment on column y\_1\_4\_3\_3.train\_other\_info.station\_base\_fare is '站点区间基础票价'; |

##### 车站信息

表2.3.4.3‑3 station\_info（station\_name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车站名 | station\_name | varchar(71) | n |  |  |  |
| 2 | 所属铁路局 | station\_railwayadmin | varchar(10) | n |  |  |  |
| 3 | 所属车务段 | station\_railwaymaster | varchar(10) | n |  |  |  |
| 4 | 车站等级 | station\_level | char(3) | n |  |  |  |
| 5 | 车站次序 | station\_order | dec (4,0) | n |  |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | char(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_3\_3）

|  |
| --- |
| -- 创建表：车站信息  create table y\_1\_4\_3\_3.station\_info  (  station\_name varchar(71) not null ,  station\_railwayadmin varchar(10) not null ,  station\_railwaymaster varchar(10) not null ,  station\_level char(3) not null ,  station\_order dec (4,0) not null ,  statin\_provide\_flag char(3) not null ,  primary key(station\_name)  )  ;  comment on table y\_1\_4\_3\_3.station\_info is '车站信息';  comment on column y\_1\_4\_3\_3.station\_info.station\_name is '车站名';  comment on column y\_1\_4\_3\_3.station\_info.station\_railwayadmin is '所属铁路局';  comment on column y\_1\_4\_3\_3.station\_info.station\_railwaymaster is '所属车务段';  comment on column y\_1\_4\_3\_3.station\_info.station\_level is '车站等级';  comment on column y\_1\_4\_3\_3.station\_info.station\_order is '车站次序';  comment on column y\_1\_4\_3\_3.station\_info.statin\_provide\_flag is '供给站标志'; |

##### 车厢信息

表2.3.4.3‑4 compart\_info（compart\_info\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | compart\_info\_id | varchar(12) | n |  |  |  |
| 2 | 车次号 | train\_num | varchar(5) | n |  |  | 参考车次信息表 |
| 3 | 车厢号 | compart\_num | dec (2,0) | n |  |  |  |
| 4 | 车厢类型 | compart\_type | varchar(7) | n |  |  |  |
| 5 | 座位总数 | compart\_siteamount | dec (3,0) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_3\_3）

|  |
| --- |
| -- 创建表：车厢信息  create table y\_1\_4\_3\_3.compart\_info  (  compart\_info\_id varchar(12) not null ,  train\_num varchar(5) not null ,  compart\_num dec (2,0) not null ,  compart\_type varchar(7) not null ,  compart\_siteamount dec (3,0) not null ,  primary key(compart\_info\_id)  )  ;  comment on table y\_1\_4\_3\_3.compart\_info is '车厢信息';  comment on column y\_1\_4\_3\_3.compart\_info.compart\_info\_id is '编号';  comment on column y\_1\_4\_3\_3.compart\_info.train\_num is '车次号';  comment on column y\_1\_4\_3\_3.compart\_info.compart\_num is '车厢号';  comment on column y\_1\_4\_3\_3.compart\_info.compart\_type is '车厢类型';  comment on column y\_1\_4\_3\_3.compart\_info.compart\_siteamount is '座位总数'; |

##### 用户信息

表2.3.4.3‑5 user\_info（user\_name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 用户名 | user\_name | varchar(20) | n |  |  |  |
| 2 | 密码 | user\_pw | varchar(20) | n |  |  |  |
| 3 | 用户类型 | user\_type | varchar(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_4\_3\_3）

|  |
| --- |
| -- 创建表：用户信息  create table y\_1\_4\_3\_3.user\_info  (  user\_name varchar(20) not null ,  user\_pw varchar(20) not null ,  user\_type varchar(3) not null ,  primary key(user\_name)  )  ;  comment on table y\_1\_4\_3\_3.user\_info is '用户信息';  comment on column y\_1\_4\_3\_3.user\_info.user\_name is '用户名';  comment on column y\_1\_4\_3\_3.user\_info.user\_pw is '密码';  comment on column y\_1\_4\_3\_3.user\_info.user\_type is '用户类型'; |

# 业务数据分析

## 售票员业务

### 实体集

下划线表示主码包含的属性

表3.1.1‑1实体集及其属性列表

|  |  |  |
| --- | --- | --- |
| 编号 | 实体集名 | 属性列表 |
| 1 | 区域 | 区域编号，区域名称 |
| 2 | 铁路分公司 | 铁路分公司编号，铁路分公司名称，地址，联系电话 |
| 3 | 火车站 | 站点名，车站等级，供给站标志 |
| 4 | 部门 | 部门编号，部门名称，简介 |
| 5 | 岗位 | 岗位编号，岗位名称，职责 |
| 6 | 员工 | 员工编号，员工姓名，性别，手机号码，密码 |
| 7 | 列车 | 车次编号，类型，速度 |
| 8 | 车厢 | 编号，车厢类别，实际类别，座位总数 |
| 9 | 乘客 | 乘客号，姓名，手机号码 |

### 实体联系图

联系有两种：实体集之间，同一实体集内不同实体之间。

将所有实体集及其联系画一个图，每个实体集不标属性。每个联系也不标属性。联系要标明联系类别。

n

1

m

n

m

n

m

1

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m

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员工

列车

从事

火车站

经过

乘客

车票业务

车厢

岗位

隶属

设立

部门

管理

区域

铁路分公司

位于

包含

图3.1.2‑1 ER图

### 联系

表3.1.3‑1联系及其属性列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 联系名 | 类别 | 涉及实体集 | 属性列表 |
| 1 | 位于 | 一对多 | 区域（一），铁路分公司（多） | 无 |
| 2 | 管理 | 一对多 | 铁路分公司（一），火车站（多） | 无 |
| 3 | 隶属 | 一对多 | 火车站（一），部门（多） | 无 |
| 4 | 设立 | 一对多 | 部门（一），岗位（多） | 无 |
| 5 | 从事 | 多对多 | 员工，岗位 | 无 |
| 6 | 包含 | 多对多 | 列车，车厢 | 车厢号分布范围 |
| 7 | 经过 | 多对多 | 列车，火车站 | 编号，到达时间，发车时间，站点序，区间基础票价，票价上浮比率 |
| 8 | 车票业务 | 多对多 | 乘客，售票员，列车，车厢，火车站，火车站 | 编号，业务类别，办理时间，订单状态，业务金额，车厢号，座位号，发车时间，到达时间 |

## 乘客业务

### 实体集

下划线表示主码包含的属性。

表3.2.1‑1实体集及其属性列表

|  |  |  |
| --- | --- | --- |
| 编号 | 实体集名 | 属性列表 |
| 1 | 区域 | 区域编号，区域名称 |
| 2 | 分公司 | 分公司编号，分公司名称，地址，联系电话 |
| 3 | 列车 | 列车号，类型，速度 |
| 4 | 火车站 | 站点名，车站等级，供给站标志 |
| 5 | 部门 | 部门编号，部门名称，简介 |
| 6 | 车厢 | 编号，车厢类别，实际类别，座位总数 |
| 7 | 网络售票终端 | 终端编号，终端语言类型 |
| 8 | 乘客 | 身份证号，乘客姓名，性别，手机号码，登录密码 |

### 实体联系图

联系有两种：实体集之间，同一实体集内不同实体之间。

将所有实体集及其联系画一个图，每个实体集不标属性。每个联系也不标属性。联系要标明联系类别

乘客

列车

票务服务

n

经过

火车站

车厢

部门

自助操作

网络售票终端

隶属11111

分公司

属于

区域

建造

包含

1

1

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n

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n

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n

n

n

图3.2.2‑1 ER图

### 联系

表3.2.3‑1联系及其属性列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 联系名 | 类别 | 涉及实体集 | 属性列表 |
| 1 | 建造 | 一对多 | 分公司（一），火车站（多） | 无 |
| 2 | 隶属 | 一对多 | 分公司（一），部门（多） | 无 |
| 3 | 属于 | 一对多 | 区域（一），分公司（多） | 无 |
| 4 | 包含 | 多对多 | 列车，车厢 | 无 |
| 5 | 自助操作 | 多对多 | 网络售票终端，乘客，列车，车厢，火车站，火车站 | 编号，业务类别，办理时间，订单状态，业务金额，座位号，车厢号，出票状态，变更到站状态 |
| 6 | 经过 | 多对多 | 列车，火车站 | 编号，到达时间，发车时间，站点序，区间基础票价，票价上浮比率 |
| 7 | 票务服务 | 多对多 | 乘客，列车，车厢，火车站，火车站 | 编号，业务类别，办理时间，订单状态，业务金额，座位号，车厢号，出票状态，变更到站状态 |

## 管理员业务

### 实体集

下划线表示主码包含的属性

表3.3.1‑1实体集及其属性列表

|  |  |  |
| --- | --- | --- |
| 编号 | 实体集名 | 属性列表 |
| 1 | 区域 | 区域编号，区域名称 |
| 2 | 分公司 | 分公司编号，分公司名称 |
| 3 | 部门 | 部门编号，部门名称 |
| 4 | 火车站 | 编号，车站中文名，车站英文名，车站等级，车站次序，供给站标志 |
| 5 | 列车 | 车次号，类型，运行时间 |
| 6 | 车厢 | 编号，车厢类型，座位总数 |
| 7 | 员工 | 员工账号，密码，员工姓名，身份证号，员工类型 |
| 8 | 岗位 | 岗位编号，岗位名称，职责 |

### 实体联系图

联系有两种：实体集之间，同一实体集内不同实体之间。

将所有实体集及其联系画一个图，每个实体集不标属性。每个联系也不标属性。联系要标明联系类别。

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列车

员工

经过

火车站

工作

车厢

拥有

从事

岗位

设立

部门

区域

建立

分公司

成立

修筑

隶属

上级

图3.3.2‑1 ER图

### 联系

表3.3.3‑1联系及其属性列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 联系名 | 类别 | 涉及实体集 | 属性列表 |
| 1 | 建立 | 一对多 | 区域（一），分公司（多） | 无 |
| 2 | 成立 | 一对多 | 分公司（一），部门（多） | 无 |
| 3 | 修筑 | 一对多 | 分公司(一)，火车站（多） | 无 |
| 4 | 工作 | 一对多 | 火车站（一），员工（多） | 无 |
| 5 | 设立 | 一对多 | 部门（一），岗位（多） | 无 |
| 6 | 隶属 | 一对多 | 部门（一），火车站（多） | 无 |
| 7 | 拥有 | 多对多 | 列车，车厢 | 此类车厢分布号，车厢数量，发车时间 |
| 8 | 从事 | 多对多 | 员工，岗位 | 无 |
| 9 | 经过 | 多对多 | 列车，火车站 | 序号，停车时间，发车时间，里程数，区间基础票价，票价上浮比率，站点次序 |
| 10 | 上级 | 多对多 | 部门，部门 | 无 |

# 业务数据设计

## 售票员业务

表4‑1关系列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 关系名 | 英文名 | 来自何方 | 备注 |
| 1 | 区域 | area | 区域实体集 |  |
| 2 | 铁路分公司 | rail\_company | 铁路分公司实体集 |  |
| 3 | 火车站 | rail\_station | 火车站实体集 |  |
| 4 | 部门 | depart | 部门实体集 |  |
| 5 | 岗位 | post | 岗位实体集 |  |
| 6 | 员工 | employee | 员工实体集 |  |
| 7 | 列车 | train | 列车实体集 |  |
| 8 | 车厢 | carriage | 车厢实体集 |  |
| 9 | 乘客 | passenger | 乘客实体集 |  |
| 10 | 从事 | deal\_with | 从事联系，涉及岗位，员工两个实体集 |  |
| 11 | 包含 | include | 包含联系，设计列车，车厢两个实体集 |  |
| 12 | 经过 | pass\_by | 经过联系，涉及列车，火车站两个实体集 |  |
| 13 | 车票业务 | ticket\_business | 车票业务联系，涉及乘客，售票员，列车，车厢，两个火车站六个实体集 |  |
| 14 | 字典 | user\_dict | 存储编码和内容的对应信息 |  |

### 区域

表4.1‑1 关系area的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 区域编号 | no | 主键，字符型，固定长度，6位数字 | 流水号 |
| 2 | 区域名称 | name | 字符型，可变长度，100个汉字，不为空，唯一 |  |

### 铁路分公司

表4.1‑2 关系rail\_company的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 铁路分公司编号 | no | 主键，字符型，固定长度，8位数字 | 流水号 |
| 2 | 铁路分公司名称 | name | 字符型，可变长度，100个汉字，不为空，唯一 |  |
| 3 | 地址 | address | 字符型，可变长度，100个汉字，不为空，唯一 |  |
| 4 | 联系电话 | phone | 字符型，可变长度，20位字母数字字符，不为空 |  |
| 5 | 区域编号 | area\_no | 外键，参照区域（区域编号） |  |

### 火车站

表4.1‑3 关系rail\_station的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 站点名 | name | 主键，字符型，可变长度，10个汉字、61个英文字符 | 中文站点名，拼音  如：呼和浩特，huhhot  汉字和英文字符用半角逗号隔开 |
| 2 | 车站等级 | station\_level | 字符型，固定长度，1位数字，不为空 | 101 |
| 3 | 供给站标志 | station\_provide\_flag | 字符型，固定长度，1位数字，不为空 | 102 |
| 4 | 铁路分公司编号 | comp\_no | 外键，参照铁路分公司（铁路分公司编号） |  |

### 部门

表4.1‑4 关系depart的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 部门编号 | no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 部门名称 | name | 字符型，可变长度，20个汉字，不为空，唯一 |  |
| 3 | 简介 | introduce | 字符型，可变长度，500个汉字，可以为空 |  |
| 4 | 火车站名 | station\_name | 外键，参照火车站（站点名），不为空 |  |

### 岗位

表4.1‑5 关系post的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 岗位编号 | no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 岗位名称 | name | 字符型，可变长度，20个汉字，不为空，唯一 |  |
| 3 | 职责 | duty | 字符型，可变长度，200个汉字，不为空 |  |
| 4 | 部门号 | dept\_no | 外键，参照部门（部门编号），不为空 |  |

### 员工

表4.1‑6 关系employee的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 员工编号 | no | 主键，数值型，12位有效数字，无小数 | 流水号 |
| 2 | 员工姓名 | name | 字符型，可变长度，15个汉字，不为空 |  |
| 3 | 性别 | sex | 字符型，固定长度，一个英文数字字符，不为空 | 103 |
| 4 | 手机号码 | phone | 字符型，固定长度，11个数字，不为空 |  |
| 5 | 密码 | password | 字符型，可变长度，20个英文字符 |  |

### 列车

表4.1‑7 关系train的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 车次编号 | no | 主键，字符型，可变长度，5个英文数字字符 | 0到1位英文字符，1到4位英文数字 |
| 2 | 类型 | train\_type | 字符型，固定长度，1个英文数字字符，不为空 | 104 |
| 3 | 速度 | speed | 数值型，三位有效数字，无小数，不为空 |  |

### 车厢

表4.1‑8 关系carriage的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | no | 主键，字符型，固定长度，2个英文数字字符 | 流水号 |
| 2 | 车厢类别 | carriage\_type | 字符型，可变长度，2个英文数字字符，不为空 | 105 |
| 3 | 实际类别 | seat\_type | 字符型，可变长度，2个英文数字字符，不为空 | 105 |
| 4 | 座位总数 | seat\_total | 数值型，三位有效数字，无小数，不为空 |  |

### 乘客

表4.1‑9 关系passenger的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 乘客号 | no | 主键，字符型，固定长度，18个英文数字字符 | 身份证号 |
| 2 | 姓名 | name | 字符型，可变长度，15个汉字，不为空 |  |
| 3 | 手机号码 | phone | 字符型，固定长度，11个数字，不为空 |  |

### 从事

表4.1‑10 关系deal\_with的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 员工编号 | emp\_no | 主键，外键，参照员工（员工编号） |  |
| 2 | 岗位编号 | post\_no | 主键，外键，参照岗位（岗位编号） |  |

### 包含

表4.1‑11 关系include的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 列车编号 | train\_no | 主键，外键，参照列车（编号） |  |
| 2 | 车厢编号 | carriage \_no | 主键，外键，参照车厢（编号） |  |
| 3 | 车厢号分布范围 | carriage\_range | 字符型，可变长度，44个英文数字字符，不为空 | 2个数字，用半角逗号分隔  例如：xx,yy,zz,… |

### 经过

表4.1‑12 关系pass\_by的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | no | 主键，字符类型，固定长度，12位有效数字，无小数 | 流水号 |
| 2 | 车次编号 | train\_no | 外键，参照列车（车次编号） |  |
| 3 | 站点名 | station\_name | 外键，参照火车站（站点名） |  |
| 4 | 发车时间 | start\_time | 日期时间型，精确到分，不为空 |  |
| 5 | 到达时间 | arrive\_time | 日期时间型，精确到分，不为空 |  |
| 6 | 站点序 | station\_order | 数值型，2位有效数字，无小数，不为空 |  |
| 7 | 区间基础票价 | base\_price | 数值型，6位有效数字，2位小数，不为空 |  |
| 8 | 票价上浮比率 | up\_rate | 数值型，6位有效数字，4位小数，不为空 |  |

### 车票业务

表4.1‑13 关系ticket\_business的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | no | 主键，数值型，12位有效数字 | 流水号 |
| 2 | 乘客号 | passenger\_no | 外键，参照乘客（乘客号） |  |
| 3 | 员工号 | emp\_no | 外键，参照员工（员工编号） |  |
| 4 | 车次编号 | train\_no | 外键，参照列车（车次编号） |  |
| 5 | 车厢编号 | carriage\_no | 外键，参照车厢（编号） |  |
| 6 | 乘客出发站 | origin\_station | 外键，参照火车站（站点名） |  |
| 7 | 乘客到达站 | destination\_station | 外键，参照火车站（站点名） |  |
| 8 | 业务类别 | busi\_type | 字符型，固定长度，1个英文数字字符，不为空 | 106 |
| 9 | 办理时间 | do\_time | 日期时间型，精确到秒，办理业务时取系统时间，不为空 |  |
| 10 | 订单状态 | busi\_status | 字符型，固定长度， 1个英文数字字符，不为空 | 107 |
| 11 | 业务金额 | busi\_\_amount | 数值型，5位有效数字，2位小数，不为空 |  |
| 12 | 车厢号 | carriage\_number | 数值型，2位有效数字，无小数，不为空 |  |
| 13 | 座位号 | seat\_number | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符，不为空 |  |
| 14 | 发车时间 | start\_time | 日期时间型，精确到分，不为空 |  |
| 15 | 到达时间 | arrive\_time | 日期时间型，精确到分，不为空 |  |

### 字典

表4.1‑14 user\_dict的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 大类编号 | categary | 主键，字符型，固定长度，3位数字 | 第1位是1 |
| 2 | 编号 | ccode | 主键，字符型，可变长度，6位数字 |  |
| 3 | 内容 | ctext | 字符型，可变长度，100个汉字 |  |

## 乘客业务

表4‑2关系列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 关系名 | 英文名 | 来自何方 | 备注 |
| 1 | 区域 | Area | 区域实体集 |  |
| 2 | 分公司 | rail\_company | 分公司实体集 |  |
| 3 | 列车 | Train | 列车实体集 |  |
| 4 | 火车站 | rail\_station | 火车站实体集 |  |
| 5 | 部门 | depart | 部门实体集 |  |
| 6 | 车厢 | carriage | 车厢实体集 |  |
| 7 | 网络售票终端 | terminal | 网络售票终端实体集 |  |
| 8 | 乘客 | passenger | 乘客实体集 |  |
| 9 | 包含 | contain | 包含联系，涉及列车，车厢两个实体集 |  |
| 10 | 自助操作 | self­\_service | 自助操作联系，涉及乘客，网络售票终端，列车，车厢，两个火车站六个实体集 |  |
| 11 | 经过 | pass\_by | 经过联系，涉及列车，火车站两个实体集 |  |
| 12 | 票务服务 | ticket\_business | 票务服务联系，涉及乘客，列车，车厢，两个火车站五个实体集 |  |
| 13 | 字典 | user\_dict | 存储编码和内容的对应信息 |  |

### 区域

表4.2‑1 关系area的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 区域编号 | no | 主键，字符型，固定长度，4位数字 | 流水号 |
| 2 | 区域名称 | name | 字符型，可变长度，100个汉字，不为空，唯一 |  |

### 分公司

表4.2‑2 关系rail\_company的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 分公司编号 | no | 主键，字符型，固定长度，8位数字 | 流水号 |
| 2 | 分公司名称 | name | 字符型，可变长度，100个汉字，不为空，唯一 |  |
| 3 | 地址 | address | 字符型，可变长度，100个汉字，不为空，唯一 |  |
| 4 | 联系电话 | phone | 字符型，可变长度，20位字母数字字符，不为空 |  |
| 5 | 区域编号 | area\_no | 外键，参照区域（区域编号） |  |

### 列车

表4.2‑3 关系train属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 列车号 | no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 类型 | train\_type | 字符型，固定长度，1个英文数字字符，不为空 | 201 |
| 3 | 速度 | speed | 数值型，三位有效数字，无小数，不为空 |  |

### 火车站

表4.2‑4 关系rail\_station属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 站点名 | Name | 主键，字符型，可变长度，10个汉字，不为空 |  |
| 2 | 车站等级 | station\_level | 字符型，固定长度，1位数字，不为空 | 202 |
| 3 | 供给站标志 | supply\_sign | 字符型，固定长度，1位数字，不为空 | 203 |
| 4 | 分公司编号 | comp\_no | 外键，参照分公司（分公司编号） |  |

### 部门

表4.2‑5 关系depart属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 部门编号 | no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 部门名称 | name | 字符型，可变长度，20个汉字，不为空，唯一 |  |
| 3 | 简介 | introduce | 字符型，可变长度，500个汉字，可以为空 |  |
| 4 | 分公司编号 | comp\_no | 外键，参照分公司（分公司编号） |  |

### 车厢

表4.2‑6 关系carriage属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | no | 主键，字符型，固定长度，2个英文数字字符 | 流水号 |
| 2 | 车厢类别 | carriage\_type | 字符型，可变长度，2个英文数字字符，不为空 | 204 |
| 3 | 实际类别 | seat\_type | 字符型，可变长度，2个英文数字字符，不为空 | 205 |
| 4 | 座位总数 | seat\_total | 数值型，三位有效数字，无小数，不为空 |  |
| 5 | 列车号 | train\_no | 外键，参照列车（列车号），不为空 |  |

### 网络售票终端

表4.2‑7 关系terminal属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 终端编号 | no | 主键，字符型，固定长度，8位数字 | 流水号 |
| 2 | 终端语言类型 | terminal\_type | 字符型，固定长度，1个英文数字字符，不为空 | 206 |

### 乘客

表4.2‑8 关系passenger属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 乘客号 | no | 主键，字符型，固定长度，18个英文数字字符 | 身份证号 |
| 2 | 姓名 | name | 字符型，可变长度，15个汉字，不为空 |  |
| 3 | 手机号码 | phone | 字符型，固定长度，11个数字，不为空 |  |
| 4 | 性别 | gender | 字符型，固定长度，一个英文数字字符，不为空 | 207 |
| 5 | 登录密码 | password | 字符型，可变长度，50个英文数字字符，不为空 |  |

### 包含

表4.2‑9 关系contain属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 列车号 | train\_no | 外键，参照列车（列车号） |  |
| 3 | 车厢编号 | carriage\_no | 外键，参照车厢（编号） |  |

### 自助操作

表4.2‑10 关系self­\_service属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | No | 主键，数值型，12位有效数字 | 流水号 |
| 2 | 终端编号 | terminal\_no | 外键，参照网络售票终端（终端编号） |  |
| 3 | 乘客号 | passenger\_no | 外键，参照乘客（乘客号） |  |
| 4 | 列车号 | train\_no | 外键，参照列车（列车号） |  |
| 5 | 车厢编号 | carriage\_no | 外键，参照车厢（编号） |  |
| 6 | 乘客出发站 | origin\_station | 外键，参照火车站（站点名） |  |
| 7 | 乘客到达站 | destination\_station | 外键，参照火车站（站点名） |  |
| 8 | 业务类别 | busi\_type | 字符型，固定长度，1个英文数字字符，不为空 | 208 |
| 9 | 办理时间 | do\_time | 日期时间型，精确到秒，办理业务时取系统时间，不为空 |  |
| 10 | 订单状态 | busi\_status | 字符型，固定长度，1个英文数字字符，不为空 | 209 |
| 11 | 业务金额 | busi\_\_amount | 数值型，5位有效数字，2位小数，不为空 |  |
| 12 | 车厢号 | carriage\_number | 数值型，2位有效数字，无小数，不为空 |  |
| 13 | 座位号 | seat\_number | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符，不为空 |  |
| 14 | 发车时间 | start\_time | 日期时间型，精确到分，不为空 |  |
| 15 | 到达时间 | arrive\_time | 日期时间型，精确到分，不为空 |  |
| 16 | 出票状态 | ticket\_status | 字符型，固定长度，1个英文数字字符，不为空 | 210 |
| 17 | 变更到站状态 | change\_station | 字符型，固定长度，1个英文数字字符，不为空 | 211 |

### 经过

表4.2‑11 关系pass\_by属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | No | 主键，字符类型，固定长度，12位有效数字，无小数 | 流水号 |
| 2 | 列车号 | train\_no | 外键，参照列车（列车号） |  |
| 3 | 站点名 | station\_name | 外键，参照火车站（站点名） |  |
| 4 | 发车时间 | start\_time | 日期时间型，精确到分，不为空 |  |
| 5 | 到达时间 | arrive\_time | 日期时间型，精确到分，不为空 |  |
| 6 | 站点序 | station\_order | 数值型，2位有效数字，无小数，不为空 |  |
| 7 | 区间基础票价 | base\_price | 数值型，6位有效数字，2位小数，不为空 |  |
| 8 | 票价上浮比率 | up\_rate | 数值型，6位有效数字，4位小数，不为空 |  |

### 票务服务

表4.2‑12 关系ticket\_business属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | No | 主键，数值型，12位有效数字 | 流水号 |
| 2 | 乘客号 | passenger\_no | 外键，参照乘客（乘客号） |  |
| 3 | 列车号 | train\_no | 外键，参照列车（列车号） |  |
| 4 | 车厢编号 | carriage\_no | 外键，参照车厢（编号） |  |
| 5 | 乘客出发站 | origin\_station | 外键，参照火车站（站点名） |  |
| 6 | 乘客到达站 | destination\_station | 外键，参照火车站（站点名） |  |
| 7 | 业务类别 | busi\_type | 字符型，固定长度，1个英文数字字符，不为空 | 208 |
| 8 | 办理时间 | do\_time | 日期时间型，精确到秒，办理业务时取系统时间，不为空 |  |
| 9 | 订单状态 | busi\_status | 字符型，固定长度，1个英文数字字符，不为空 | 209 |
| 10 | 业务金额 | busi\_\_amount | 数值型，5位有效数字，2位小数，不为空 |  |
| 11 | 车厢号 | carriage\_number | 数值型，2位有效数字，无小数，不为空 |  |
| 12 | 座位号 | seat\_number | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符，不为空 |  |
| 13 | 发车时间 | start\_time | 日期时间型，精确到分，不为空 |  |
| 14 | 到达时间 | arrive\_time | 日期时间型，精确到分，不为空 |  |
| 15 | 出票状态 | ticket\_status | 字符型，固定长度，1个英文数字字符，不为空 | 210 |
| 16 | 变更到站状态 | change\_station | 字符型，固定长度，1个英文数字字符，不为空 | 211 |

### 字典

表4.2‑13 关系user\_dict属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 大类编号 | categary | 主键，字符型，固定长度，3位数字 | 第1位是2 |
| 2 | 编号 | ccode | 主键，字符型，可变长度，6位数字 |  |
| 3 | 内容 | ctext | 字符型，可变长度，100个汉字 |  |

## 管理员业务

表4‑3关系列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 关系名 | 表英文名 | 来自何方 | 备注 |
| 1 | 区域 | area | 区域实体集 |  |
| 2 | 分公司 | company | 分公司实体集 |  |
| 3 | 部门 | department | 部门实体集 |  |
| 4 | 火车站 | station | 火车站实体集 |  |
| 5 | 列车 | train | 列车实体集 |  |
| 6 | 车厢 | carriage | 车厢实体集 |  |
| 7 | 员工 | administe | 员工实体集 |  |
| 8 | 岗位 | post | 岗位实体集 |  |
| 9 | 拥有 | possess | 拥有联系，涉及列车，车厢两个实体集 |  |
| 10 | 从事 | work\_on | 从事联系，涉及员工，岗位两个实体集 |  |
| 11 | 经过 | pass\_by | 经过联系，涉及列车，火车站两个实体集 |  |
| 12 | 上级 | superior | 上级实体集，涉及部门，部门两个实体集 |  |
| 13 | 字典 | user\_dict | 存储编码和内容的对应信息 |  |

### 区域

表4.3‑1 关系area的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 区域编号 | area\_no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 区域名称 | area\_name | 字符型，可变长度，100个汉字，不为空，唯一 |  |

### 分公司

表4.3‑2 关系company的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 分公司编号 | company\_no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 分公司名称 | company\_name | 字符型，可变长度，100个汉字，不为空，唯一 |  |
| 3 | 区域编号 | area\_no | 外键，参照区域（区域编号） |  |

### 部门

表4.3‑3 关系department的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 部门编号 | department\_no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 部门名称 | department\_name | 字符型，可变长度，20个汉字，不为空，唯一 |  |
| 3 | 分公司编号 | company\_no | 外键，参照分公司（分公司编号） |  |

### 火车站

表4.3‑4 关系station的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | station\_no | 主键，字符类型，固定长度，4位数字 | 流水号 |
| 2 | 车站中文名 | chinese\_name | 字符型，可变长度，10个汉字，不为空 |  |
| 3 | 车站英文名 | english\_name | 字符型，可变长度， 60个英文，不为空 |  |
| 4 | 车站等级 | station\_level | 字符型，固定长度，1位数字，不为空 | 301 |
| 5 | 车站次序 | station\_order | 数值型，4位有效数字，无小数，不为空 |  |
| 6 | 供给站标志 | statin\_provide\_flag | 字符型，固定长度，1位数字，不为空 | 302 |
| 7 | 分公司编号 | company\_no | 外键，参照分公司（分公司编号） |  |
| 8 | 部门编号 | department\_no | 外键，参照部门（部门编号） |  |

### 列车

表4.3‑5 关系train的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 车次号 | train\_id | 主键，字符型，可变长度，5个英文数字字符 |  |
| 2 | 类型 | train\_type | 字符型，固定长度，1位数字，不为空 | 303 |
| 3 | 运行时间 | train\_runtime | 日期时间间隔，不为空 |  |

### 车厢

表4.3‑6 关系carriage的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 编号 | carriage \_no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 车厢类型 | carriage \_type | 字符型，固定长度，1位数字，不为空 | 304 |
| 3 | 座位总数 | carriage \_sit\_num | 数值型，3位有效数字，无小数，不为空 |  |

### 员工

表4.3‑7 关系administe的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 员工账号 | administer\_id | 主键，字符型，固定长度，11个数字 | 手机号 |
| 2 | 密码 | administer\_pw | 字符型，可变长度，20个英文数字字符，不为空 |  |
| 3 | 员工姓名 | administer\_name | 字符型，可变长度，8个汉字字符，不为空 |  |
| 4 | 身份证号 | id\_card\_num | 字符型，固定长度，18个英文数字字符，不为空 |  |
| 5 | 员工类型 | employee\_type | 字符型，固定长度，1位数字，不为空 | 305 |
| 6 | 火车站编号 | station\_no | 外键，参照火车站（编号） |  |

### 岗位

表4.3‑8 关系post的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 岗位编号 | post\_no | 主键，字符型，固定长度，2位数字 | 流水号 |
| 2 | 岗位名称 | post\_name | 字符型，可变长度，20个汉字，不为空，唯一 |  |
| 3 | 职责 | duty | 字符型，可变长度，200个汉字，不为空 |  |
| 4 | 部门编号 | department\_no | 外键，参照部门（部门编号） |  |

### 拥有

表4.3‑9 关系possess的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 车次号 | train\_id | 主键，外键，参照列车（车次号） |  |
| 2 | 车厢编号 | carriage \_no | 主键，外键，参照车厢（编号） |  |
| 3 | 此类车厢分布号 | carriage\_range | 字符型，可变长度，44个字符，2个数字+1个半角逗号格式循环出现，不为空 | x，y，z，w，…… |
| 4 | 车厢数量 | carriage \_amount | 数值型，2位有效数字，无小数，不为空 |  |
| 5 | 发车时间 | starttime | 日期时间型 | x年y月z日m时n分 |

### 从事

表4.3‑10 关系work\_on的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 员工账号 | administer\_id | 主键，外键，参照员工（员工账号） |  |
| 2 | 岗位编号 | post\_no | 主键，外键，参照岗位（岗位编号） |  |

### 经过

表4.3‑11 关系pass\_by的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 序号 | num | 主键，字符型，固定长度，12位数字，不为空 | 流水号 |
| 2 | 车次号 | train\_id | 外键，参照列车（车次号） |  |
| 3 | 火车站编号 | station\_no | 外键，参照火车站（编号） |  |
| 4 | 停车时间 | stoptime | 日期时间型 | x年y月z日m时n分 |
| 5 | 发车时间 | starttime | 日期时间型 | x年y月z日m时n分 |
| 6 | 里程数 | mileage | 数值型，7位有效数字，2位小数，不为空 | 量纲：公里 |
| 7 | 区间基础票价 | base\_fare | 数值型，5位有效数字，1位小数，不为空 |  |
| 8 | 票价上浮比率 | fare\_rate | 字符型，固定长度，60个英文数字字符，不为空 |  |
| 9 | 站点次序 | station\_order | 数值型，2位有效数字，无小数，不为空 |  |

### 上级

表4.3‑12 关系superior的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 部门编号 | department\_no | 主键，外键，参照部门（部门编号） |  |
| 2 | 上级部门编号 | supper\_department\_no | 主键，外键，参照部门（部门编号） |  |

### 字典

表4.3‑13 关系user\_dict的属性信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 要求 | 备注 |
| 1 | 大类编号 | category | 主键，字符型，固定长度，3位数字 | 第1位为3 |
| 2 | 编号 | ccode | 主键，字符型，可变长度，6位数字 |  |
| 3 | 内容 | ctext | 字符型，可变长度，100个汉字 |  |

# 局部数据实现1

## 售票员业务

### 序列

表5.1‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 6 | 1 | 1 | 1 | 999999 | 区域编号 |  |
| 2 | seq\_rail\_company\_no | 8 | 1 | 1 | 1 | 99999999 | 铁路分公司编号 |  |
| 3 | seq\_depart\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 4 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 5 | seq\_employee\_no | 12 | 1 | 1 | 1 | 999999999999 | 员工编号 |  |
| 6 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 7 | seq\_pass\_by\_no | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 8 | seq\_ticket\_business\_no | 12 | 1 | 1 | 1 | 999999999999 | 车票业务编号 |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_1\_1.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 999999 nocache;  --创建序列，用于：铁路分公司编号  create sequence y\_1\_1\_1\_1.seq\_rail\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 nocache;  --创建序列，用于：部门编号  create sequence y\_1\_1\_1\_1.seq\_depart\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：岗位编号  create sequence y\_1\_1\_1\_1.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：员工编号  create sequence y\_1\_1\_1\_1.seq\_employee\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_1\_1.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：经过编号  create sequence y\_1\_1\_1\_1.seq\_pass\_by\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache;  --创建序列，用于：车票业务编号  create sequence y\_1\_1\_1\_1.seq\_ticket\_business\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache; |

### 表

表5.1.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 铁路分公司 | rail\_company |  |
| 3 | 火车站 | rail\_station |  |
| 4 | 部门 | depart |  |
| 5 | 岗位 | post |  |
| 6 | 员工 | employee |  |
| 7 | 列车 | train |  |
| 8 | 车厢 | carriage |  |
| 9 | 乘客 | passenger |  |
| 10 | 从事 | deal\_with |  |
| 11 | 包含 | include |  |
| 12 | 经过 | pass\_by |  |
| 13 | 车票业务 | ticket\_business |  |
| 14 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表5.1.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | no | char(7) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | name | varchar2(300) | n |  | y |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_1\_1.area  (  no char(7) default (to\_char(seq\_area\_no.nextval,'099999')) not null ,  name varchar2(300) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.area is '区域';  comment on column y\_1\_1\_1\_1.area.no is '区域编号';  comment on column y\_1\_1\_1\_1.area.name is '区域名称'; |

##### 铁路分公司

表5.1.2.1‑2 rail\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 铁路分公司编号 | no | char(9) | n |  |  | 来自序列seq\_rail\_company\_no |
| 2 | 铁路分公司名称 | name | varchar2(300) | n |  | y |  |
| 3 | 地址 | address | varchar2(300) | n |  | y |  |
| 4 | 联系电话 | phone | varchar2(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：铁路分公司  create table y\_1\_1\_1\_1.rail\_company  (  no char(9) default (to\_char(seq\_rail\_company\_no.nextval,'09999999')) not null ,  name varchar2(300) unique not null ,  address varchar2(300) unique not null ,  phone varchar2(20) not null ,  area\_no references y\_1\_1\_1\_1.area(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.rail\_company is '铁路分公司';  comment on column y\_1\_1\_1\_1.rail\_company.no is '铁路分公司编号';  comment on column y\_1\_1\_1\_1.rail\_company.name is '铁路分公司名称';  comment on column y\_1\_1\_1\_1.rail\_company.address is '地址';  comment on column y\_1\_1\_1\_1.rail\_company.phone is '联系电话';  comment on column y\_1\_1\_1\_1.rail\_company.area\_no is '区域编号'; |

##### 火车站

表5.1.2.1‑3 rail\_station（name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 站点名 | name | varchar(91) | n |  |  |  |
| 2 | 车站等级 | station\_level | char(1) | n |  |  | 101 |
| 3 | 供给站标志 | station\_provide\_flag | char(1) | n |  |  | 102 |
| 4 | 铁路分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_1\_1.rail\_station  (  name varchar(91) not null ,  station\_level char(1) not null ,  station\_provide\_flag char(1) not null ,  comp\_no references y\_1\_1\_1\_1.rail\_company(no) not null ,  primary key(name)  )  ;  comment on table y\_1\_1\_1\_1.rail\_station is '火车站';  comment on column y\_1\_1\_1\_1.rail\_station.name is '站点名';  comment on column y\_1\_1\_1\_1.rail\_station.station\_level is '车站等级';  comment on column y\_1\_1\_1\_1.rail\_station.station\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_1\_1.rail\_station.comp\_no is '铁路分公司编号'; |

##### 部门

表5.1.2.1‑4 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | no | char(3) | n |  |  | 来自序列seq\_depart\_no |
| 2 | 部门名称 | name | varchar2(60) | n |  | y |  |
| 3 | 简介 | introduce | varchar2(1500) |  |  |  |  |
| 4 | 火车站名 | station\_name | rail\_station(name) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_1\_1.depart  (  no char(3) default (to\_char(seq\_depart\_no.nextval,'09')) not null ,  name varchar2(60) unique not null ,  introduce varchar2(1500) ,  station\_name references y\_1\_1\_1\_1.rail\_station(name) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.depart is '部门';  comment on column y\_1\_1\_1\_1.depart.no is '部门编号';  comment on column y\_1\_1\_1\_1.depart.name is '部门名称';  comment on column y\_1\_1\_1\_1.depart.introduce is '简介';  comment on column y\_1\_1\_1\_1.depart.station\_name is '火车站名'; |

##### 岗位

表5.1.2.1‑5 post (no)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 岗位编号 | no | char(3) | n |  |  | 来自序列seq\_post\_no |
| 2 | 岗位名称 | name | varchar2(60) | n |  | y |  |
| 3 | 职责 | duty | varchar2(600) | n |  |  |  |
| 4 | 部门号 | dept\_no | depart(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_1\_1\_1.post  (  no char(3) default (to\_char(seq\_post\_no.nextval,'09')) not null ,  name varchar2(60) unique not null ,  duty varchar2(600) not null ,  dept\_no references y\_1\_1\_1\_1.depart(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.post is '岗位';  comment on column y\_1\_1\_1\_1.post.no is '岗位编号';  comment on column y\_1\_1\_1\_1.post.name is '岗位名称';  comment on column y\_1\_1\_1\_1.post.duty is '职责';  comment on column y\_1\_1\_1\_1.post.dept\_no is '部门号'; |

##### 员工

表5.1.2.1‑6 employee (no)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | no | number(13,0) | n |  |  | 来自序列seq\_employee\_no |
| 2 | 员工姓名 | name | varchar2(45) | n |  |  |  |
| 3 | 性别 | sex | char(1) | n |  |  | 103 |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |
| 5 | 密码 | password | varchar2(20) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_1\_1\_1.employee  (  no number(13,0) default (seq\_employee\_no.nextval) not null ,  name varchar2(45) not null ,  sex char(1) not null ,  phone char(11) not null ,  password varchar2(20) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.employee is '员工';  comment on column y\_1\_1\_1\_1.employee.no is '员工编号';  comment on column y\_1\_1\_1\_1.employee.name is '员工姓名';  comment on column y\_1\_1\_1\_1.employee.sex is '性别';  comment on column y\_1\_1\_1\_1.employee.phone is '手机号码';  comment on column y\_1\_1\_1\_1.employee.password is '密码'; |

##### 列车

表5.1.2.1‑7 train（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次编号 | no | varchar2(5) | n |  |  |  |
| 2 | 类型 | train\_type | char(1) | n |  |  | 104 |
| 3 | 速度 | speed | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_1\_1.train  (  no varchar2(5) not null ,  train\_type char(1) not null ,  speed number(3,0) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.train is '列车';  comment on column y\_1\_1\_1\_1.train.no is '车次编号';  comment on column y\_1\_1\_1\_1.train.train\_type is '类型';  comment on column y\_1\_1\_1\_1.train.speed is '速度'; |

##### 车厢

表5.1.2.1‑8 carriage（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(3) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类别 | carriage\_type | varchar2(2) | n |  |  | 105 |
| 3 | 实际类别 | seat\_type | varchar2(2) | n |  |  | 105 |
| 4 | 座位总数 | seat\_total | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_1\_1.carriage  (  no char(3) default (to\_char(seq\_carriage\_no.nextval,'09')) not null ,  carriage\_type varchar2(2) not null ,  seat\_type varchar2(2) not null ,  seat\_total number(3,0) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.carriage is '车厢';  comment on column y\_1\_1\_1\_1.carriage.no is '编号';  comment on column y\_1\_1\_1\_1.carriage.carriage\_type is '车厢类别';  comment on column y\_1\_1\_1\_1.carriage.seat\_type is '实际类别';  comment on column y\_1\_1\_1\_1.carriage.seat\_total is '座位总数'; |

##### 乘客

表5.1.2.1‑9 passenger (no)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | no | char(18) | n |  |  |  |
| 2 | 姓名 | name | varchar2(45) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_1\_1\_1.passenger  (  no char(18) not null ,  name varchar2(45) not null ,  phone char(11) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.passenger is '乘客';  comment on column y\_1\_1\_1\_1.passenger.no is '乘客号';  comment on column y\_1\_1\_1\_1.passenger.name is '姓名';  comment on column y\_1\_1\_1\_1.passenger.phone is '手机号码'; |

##### 从事

表5.1.2.1‑10 deal\_with（emp\_no,post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | emp\_no | employee(no) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_1\_1\_1.deal\_with  (  emp\_no references y\_1\_1\_1\_1.employee(no) not null ,  post\_no references y\_1\_1\_1\_1.post(no) not null ,  primary key(emp\_no,post\_no)  )  ;  comment on table y\_1\_1\_1\_1.deal\_with is '从事';  comment on column y\_1\_1\_1\_1.deal\_with.emp\_no is '员工编号';  comment on column y\_1\_1\_1\_1.deal\_with.post\_no is '岗位编号'; |

##### 包含

表5.1.2.1‑11 include（train\_no, carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车编号 | train\_no | train (no) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 3 | 车厢号分布范围 | carriage\_range | varchar2(44) |  |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_1\_1\_1.include  (  train\_no references y\_1\_1\_1\_1.train (no) not null ,  carriage\_no references y\_1\_1\_1\_1.carriage(no) not null ,  carriage\_range varchar2(44) ,  primary key(train\_no, carriage\_no)  )  ;  comment on table y\_1\_1\_1\_1.include is '包含';  comment on column y\_1\_1\_1\_1.include.train\_no is '列车编号';  comment on column y\_1\_1\_1\_1.include.carriage\_no is '车厢编号';  comment on column y\_1\_1\_1\_1.include.carriage\_range is '车厢号分布范围'; |

##### 经过

表5.1.2.1‑12 pass\_by（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(13) | n |  |  | 来自序列seq\_pass\_by\_no |
| 2 | 车次编号 | train\_no | train(no) | n |  |  |  |
| 3 | 站点名 | station\_name | rail\_station(name) | n |  |  |  |
| 4 | 发车时间 | start\_time | date | n |  |  | 大于到达时间 |
| 5 | 到达时间 | arrive\_time | date | n |  |  |  |
| 6 | 站点序 | station\_order | number(2,0) | n |  |  |  |
| 7 | 区间基础票价 | base\_price | number(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | number(6,4) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_1\_1.pass\_by  (  no char(13) default (to\_char(seq\_pass\_by\_no.nextval,'099999999999')) not null ,  train\_no references y\_1\_1\_1\_1.train(no) not null ,  station\_name references y\_1\_1\_1\_1.rail\_station(name) not null ,  start\_time date not null ,  arrive\_time date not null ,  station\_order number(2,0) not null ,  base\_price number(6,2) not null ,  up\_rate number(6,4) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.pass\_by is '经过';  comment on column y\_1\_1\_1\_1.pass\_by.no is '编号';  comment on column y\_1\_1\_1\_1.pass\_by.train\_no is '车次编号';  comment on column y\_1\_1\_1\_1.pass\_by.station\_name is '站点名';  comment on column y\_1\_1\_1\_1.pass\_by.start\_time is '发车时间';  comment on column y\_1\_1\_1\_1.pass\_by.arrive\_time is '到达时间';  comment on column y\_1\_1\_1\_1.pass\_by.station\_order is '站点序';  comment on column y\_1\_1\_1\_1.pass\_by.base\_price is '区间基础票价';  comment on column y\_1\_1\_1\_1.pass\_by.up\_rate is '票价上浮比率'; |

##### 车票业务

表5.1.2.1‑13 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | number(13,0) | n |  |  | 来自序列seq\_ticket\_business\_no |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 员工号 | emp\_no | employee(no) | n |  |  |  |
| 4 | 车次编号 | train\_no | train(no) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 106 |
| 9 | 办理时间 | do\_time | date | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 107 |
| 11 | 业务金额 | busi\_\_amount | number(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar2(5) | n |  |  |  |
| 14 | 发车时间 | start\_time | date | n |  |  | 小于到达时间 |
| 15 | 到达时间 | arrive\_time | date | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：车票业务  create table y\_1\_1\_1\_1.ticket\_business  (  no number(13,0) default (seq\_ticket\_business\_no.nextval) not null ,  passenger\_no references y\_1\_1\_1\_1.passenger(no) not null ,  emp\_no references y\_1\_1\_1\_1.employee(no) not null ,  train\_no references y\_1\_1\_1\_1.train(no) not null ,  carriage\_no references y\_1\_1\_1\_1.carriage(no) not null ,  origin\_station references y\_1\_1\_1\_1.rail\_station(name) not null ,  destination\_station references y\_1\_1\_1\_1.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time date not null ,  busi\_status char(1) not null ,  busi\_\_amount number(5,2) not null ,  carriage\_number number(2,0) not null ,  seat\_number varchar2(5) not null ,  start\_time date not null ,  arrive\_time date not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_1.ticket\_business is '车票业务';  comment on column y\_1\_1\_1\_1.ticket\_business.no is '编号';  comment on column y\_1\_1\_1\_1.ticket\_business.passenger\_no is '乘客号';  comment on column y\_1\_1\_1\_1.ticket\_business.emp\_no is '员工号';  comment on column y\_1\_1\_1\_1.ticket\_business.train\_no is '车次编号';  comment on column y\_1\_1\_1\_1.ticket\_business.carriage\_no is '车厢编号';  comment on column y\_1\_1\_1\_1.ticket\_business.origin\_station is '乘客出发站';  comment on column y\_1\_1\_1\_1.ticket\_business.destination\_station is '乘客到达站';  comment on column y\_1\_1\_1\_1.ticket\_business.busi\_type is '业务类别';  comment on column y\_1\_1\_1\_1.ticket\_business.do\_time is '办理时间';  comment on column y\_1\_1\_1\_1.ticket\_business.busi\_status is '订单状态';  comment on column y\_1\_1\_1\_1.ticket\_business.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_1\_1.ticket\_business.carriage\_number is '车厢号';  comment on column y\_1\_1\_1\_1.ticket\_business.seat\_number is '座位号';  comment on column y\_1\_1\_1\_1.ticket\_business.start\_time is '发车时间';  comment on column y\_1\_1\_1\_1.ticket\_business.arrive\_time is '到达时间'; |

##### 字典

表5.1.2.1‑14 user\_dict（categary,ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | categary | char(3) | n |  |  |  |
| 2 | 编号 | ccode | varchar2(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar2(300) |  |  |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_1\_1.user\_dict  (  category char(3) not null ,  ccode varchar2(6) not null ,  ctext varchar2(300) ,  primary key(category,ccode)  )  ;  comment on table y\_1\_1\_1\_1.user\_dict is '字典';  comment on column y\_1\_1\_1\_1.user\_dict.category is '大类编号';  comment on column y\_1\_1\_1\_1.user\_dict.ccode is '编号';  comment on column y\_1\_1\_1\_1.user\_dict.ctext is '内容'; |

#### 添加检查约束

表5.1.2‑2语句

|  |
| --- |
| alter table pass\_by add check (arrive\_time < start\_time);  alter table ticket\_business add check (arrive\_time > start\_time); |

### 同义词

表5.1‑2同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | emp | employee | 员工别称 |  |
| 2 | inc | include | 包含别称 |  |
| 3 | dep | depart | 部门别称 |  |
| 4 | busi | ticket\_business | 业务别称 |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| --创建同义词：员工别称  create synonym y\_1\_1\_1\_1.emp for y\_1\_1\_1\_1.employee;  --创建同义词：包含别称  create synonym y\_1\_1\_1\_1.inc for y\_1\_1\_1\_1.include;  --创建同义词：部门别称  create synonym y\_1\_1\_1\_1.dep for y\_1\_1\_1\_1.depart;  --创建同义词：业务别称  create synonym y\_1\_1\_1\_1.busi for y\_1\_1\_1\_1.ticket\_business; |

### 视图

#### 参照信息

表5.1.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 铁路分公司信息 | v\_rail\_company\_mes | 显示带区域名称的铁路分公司 | 将区域名称加进来 |
| 2 | 火车站信息 | v\_rail\_station\_mes | 显示带车站等级名称、供给站标志名称、铁路分公司名称的火车站 | 将车站等级名称、供给站标志名称、铁路分公司名称加进来 |
| 3 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 4 | 员工信息 | v\_employee\_mes | 显示带性别名称的员工 | 将性别名称加进来 |
| 5 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 6 | 车厢信息 | v\_carriage\_mes | 显示带车厢类别名称、实际类别名称的车厢 | 将车厢类别名称、实际类别名称加进来 |
| 7 | 从事信息 | v\_deal\_with\_mes | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 8 | 车票业务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、员工姓名、业务类别名称、订单状态名称的车票业务 | 将乘客姓名、员工姓名、业务类别名称、订单状态名称加进来 |

##### 铁路分公司信息

表5.1.4.1‑1 视图v\_rail\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 铁路分公司编号 | no | rail\_company | no |  |  |
| 2 | 铁路分公司名称 | name | rail\_company | name |  |  |
| 3 | 地址 | address | rail\_company | address |  |  |
| 4 | 联系电话 | phone | rail\_company | phone |  |  |
| 5 | 区域编号 | area\_no | rail\_company | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | rail\_company.area\_no = area.no |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：铁路分公司信息  create view y\_1\_1\_1\_1.v\_rail\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from rail\_company a, area b  where a.area\_no = b.no  ;  comment on table y\_1\_1\_1\_1.v\_rail\_company\_mes is '铁路分公司信息';  comment on column y\_1\_1\_1\_1.v\_rail\_company\_mes.no is '铁路分公司编号';  comment on column y\_1\_1\_1\_1.v\_rail\_company\_mes.name is '铁路分公司名称';  comment on column y\_1\_1\_1\_1.v\_rail\_company\_mes.address is '地址';  comment on column y\_1\_1\_1\_1.v\_rail\_company\_mes.phone is '联系电话';  comment on column y\_1\_1\_1\_1.v\_rail\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_1\_1\_1.v\_rail\_company\_mes.area\_name is '区域名称'; |

##### 火车站信息

表5.1.4.1‑2 视图v\_rail\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 站点名 | name | rail\_station | name |  |  |
| 2 | 车站等级 | station\_level | rail\_station | station\_level |  |  |
| 3 | 供给站标志 | station\_provide\_flag | rail\_station | station\_provide\_flag |  |  |
| 4 | 铁路分公司编号 | comp\_no | rail\_station | comp\_no |  |  |
| 5 | 铁路分公司名称 | comp\_name | rail\_company | name | rail\_station.comp\_no = rail\_company.no |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：火车站信息  create view y\_1\_1\_1\_1.v\_rail\_station\_mes(name, station\_level, station\_provide\_flag, comp\_no, comp\_name)  as  select a.name, a.station\_level, a.station\_provide\_flag, a.comp\_no, b.name  from rail\_station a, rail\_company b  where a.comp\_no = b.no  ;  comment on table y\_1\_1\_1\_1.v\_rail\_station\_mes is '火车站信息';  comment on column y\_1\_1\_1\_1.v\_rail\_station\_mes.name is '站点名';  comment on column y\_1\_1\_1\_1.v\_rail\_station\_mes.station\_level is '车站等级';  comment on column y\_1\_1\_1\_1.v\_rail\_station\_mes.station\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_1\_1.v\_rail\_station\_mes.comp\_no is '铁路分公司编号';  comment on column y\_1\_1\_1\_1.v\_rail\_station\_mes.comp\_name is '铁路分公司名称'; |

##### 岗位信息

表5.1.4.1‑3 视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 岗位编号 | no | post | no |  |  |
| 2 | 岗位名称 | name | post | name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门号 | dept\_no | post | dept\_no |  |  |
| 5 | 部门名称 | dept\_name | dep | name | post.dept\_no = dep.no |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：岗位信息  create view y\_1\_1\_1\_1.v\_post\_mes(no, name, duty, dept\_no, dept\_name)  as  select a.no, a.name, a.duty, a.dept\_no, b.name  from post a, dep b  where a.dept\_no = b.no  ;  comment on table y\_1\_1\_1\_1.v\_post\_mes is '岗位信息';  comment on column y\_1\_1\_1\_1.v\_post\_mes.no is '岗位编号';  comment on column y\_1\_1\_1\_1.v\_post\_mes.name is '岗位名称';  comment on column y\_1\_1\_1\_1.v\_post\_mes.duty is '职责';  comment on column y\_1\_1\_1\_1.v\_post\_mes.dept\_no is '部门号';  comment on column y\_1\_1\_1\_1.v\_post\_mes.dept\_name is '部门名称'; |

##### 员工信息

表5.1.4.1‑4 视图v\_employee\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | no | emp | no |  |  |
| 2 | 员工姓名 | name | emp | name |  |  |
| 3 | 性别 | sex | emp | sex |  |  |
| 4 | 性别名称 | sex\_name | user\_dict | ctext | user\_dict.category= '103' and  user\_dict.ccode= emp.sex |  |
| 5 | 手机号码 | phone | emp | phone |  |  |
| 6 | 密码 | password | emp | password |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：员工信息  create view y\_1\_1\_1\_1.v\_employee\_mes(no, name, sex, sex\_name, phone, password)  as  select a.no, a.name, a.sex, b.ctext, a.phone, a.password  from emp a, user\_dict b  where b.category= '103' and b.ccode= a.sex  ;  comment on table y\_1\_1\_1\_1.v\_employee\_mes is '员工信息';  comment on column y\_1\_1\_1\_1.v\_employee\_mes.no is '员工编号';  comment on column y\_1\_1\_1\_1.v\_employee\_mes.name is '员工姓名';  comment on column y\_1\_1\_1\_1.v\_employee\_mes.sex is '性别';  comment on column y\_1\_1\_1\_1.v\_employee\_mes.sex\_name is '性别名称';  comment on column y\_1\_1\_1\_1.v\_employee\_mes.phone is '手机号码';  comment on column y\_1\_1\_1\_1.v\_employee\_mes.password is '密码'; |

##### 列车信息

表5.1.4.1‑5 视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次编号 | no | train | no |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.category= '104' and  user\_dict.ccode=train.train\_type |  |
| 4 | 速度 | speed | train | speed |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：列车信息  create view y\_1\_1\_1\_1.v\_train\_mes(no, train\_type, train\_type\_name, speed)  as  select a.no, a.train\_type, b.ctext, a.speed  from train a, user\_dict b  where b.category= '104' and b.ccode=a.train\_type  ;  comment on table y\_1\_1\_1\_1.v\_train\_mes is '列车信息';  comment on column y\_1\_1\_1\_1.v\_train\_mes.no is '车次编号';  comment on column y\_1\_1\_1\_1.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_1\_1\_1.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_1\_1\_1.v\_train\_mes.speed is '速度'; |

##### 车厢信息

表5.1.4.1‑6 视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | carriage | no |  |  |
| 2 | 车厢类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 车厢类别名称 | carriage\_type\_name | user\_dict c1 | ctext | c1.category= '105' and  c1.ccode=carriage.carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict c2 | ctext | c2.category= '105' and  c2.ccode=carriage.seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_1\_1\_1.v\_carriage\_mes(no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total)  as  select a.no, a.carriage\_type, c1.ctext, a.seat\_type, c2.ctext, a.seat\_total  from carriage a, user\_dict c1, user\_dict c2  where c1.category= '105' and c1.ccode=a.carriage\_type and c2.category= '105' and c2.ccode=a.seat\_type  ;  comment on table y\_1\_1\_1\_1.v\_carriage\_mes is '车厢信息';  comment on column y\_1\_1\_1\_1.v\_carriage\_mes.no is '编号';  comment on column y\_1\_1\_1\_1.v\_carriage\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_1\_1\_1.v\_carriage\_mes.carriage\_type\_name is '车厢类别名称';  comment on column y\_1\_1\_1\_1.v\_carriage\_mes.seat\_type is '实际类别';  comment on column y\_1\_1\_1\_1.v\_carriage\_mes.seat\_type\_name is '实际类别名称';  comment on column y\_1\_1\_1\_1.v\_carriage\_mes.seat\_total is '座位总数'; |

##### 从事信息

表5.1.4.1‑7 视图v\_deal\_with\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | emp\_no | deal\_with | emp\_no |  |  |
| 2 | 员工姓名 | emp\_name | employee | name | deal\_with.emp\_no = employee.no |  |
| 3 | 岗位编号 | post\_no | deal\_with | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | name | deal\_with.post\_no = post.no |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：从事信息  create view y\_1\_1\_1\_1.v\_deal\_with\_mes(emp\_no, emp\_name, post\_no, post\_name)  as  select a.emp\_no, b.name, a.post\_no, c.name  from deal\_with a, employee b, post c  where a.emp\_no = b.no and a.post\_no = c.no  ;  comment on table y\_1\_1\_1\_1.v\_deal\_with\_mes is '从事信息';  comment on column y\_1\_1\_1\_1.v\_deal\_with\_mes.emp\_no is '员工编号';  comment on column y\_1\_1\_1\_1.v\_deal\_with\_mes.emp\_name is '员工姓名';  comment on column y\_1\_1\_1\_1.v\_deal\_with\_mes.post\_no is '岗位编号';  comment on column y\_1\_1\_1\_1.v\_deal\_with\_mes.post\_name is '岗位名称'; |

##### 车票业务信息

表5.1.4.1‑8 视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | busi | no |  |  |
| 2 | 乘客号 | passenger\_no | busi | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | busi.passenger\_no=passenger.no |  |
| 4 | 员工号 | emp\_no | busi | emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | employee | name | busi.emp\_no = employee.no |  |
| 6 | 车次编号 | train\_no | busi | train\_no |  |  |
| 7 | 车厢编号 | carriage\_no | busi | carriage\_no |  |  |
| 8 | 乘客出发站 | origin\_station | busi | origin\_station |  |  |
| 9 | 乘客到达站 | destination\_station | busi | destination\_station |  |  |
| 10 | 业务类别 | busi\_type | busi | busi\_type |  |  |
| 11 | 业务类别名称 | busi\_type\_name | user\_dict c1 | ctext | c1.category= '106' and  c1.ccode=busi.busi\_type |  |
| 12 | 办理时间 | do\_time | busi | do\_time |  |  |
| 13 | 订单状态 | busi\_status | busi | busi\_status |  |  |
| 14 | 订单状态名称 | busi\_status\_name | user\_dict c2 | ctext | c2.category= '107' and  c2.ccode=busi.busi\_status |  |
| 15 | 业务金额 | busi\_\_amount | busi | busi\_\_amount |  |  |
| 16 | 车厢号 | carriage\_number | busi | carriage\_number |  |  |
| 17 | 座位号 | seat\_number | busi | seat\_number |  |  |
| 18 | 发车时间 | start\_time | busi | start\_time |  |  |
| 19 | 到达时间 | arrive\_time | busi | arrive\_time |  |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：车票业务信息  create view y\_1\_1\_1\_1.v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, carriage\_no, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_\_amount, carriage\_number, seat\_number, start\_time, arrive\_time)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, a.carriage\_no, a.origin\_station, a.destination\_station, a.busi\_type, c1.ctext, a.do\_time, a.busi\_status, c2.ctext, a.busi\_\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time  from busi a, passenger b, employee c, user\_dict c1, user\_dict c2  where a.passenger\_no=b.no and a.emp\_no = c.no and c1.category= '106' and c1.ccode=a.busi\_type and c2.category= '107' and c2.ccode=a.busi\_status  ;  comment on table y\_1\_1\_1\_1.v\_ticket\_business\_mes is '车票业务信息';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.no is '编号';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.passenger\_no is '乘客号';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.emp\_no is '员工号';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.emp\_name is '员工姓名';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.train\_no is '车次编号';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.busi\_type is '业务类别';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.do\_time is '办理时间';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.busi\_status is '订单状态';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.carriage\_number is '车厢号';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.seat\_number is '座位号';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_1\_1.v\_ticket\_business\_mes.arrive\_time is '到达时间'; |

#### 单据

表5.1.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 乘客车票订单 | order\_info | 退订车票、改签车票 |  |
| 2 | 退票详细信息 | refund\_info | 退订车票 |  |
| 3 | 改签详细信息 | rebook\_info | 改签车票 |  |
| 4 | 余票信息 | ticketleft\_info | 销售车票、退订车票、改签车票 |  |

##### 乘客车票订单

表5.1.4.2‑1视图order\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_id | ticket\_business | busi\_status |  |  |
| 2 | 乘客号 | passenger\_id | ticket\_business | passenger\_no | ticket\_business.passenger\_no = passenger.no |  |
| 3 | 编号 | id | ticket\_business | no |  |  |
| 4 | 乘客出发站 | origin\_station | ticket\_business | origin\_station |  |  |
| 5 | 乘客到达站 | destination\_station | ticket\_business | destination\_station |  |  |
| 6 | 车厢号 | carriage\_number | ticket\_business | carriage\_number | ticket\_business.carriage\_number = carriage.no |  |
| 7 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 8 | 发车时间 | start\_time | ticket\_business | start\_time |  |  |
| 9 | 到达时间 | arrive\_time | ticket\_business | arrive\_time |  |  |
| 10 | 订购时间 | order\_time | ticket\_business | do\_time |  |  |
| 11 | 票价 | price | ticket\_business | busi\_\_amount |  |  |
| 12 | 订单状态 | order\_status | ticket\_business | busi\_status |  |  |
| 13 | 车座种类 | seat\_type | carriage | seat\_type |  |  |
| 14 | 售票员号 | conductor\_id | ticket\_business | emp\_no | ticket\_business.emp\_no = employee.no |  |
| 15 | 车次编号 | train\_id | ticket\_business | train\_no | ticket\_business.train\_no = train.no |  |

执行脚本（Oracle，y\_1\_1\_1\_1）

|  |
| --- |
| -- 创建视图：乘客车票订单  create view y\_1\_1\_1\_1.order\_info(order\_id, passenger\_id, id, origin\_station, destination\_station, carriage\_number, seat\_number, start\_time, arrive\_time, order\_time, price, order\_status, seat\_type, conductor\_id, train\_id)  as  select a.busi\_status, a.passenger\_no, a.no, a.origin\_station, a.destination\_station, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.do\_time, a.busi\_\_amount, a.busi\_status, b.seat\_type, a.emp\_no, a.train\_no  from ticket\_business a, carriage b  where a.passenger\_no = passenger.no and a.carriage\_number = b.no and a.emp\_no = employee.no and a.train\_no = train.no  ;  comment on table y\_1\_1\_1\_1.order\_info is '乘客车票订单';  comment on column y\_1\_1\_1\_1.order\_info.order\_id is '订单号';  comment on column y\_1\_1\_1\_1.order\_info.passenger\_id is '乘客号';  comment on column y\_1\_1\_1\_1.order\_info.id is '编号';  comment on column y\_1\_1\_1\_1.order\_info.origin\_station is '乘客出发站';  comment on column y\_1\_1\_1\_1.order\_info.destination\_station is '乘客到达站';  comment on column y\_1\_1\_1\_1.order\_info.carriage\_number is '车厢号';  comment on column y\_1\_1\_1\_1.order\_info.seat\_number is '座位号';  comment on column y\_1\_1\_1\_1.order\_info.start\_time is '发车时间';  comment on column y\_1\_1\_1\_1.order\_info.arrive\_time is '到达时间';  comment on column y\_1\_1\_1\_1.order\_info.order\_time is '订购时间';  comment on column y\_1\_1\_1\_1.order\_info.price is '票价';  comment on column y\_1\_1\_1\_1.order\_info.order\_status is '订单状态';  comment on column y\_1\_1\_1\_1.order\_info.seat\_type is '车座种类';  comment on column y\_1\_1\_1\_1.order\_info.conductor\_id is '售票员号';  comment on column y\_1\_1\_1\_1.order\_info.train\_id is '车次编号'; |

#### 报表

表5.1.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表5.1.4.3‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 函数

表5.1‑3函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 过程

表5.1‑4过程列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表5.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

## 乘客业务

### 序列

表5.2‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 4 | 1 | 1 | 1 | 9999 | 区域编号 |  |
| 2 | seq\_rail\_company\_no | 8 | 1 | 1 | 1 | 99999999 | 分公司编号 |  |
| 3 | seq\_train\_no | 2 | 1 | 1 | 1 | 99 | 列车号 |  |
| 4 | seq\_depart\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 5 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 6 | seq\_terminal\_no | 8 | 1 | 1 | 1 | 99999999 | 终端编号 |  |
| 7 | seq\_contain\_no | 2 | 1 | 1 | 1 | 99 | 包含编号 |  |
| 8 | seq\_self\_service\_no | 12 | 1 | 1 | 1 | 999999999999 | 自助操作编号 |  |
| 9 | seq\_pass\_by\_no | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_no | 12 | 1 | 1 | 1 | 999999999999 | 票务服务编号 |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_2\_1.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 9999 nocache;  --创建序列，用于：分公司编号  create sequence y\_1\_1\_2\_1.seq\_rail\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 nocache;  --创建序列，用于：列车号  create sequence y\_1\_1\_2\_1.seq\_train\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：部门编号  create sequence y\_1\_1\_2\_1.seq\_depart\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_2\_1.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：终端编号  create sequence y\_1\_1\_2\_1.seq\_terminal\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 nocache;  --创建序列，用于：包含编号  create sequence y\_1\_1\_2\_1.seq\_contain\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：自助操作编号  create sequence y\_1\_1\_2\_1.seq\_self\_service\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache;  --创建序列，用于：经过编号  create sequence y\_1\_1\_2\_1.seq\_pass\_by\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache;  --创建序列，用于：票务服务编号  create sequence y\_1\_1\_2\_1.seq\_ticket\_business\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache; |

### 表

表5.2.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | rail\_company |  |
| 3 | 列车 | train |  |
| 4 | 火车站 | rail\_station |  |
| 5 | 部门 | depart |  |
| 6 | 车厢 | carriage |  |
| 7 | 网络售票终端 | terminal |  |
| 8 | 乘客 | passenger |  |
| 9 | 包含 | contain |  |
| 10 | 自助操作 | self­\_service |  |
| 11 | 经过 | pass\_by |  |
| 12 | 票务服务 | ticket\_business |  |
| 13 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表5.2.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | no | char(5) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | name | varchar2(300) | n |  | y |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：表1  create table y\_1\_1\_2\_1.area  (  no char(5) default (to\_char(seq\_area\_no.nextval,'0999')) not null ,  name varchar2(300) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.area is '表1';  comment on column y\_1\_1\_2\_1.area.no is '区域编号';  comment on column y\_1\_1\_2\_1.area.name is '区域名称'; |

##### 分公司

表5.2.2.1‑2 rail\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 分公司编号 | no | char(9) | n |  |  | 来自序列seq\_rail\_company\_no |
| 2 | 分公司名称 | name | varchar2(300) | n |  | y |  |
| 3 | 地址 | address | varchar2(300) | n |  | y |  |
| 4 | 联系电话 | phone | varchar2(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_1\_2\_1.rail\_company  (  no char(9) default (to\_char(seq\_rail\_company\_no.nextval,'09999999')) not null ,  name varchar2(300) unique not null ,  address varchar2(300) unique not null ,  phone varchar2(20) not null ,  area\_no references y\_1\_1\_2\_1.area(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.rail\_company is '分公司';  comment on column y\_1\_1\_2\_1.rail\_company.no is '分公司编号';  comment on column y\_1\_1\_2\_1.rail\_company.name is '分公司名称';  comment on column y\_1\_1\_2\_1.rail\_company.address is '地址';  comment on column y\_1\_1\_2\_1.rail\_company.phone is '联系电话';  comment on column y\_1\_1\_2\_1.rail\_company.area\_no is '区域编号'; |

##### 列车

表5.2.2.1‑3 train（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车号 | no | char(3) | n |  |  | 来自序列seq\_train\_no |
| 2 | 类型 | train\_type | char(1) | n |  |  | 201 |
| 3 | 速度 | speed | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_2\_1.train  (  no char(3) default (to\_char(seq\_train\_no.nextval,'09')) not null ,  train\_type char(1) not null ,  speed number(3,0) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.train is '列车';  comment on column y\_1\_1\_2\_1.train.no is '列车号';  comment on column y\_1\_1\_2\_1.train.train\_type is '类型';  comment on column y\_1\_1\_2\_1.train.speed is '速度'; |

##### 火车站

表5.2.2.1‑4 rail\_station（name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 站点名 | name | varchar2(30) | n |  |  |  |
| 2 | 车站等级 | station\_level | char(1) | n |  |  | 202 |
| 3 | 供给站标志 | supply\_sign | char(1) | n |  |  | 203 |
| 4 | 分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_2\_1.rail\_station  (  name varchar2(30) not null ,  station\_level char(1) not null ,  supply\_sign char(1) not null ,  comp\_no references y\_1\_1\_2\_1.rail\_company(no) not null ,  primary key(name)  )  ;  comment on table y\_1\_1\_2\_1.rail\_station is '火车站';  comment on column y\_1\_1\_2\_1.rail\_station.name is '站点名';  comment on column y\_1\_1\_2\_1.rail\_station.station\_level is '车站等级';  comment on column y\_1\_1\_2\_1.rail\_station.supply\_sign is '供给站标志';  comment on column y\_1\_1\_2\_1.rail\_station.comp\_no is '分公司编号'; |

##### 部门

表5.2.2.1‑5 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | no | char(3) | n |  |  | 来自序列seq\_depart\_no |
| 2 | 部门名称 | name | varchar2(60) | n |  | y |  |
| 3 | 简介 | introduce | varchar2(1500) |  |  |  |  |
| 4 | 分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_2\_1.depart  (  no char(3) default (to\_char(seq\_depart\_no.nextval,'09')) not null ,  name varchar2(60) unique not null ,  introduce varchar2(1500) ,  comp\_no references y\_1\_1\_2\_1.rail\_company(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.depart is '部门';  comment on column y\_1\_1\_2\_1.depart.no is '部门编号';  comment on column y\_1\_1\_2\_1.depart.name is '部门名称';  comment on column y\_1\_1\_2\_1.depart.introduce is '简介';  comment on column y\_1\_1\_2\_1.depart.comp\_no is '分公司编号'; |

##### 车厢

表5.2.2.1‑6 carriage（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | carriage\_no | char(3) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类别 | carriage\_type | varchar2(2) | n |  |  | 204 |
| 3 | 实际类别 | seat\_type | varchar2(2) | n |  |  | 205 |
| 4 | 座位总数 | seat\_total | number(3,0) | n |  |  |  |
| 5 | 列车号 | train\_no | train(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_2\_1.carriage  (  carriage\_no char(3) default (to\_char(seq\_carriage\_no.nextval,'09')) not null ,  carriage\_type varchar2(2) not null ,  seat\_type varchar2(2) not null ,  seat\_total number(3,0) not null ,  train\_no references y\_1\_1\_2\_1.train(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.carriage is '车厢';  comment on column y\_1\_1\_2\_1.carriage.carriage\_no is '编号';  comment on column y\_1\_1\_2\_1.carriage.carriage\_type is '车厢类别';  comment on column y\_1\_1\_2\_1.carriage.seat\_type is '实际类别';  comment on column y\_1\_1\_2\_1.carriage.seat\_total is '座位总数';  comment on column y\_1\_1\_2\_1.carriage.train\_no is '列车号'; |

##### 网络售票终端

表5.2.2.1‑7 terminal（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 终端编号 | no | char(9) | n |  |  | 来自序列seq\_terminal\_no |
| 2 | 终端语言类型 | terminal\_type | char(1) | n |  |  | 206 |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：网络售票终端  create table y\_1\_1\_2\_1.terminal  (  no char(9) default (to\_char(seq\_terminal\_no.nextval,'09999999')) not null ,  terminal\_type char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.terminal is '网络售票终端';  comment on column y\_1\_1\_2\_1.terminal.no is '终端编号';  comment on column y\_1\_1\_2\_1.terminal.terminal\_type is '终端语言类型'; |

##### 乘客

表5.2.2.1‑8 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | no | char(18) | n |  |  |  |
| 2 | 姓名 | name | varchar2(45) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |
| 4 | 性别 | gender | char(1) | n |  |  | 207 |
| 5 | 登录密码 | password | varchar2(50) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_1\_2\_1.passenger  (  no char(18) not null ,  name varchar2(45) not null ,  phone char(11) not null ,  gender char(1) not null ,  password varchar2(50) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.passenger is '乘客';  comment on column y\_1\_1\_2\_1.passenger.no is '乘客号';  comment on column y\_1\_1\_2\_1.passenger.name is '姓名';  comment on column y\_1\_1\_2\_1.passenger.phone is '手机号码';  comment on column y\_1\_1\_2\_1.passenger.gender is '性别';  comment on column y\_1\_1\_2\_1.passenger.password is '登录密码'; |

##### 包含

表5.2.2.1‑9 contain（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(3) | n |  |  | 来自序列seq\_contain\_no |
| 2 | 列车号 | train\_no | train(no) | n |  |  |  |
| 3 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_1\_2\_1.contain  (  no char(3) default (to\_char(seq\_contain\_no.nextval,'09')) not null ,  train\_no references y\_1\_1\_2\_1.train(no) not null ,  carriage\_no references y\_1\_1\_2\_1.carriage(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.contain is '包含';  comment on column y\_1\_1\_2\_1.contain.no is '编号';  comment on column y\_1\_1\_2\_1.contain.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.contain.carriage\_no is '车厢编号'; |

##### 自助操作

表5.2.2.1‑10 self\_service（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | number(12,0) | n |  |  | 来自序列seq\_self\_service\_no |
| 2 | 终端编号 | terminal\_no | terminal (no) | n |  |  |  |
| 3 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 4 | 列车号 | train\_no | train(no) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 208 |
| 9 | 办理时间 | do\_time | date | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 209 |
| 11 | 业务金额 | busi\_amount | number(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar2(5) | n |  |  |  |
| 14 | 发车时间 | start\_time | date | n |  |  | 小于到达时间 |
| 15 | 到达时间 | arrive\_time | date | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 210 |
| 17 | 变更到站状态 | change\_station | char(1) | n |  |  | 211 |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：自助操作  create table y\_1\_1\_2\_1.self\_service  (  no number(12,0) default (seq\_self\_service\_no.nextval) not null ,  terminal\_no references y\_1\_1\_2\_1.terminal (no) not null ,  passenger\_no references y\_1\_1\_2\_1.passenger(no) not null ,  train\_no references y\_1\_1\_2\_1.train(no) not null ,  carriage\_no references y\_1\_1\_2\_1.carriage(no) not null ,  origin\_station references y\_1\_1\_2\_1.rail\_station(name) not null ,  destination\_station references y\_1\_1\_2\_1.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time date not null ,  busi\_status char(1) not null ,  busi\_amount number(5,2) not null ,  carriage\_number number(2,0) not null ,  seat\_number varchar2(5) not null ,  start\_time date not null ,  arrive\_time date not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.self\_service is '自助操作';  comment on column y\_1\_1\_2\_1.self\_service.no is '编号';  comment on column y\_1\_1\_2\_1.self\_service.terminal\_no is '终端编号';  comment on column y\_1\_1\_2\_1.self\_service.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_1.self\_service.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.self\_service.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_1.self\_service.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_1.self\_service.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_1.self\_service.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_1.self\_service.do\_time is '办理时间';  comment on column y\_1\_1\_2\_1.self\_service.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_1.self\_service.busi\_amount is '业务金额';  comment on column y\_1\_1\_2\_1.self\_service.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_1.self\_service.seat\_number is '座位号';  comment on column y\_1\_1\_2\_1.self\_service.start\_time is '发车时间';  comment on column y\_1\_1\_2\_1.self\_service.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_1.self\_service.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_1.self\_service.change\_station is '变更到站状态'; |

##### 经过

表5.2.2.1‑11 pass\_by（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(13) | n |  |  | 来自序列seq\_pass\_by\_no |
| 2 | 列车号 | train\_no | train (no) | n |  |  |  |
| 3 | 站点名 | station\_name | rail\_station (name) | n |  |  |  |
| 4 | 发车时间 | start\_time | date | n |  |  | 大于到达时间 |
| 5 | 到达时间 | arrive\_time | date | n |  |  |  |
| 6 | 站点序 | station\_order | number(2,0) | n |  |  |  |
| 7 | 区间基础票价 | base\_price | number(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | number(6,4) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_2\_1.pass\_by  (  no char(13) default (to\_char(seq\_pass\_by\_no.nextval,'099999999999')) not null ,  train\_no references y\_1\_1\_2\_1.train (no) not null ,  station\_name references y\_1\_1\_2\_1.rail\_station (name) not null ,  start\_time date not null ,  arrive\_time date not null ,  station\_order number(2,0) not null ,  base\_price number(6,2) not null ,  up\_rate number(6,4) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.pass\_by is '经过';  comment on column y\_1\_1\_2\_1.pass\_by.no is '编号';  comment on column y\_1\_1\_2\_1.pass\_by.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.pass\_by.station\_name is '站点名';  comment on column y\_1\_1\_2\_1.pass\_by.start\_time is '发车时间';  comment on column y\_1\_1\_2\_1.pass\_by.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_1.pass\_by.station\_order is '站点序';  comment on column y\_1\_1\_2\_1.pass\_by.base\_price is '区间基础票价';  comment on column y\_1\_1\_2\_1.pass\_by.up\_rate is '票价上浮比率'; |

##### 票务服务

表5.2.2.1‑12 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | number(12,0) | n |  |  | 来自序列seq\_ticket\_business\_no |
| 2 | 乘客号 | passenger\_no | passenger (no) | n |  |  |  |
| 3 | 列车号 | train\_no | train (no) | n |  |  |  |
| 4 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 5 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 6 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 7 | 业务类别 | busi\_type | char(1) | n |  |  | 208 |
| 8 | 办理时间 | do\_time | date | n |  |  |  |
| 9 | 订单状态 | busi\_status | char(1) | n |  |  | 209 |
| 10 | 业务金额 | busi\_amount | number(5,2) | n |  |  |  |
| 11 | 车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 12 | 座位号 | seat\_number | varchar2(5) | n |  |  |  |
| 13 | 发车时间 | start\_time | date | n |  |  | 小于到达时间 |
| 14 | 到达时间 | arrive\_time | date | n |  |  |  |
| 15 | 出票状态 | ticket\_status | char(1) | n |  |  | 210 |
| 16 | 变更到站状态 | change\_station | char(1) | n |  |  | 211 |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：票务服务  create table y\_1\_1\_2\_1.ticket\_business  (  no number(12,0) default (seq\_ticket\_business\_no.nextval) not null ,  passenger\_no references y\_1\_1\_2\_1.passenger (no) not null ,  train\_no references y\_1\_1\_2\_1.train (no) not null ,  carriage\_no references y\_1\_1\_2\_1.carriage(no) not null ,  origin\_station references y\_1\_1\_2\_1.rail\_station(name) not null ,  destination\_station references y\_1\_1\_2\_1.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time date not null ,  busi\_status char(1) not null ,  busi\_\_amount number(5,2) not null ,  carriage\_number number(2,0) not null ,  seat\_number varchar2(5) not null ,  start\_time date not null ,  arrive\_time date not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_1.ticket\_business is '票务服务';  comment on column y\_1\_1\_2\_1.ticket\_business.no is '编号';  comment on column y\_1\_1\_2\_1.ticket\_business.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_1.ticket\_business.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.ticket\_business.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_1.ticket\_business.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_1.ticket\_business.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_1.ticket\_business.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_1.ticket\_business.do\_time is '办理时间';  comment on column y\_1\_1\_2\_1.ticket\_business.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_1.ticket\_business.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_2\_1.ticket\_business.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_1.ticket\_business.seat\_number is '座位号';  comment on column y\_1\_1\_2\_1.ticket\_business.start\_time is '发车时间';  comment on column y\_1\_1\_2\_1.ticket\_business.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_1.ticket\_business.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_1.ticket\_business.change\_station is '变更到站状态'; |

##### 字典

表5.2.2.1‑13 user\_dict（categary,ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | categary | char(3) | n |  |  |  |
| 2 | 编号 | ccode | varchar2(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar2(300) |  |  |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_2\_1.user\_dict  (  category char(3) not null ,  ccode varchar2(6) not null ,  ctext varchar2(300) ,  primary key(category,ccode)  )  ;  comment on table y\_1\_1\_2\_1.user\_dict is '字典';  comment on column y\_1\_1\_2\_1.user\_dict.category is '大类编号';  comment on column y\_1\_1\_2\_1.user\_dict.ccode is '编号';  comment on column y\_1\_1\_2\_1.user\_dict.ctext is '内容'; |

#### 添加检查约束

表5.2.2‑2语句

|  |
| --- |
| alter table self\_service add check (arrive\_time > start\_time);  alter table pass\_by add check (start\_time > arrive\_time);  alter table ticket\_business add check (arrive\_time > start\_time); |

### 同义词

表5.2‑2同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | r\_com | rail\_company | 铁路分公司别称 |  |
| 2 | r\_station | rail\_station | 火车站别称 |  |
| 3 | t\_bus | ticket\_business | 车票业务别称 |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| --创建同义词：铁路分公司别称  create synonym y\_1\_1\_2\_1.r\_com for y\_1\_1\_2\_1.rail\_company;  --创建同义词：火车站别称  create synonym y\_1\_1\_2\_1.r\_station for y\_1\_1\_2\_1.rail\_station;  --创建同义词：车票业务别称  create synonym y\_1\_1\_2\_1.t\_bus for y\_1\_1\_2\_1.ticket\_business; |

### 视图

#### 参照信息

表5.2.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_rail\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 3 | 火车站信息 | v\_rail\_station\_mes | 显示带分公司名称、车站等级名称、供给站标志名称的火车站 | 将分公司名称、车站等级名称、供给站名称加进来 |
| 4 | 部门信息 | v\_depart\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 5 | 车厢信息 | v\_carriage\_mes | 显示带车厢类别名称、实际类别名称的车厢 | 将车厢类别名称、实际类别名称加进来 |
| 6 | 网络售票终端信息 | v\_terminal\_mes | 显示带终端语言类型名称的网络售票终端信息 | 将终端语言类型名称加进来 |
| 7 | 乘客信息 | v\_passenger\_mes | 显示带性别名称的乘客 | 将性别名称加进来 |
| 8 | 包含信息 | v\_contain\_mes | 显示带列车类型、车厢类别的包含 | 将列车类型、车厢类别加进来 |
| 9 | 自助操作信息 | v\_self\_service\_mes | 显示带乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的自助操作 | 将乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |
| 10 | 经过信息 | v\_pass\_by\_mes | 显示带列车类型的经过 | 将列车类型加进来 |
| 11 | 票务服务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的票务服务 | 将乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |

##### 分公司信息

表5.2.4.1‑1 视图v\_rail\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 分公司编号 | no | r\_com | no |  |  |
| 2 | 分公司名称 | name | r\_com | name |  |  |
| 3 | 地址 | address | r\_com | address |  |  |
| 4 | 联系电话 | phone | r\_com | phone |  |  |
| 5 | 区域编号 | area\_no | r\_com | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | r\_com.area\_no = area.no |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：分公司信息  create view y\_1\_1\_2\_1.v\_rail\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from r\_com a, area b  where a.area\_no = b.no  ;  comment on table y\_1\_1\_2\_1.v\_rail\_company\_mes is '分公司信息';  comment on column y\_1\_1\_2\_1.v\_rail\_company\_mes.no is '分公司编号';  comment on column y\_1\_1\_2\_1.v\_rail\_company\_mes.name is '分公司名称';  comment on column y\_1\_1\_2\_1.v\_rail\_company\_mes.address is '地址';  comment on column y\_1\_1\_2\_1.v\_rail\_company\_mes.phone is '联系电话';  comment on column y\_1\_1\_2\_1.v\_rail\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_1\_2\_1.v\_rail\_company\_mes.area\_name is '区域名称'; |

##### 列车信息

表5.2.4.1‑2 视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 列车号 | train\_no | train | train\_no |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.category= '201' and  user\_dict.ccode=train.train\_type |  |
| 4 | 速度 | speed | train | speed |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：列车信息  create view y\_1\_1\_2\_1.v\_train\_mes(train\_no, train\_type, train\_type\_name, speed)  as  select a.train\_no, a.train\_type, b.ctext, a.speed  from train a, user\_dict b  where b.category= '201' and b.ccode=a.train\_type  ;  comment on table y\_1\_1\_2\_1.v\_train\_mes is '列车信息';  comment on column y\_1\_1\_2\_1.v\_train\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_1\_2\_1.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_1\_2\_1.v\_train\_mes.speed is '速度'; |

##### 火车站信息

表5.2.4.1‑3 视图v\_rail\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 站点名 | name | r\_station | name |  |  |
| 2 | 车站等级 | station\_level | r\_station | station\_level |  |  |
| 3 | 车站等级名称 | station\_level\_name | user\_dict c1 | ctext | c1.category= '202' and  c1.ccode=r\_station.station\_level |  |
| 4 | 供给站标志 | supply\_sign | r\_station | supply\_sign |  |  |
| 5 | 供给站标志名称 | supply\_sign\_name | user\_dict c2 | ctext | c2.category= '203' and  c2.ccode=r\_station. supply\_sign |  |
| 6 | 分公司编号 | comp\_no | r\_station | comp\_no |  |  |
| 7 | 分公司名称 | comp\_name | r\_com | name | r\_station.comp\_no = r\_com.no |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：火车站信息  create view y\_1\_1\_2\_1.v\_rail\_station\_mes(name, station\_level, station\_level\_name, supply\_sign, supply\_sign\_name, comp\_no, comp\_name)  as  select a.name, a.station\_level, c1.ctext, a.supply\_sign, c2.ctext, a.comp\_no, d.name  from r\_station a, user\_dict c1, user\_dict c2, r\_com d  where c1.category= '202' and c1.ccode=a.station\_level and c2.category= '203' and c2.ccode=a. supply\_sign and a.comp\_no = d.no  ;  comment on table y\_1\_1\_2\_1.v\_rail\_station\_mes is '火车站信息';  comment on column y\_1\_1\_2\_1.v\_rail\_station\_mes.name is '站点名';  comment on column y\_1\_1\_2\_1.v\_rail\_station\_mes.station\_level is '车站等级';  comment on column y\_1\_1\_2\_1.v\_rail\_station\_mes.station\_level\_name is '车站等级名称';  comment on column y\_1\_1\_2\_1.v\_rail\_station\_mes.supply\_sign is '供给站标志';  comment on column y\_1\_1\_2\_1.v\_rail\_station\_mes.supply\_sign\_name is '供给站标志名称';  comment on column y\_1\_1\_2\_1.v\_rail\_station\_mes.comp\_no is '分公司编号';  comment on column y\_1\_1\_2\_1.v\_rail\_station\_mes.comp\_name is '分公司名称'; |

##### 部门信息

表5.2.4.1‑4 视图v\_depart\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | no | depart | no |  |  |
| 2 | 部门名称 | name | depart | name |  |  |
| 3 | 简介 | introduce | depart | introduce |  |  |
| 4 | 分公司编号 | comp\_no | depart | comp\_no |  |  |
| 5 | 分公司名称 | comp\_name | r\_com | name | depart.comp\_no = r\_com.no |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：部门信息  create view y\_1\_1\_2\_1.v\_depart\_mes(no, name, introduce, comp\_no, comp\_name)  as  select a.no, a.name, a.introduce, a.comp\_no, b.name  from depart a, r\_com b  where a.comp\_no = b.no  ;  comment on table y\_1\_1\_2\_1.v\_depart\_mes is '部门信息';  comment on column y\_1\_1\_2\_1.v\_depart\_mes.no is '部门编号';  comment on column y\_1\_1\_2\_1.v\_depart\_mes.name is '部门名称';  comment on column y\_1\_1\_2\_1.v\_depart\_mes.introduce is '简介';  comment on column y\_1\_1\_2\_1.v\_depart\_mes.comp\_no is '分公司编号';  comment on column y\_1\_1\_2\_1.v\_depart\_mes.comp\_name is '分公司名称'; |

##### 车厢信息

表5.2.4.1‑5 视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | carriage | carriage\_no |  |  |
| 2 | 车厢类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 车厢类别名称 | carriage\_type\_name | user\_dict c1 | ctext | c1.category= '204' and  c1.ccode= carriage. carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict c2 | ctext | c2.category= '205' and  c2.ccode= carriage. seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |
| 7 | 列车号 | train\_no | carriage | train\_no |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_1\_2\_1.v\_carriage\_mes(carriage\_no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total, train\_no)  as  select a.carriage\_no, a.carriage\_type, c1.ctext, a.seat\_type, c2.ctext, a.seat\_total, a.train\_no  from carriage a, user\_dict c1, user\_dict c2  where c1.category= '204' and c1.ccode= a. carriage\_type and c2.category= '205' and c2.ccode= a. seat\_type  ;  comment on table y\_1\_1\_2\_1.v\_carriage\_mes is '车厢信息';  comment on column y\_1\_1\_2\_1.v\_carriage\_mes.carriage\_no is '编号';  comment on column y\_1\_1\_2\_1.v\_carriage\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_1\_2\_1.v\_carriage\_mes.carriage\_type\_name is '车厢类别名称';  comment on column y\_1\_1\_2\_1.v\_carriage\_mes.seat\_type is '实际类别';  comment on column y\_1\_1\_2\_1.v\_carriage\_mes.seat\_type\_name is '实际类别名称';  comment on column y\_1\_1\_2\_1.v\_carriage\_mes.seat\_total is '座位总数';  comment on column y\_1\_1\_2\_1.v\_carriage\_mes.train\_no is '列车号'; |

##### 网络售票终端信息

表5.2.4.1‑6 视图v\_terminal\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 终端编号 | no | terminal | no |  |  |
| 2 | 终端语言类型 | terminal\_type | terminal | terminal\_type |  |  |
| 3 | 终端语言类型名称 | terminal\_type\_name | user\_dict | ctext | user\_dict.category= '206' and  user\_dict.ccode= terminal. terminal\_type |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：网络售票终端信息  create view y\_1\_1\_2\_1.v\_terminal\_mes(no, terminal\_type, terminal\_type\_name)  as  select a.no, a.terminal\_type, b.ctext  from terminal a, user\_dict b  where b.category= '206' and b.ccode= a. terminal\_type  ;  comment on table y\_1\_1\_2\_1.v\_terminal\_mes is '网络售票终端信息';  comment on column y\_1\_1\_2\_1.v\_terminal\_mes.no is '终端编号';  comment on column y\_1\_1\_2\_1.v\_terminal\_mes.terminal\_type is '终端语言类型';  comment on column y\_1\_1\_2\_1.v\_terminal\_mes.terminal\_type\_name is '终端语言类型名称'; |

##### 乘客信息

表5.2.4.1‑7 视图v\_passenger\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 乘客号 | no | passenger | no |  |  |
| 2 | 姓名 | name | passenger | name |  |  |
| 3 | 手机号码 | phone | passenger | phone |  |  |
| 4 | 性别 | gender | passenger | gender |  |  |
| 5 | 性别名称 | gender\_name | user\_dict | ctext | user\_dict.category= '207' and  user\_dict.ccode= passenger.gender |  |
| 6 | 登录密码 | password | passenger | password |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：乘客信息  create view y\_1\_1\_2\_1.v\_passenger\_mes(no, name, phone, gender, gender\_name, password)  as  select a.no, a.name, a.phone, a.gender, b.ctext, a.password  from passenger a, user\_dict b  where b.category= '207' and b.ccode= a.gender  ;  comment on table y\_1\_1\_2\_1.v\_passenger\_mes is '乘客信息';  comment on column y\_1\_1\_2\_1.v\_passenger\_mes.no is '乘客号';  comment on column y\_1\_1\_2\_1.v\_passenger\_mes.name is '姓名';  comment on column y\_1\_1\_2\_1.v\_passenger\_mes.phone is '手机号码';  comment on column y\_1\_1\_2\_1.v\_passenger\_mes.gender is '性别';  comment on column y\_1\_1\_2\_1.v\_passenger\_mes.gender\_name is '性别名称';  comment on column y\_1\_1\_2\_1.v\_passenger\_mes.password is '登录密码'; |

##### 包含信息

表5.2.4.1‑8 视图v\_contain\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | contain | no |  |  |
| 2 | 列车号 | train\_no | contain | train\_no |  |  |
| 3 | 列车类型 | train\_type | train | train\_type | contain.train\_no = train.train\_no |  |
| 4 | 车厢编号 | carriage\_no | contain | carriage\_no |  |  |
| 5 | 车厢类别 | carriage\_type | carriage | carriage\_type | contain.carriage\_no = carriage.carriage\_no |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：包含信息  create view y\_1\_1\_2\_1.v\_contain\_mes(no, train\_no, train\_type, carriage\_no, carriage\_type)  as  select a.no, a.train\_no, b.train\_type, a.carriage\_no, c.carriage\_type  from contain a, train b, carriage c  where a.train\_no = b.train\_no and a.carriage\_no = c.carriage\_no  ;  comment on table y\_1\_1\_2\_1.v\_contain\_mes is '包含信息';  comment on column y\_1\_1\_2\_1.v\_contain\_mes.no is '编号';  comment on column y\_1\_1\_2\_1.v\_contain\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.v\_contain\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_2\_1.v\_contain\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_1.v\_contain\_mes.carriage\_type is '车厢类别'; |

##### 自助操作信息

表5.2.4.1‑9 视图v\_self\_service\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | self\_service | no |  |  |
| 2 | 终端编号 | terminal\_no | self\_service | terminal\_no |  |  |
| 3 | 乘客号 | passenger\_no | self\_service | passenger\_no |  |  |
| 4 | 乘客姓名 | passenger\_name | passenger | name | self\_service.passenger\_no = passenger.no |  |
| 5 | 列车号 | train\_no | self\_service | train\_no |  |  |
| 6 | 列车类型 | train\_type | train | train\_type | self\_service. train\_no = train. train\_no |  |
| 7 | 车厢编号 | carriage\_no | self\_service | carriage\_no |  |  |
| 8 | 车厢类别 | carriage\_type | carriage | carriage\_type | self\_service.carriage\_no = carriage.carriage\_no |  |
| 9 | 乘客出发站 | origin\_station | self\_service | origin\_station |  |  |
| 10 | 乘客到达站 | destination\_station | self\_service | destination\_station |  |  |
| 11 | 业务类别 | busi\_type | self\_service | busi\_type |  |  |
| 12 | 业务类别名称 | busi\_type\_name | user\_dict c1 | ctext | c1.category= '208' and  c1.ccode= self\_service. busi\_type |  |
| 13 | 办理时间 | do\_time | self\_service | do\_time |  |  |
| 14 | 订单状态 | busi\_status | self\_service | busi\_status |  |  |
| 15 | 订单状态名称 | busi\_status\_name | user\_dict c2 | ctext | c2.category= '209' and  c2.ccode= self\_service. busi\_status |  |
| 16 | 业务金额 | busi\_amount | self\_service | busi\_amount |  |  |
| 17 | 车厢号 | carriage\_number | self\_service | carriage\_number |  |  |
| 18 | 座位号 | seat\_number | self\_service | seat\_number |  |  |
| 19 | 发车时间 | start\_time | self\_service | start\_time |  |  |
| 20 | 到达时间 | arrive\_time | self\_service | arrive\_time |  |  |
| 21 | 出票状态 | ticket\_status | self\_service | ticket\_status |  |  |
| 22 | 出票状态名称 | ticket\_status\_name | user\_dict c3 | ctext | c3.category= '210' and  c3.ccode= self\_service. ticket\_status |  |
| 23 | 变更到站状态 | change\_station | self\_service | change\_station |  |  |
| 24 | 变更到站状态名称 | change\_station\_name | user\_dict c4 | ctext | c4.category= '211' and  c4.ccode= self\_service. change\_station |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：自助操作信息  create view y\_1\_1\_2\_1.v\_self\_service\_mes(no, terminal\_no, passenger\_no, passenger\_name, train\_no, train\_type, carriage\_no, carriage\_type, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.terminal\_no, a.passenger\_no, b.name, a.train\_no, c.train\_type, a.carriage\_no, d.carriage\_type, a.origin\_station, a.destination\_station, a.busi\_type, c1.ctext, a.do\_time, a.busi\_status, c2.ctext, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, c3.ctext, a.change\_station, c4.ctext  from self\_service a, passenger b, train c, carriage d, user\_dict c1, user\_dict c2, user\_dict c3, user\_dict c4  where a.passenger\_no = b.no and a. train\_no = c. train\_no and a.carriage\_no = d.carriage\_no and c1.category= '208' and c1.ccode= a. busi\_type and c2.category= '209' and c2.ccode= a. busi\_status and c3.category= '210' and c3.ccode= a. ticket\_status and c4.category= '211' and c4.ccode= a. change\_station  ;  comment on table y\_1\_1\_2\_1.v\_self\_service\_mes is '自助操作信息';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.no is '编号';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.terminal\_no is '终端编号';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.do\_time is '办理时间';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.busi\_amount is '业务金额';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.seat\_number is '座位号';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.change\_station is '变更到站状态';  comment on column y\_1\_1\_2\_1.v\_self\_service\_mes.change\_station\_name is '变更到站状态名称'; |

##### 经过信息

表5.2.4.1‑10 视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | pass\_by | no |  |  |
| 2 | 列车号 | train\_no | pass\_by | train\_no |  |  |
| 3 | 列车类型 | train\_type | train | train\_type | pass\_by.train\_no = train.train\_no |  |
| 4 | 站点名 | station\_name | pass\_by | station\_name |  |  |
| 5 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 6 | 到达时间 | arrive\_time | pass\_by | arrive\_time |  |  |
| 7 | 站点序 | station\_order | pass\_by | station\_order |  |  |
| 8 | 区间基础票价 | base\_price | pass\_by | base\_price |  |  |
| 9 | 票价上浮比率 | up\_rate | pass\_by | up\_rate |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：经过信息  create view y\_1\_1\_2\_1.v\_pass\_by\_mes(no, train\_no, train\_type, station\_name, start\_time, arrive\_time, station\_order, base\_price, up\_rate)  as  select a.no, a.train\_no, b.train\_type, a.station\_name, a.start\_time, a.arrive\_time, a.station\_order, a.base\_price, a.up\_rate  from pass\_by a, train b  where a.train\_no = b.train\_no  ;  comment on table y\_1\_1\_2\_1.v\_pass\_by\_mes is '经过信息';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.no is '编号';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.station\_name is '站点名';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.station\_order is '站点序';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.base\_price is '区间基础票价';  comment on column y\_1\_1\_2\_1.v\_pass\_by\_mes.up\_rate is '票价上浮比率'; |

##### 票务服务信息

表5.2.4.1‑11 视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | t\_bus | no |  |  |
| 2 | 乘客号 | passenger\_no | t\_bus | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | t\_bus.passenger\_no = passenger.no |  |
| 4 | 列车号 | train\_no | t\_bus | train\_no |  |  |
| 5 | 列车类型 | train\_type | train | train\_type | t\_bus.train\_no=train. train\_no |  |
| 6 | 车厢编号 | carriage\_no | t\_bus | carriage\_no |  |  |
| 7 | 车厢类别 | carriage\_type | carriage | carriage\_type | t\_bus.carriage\_no = carriage.carriage\_no |  |
| 8 | 乘客出发站 | origin\_station | t\_bus | origin\_station |  |  |
| 9 | 乘客到达站 | destination\_station | t\_bus | destination\_station |  |  |
| 10 | 业务类别 | busi\_type | t\_bus | busi\_type |  |  |
| 11 | 业务类别名称 | busi\_type\_name | user\_dict c1 | ctext | c1.category= '208' and  c1.ccode= t\_bus.busi\_type |  |
| 12 | 办理时间 | do\_time | t\_bus | do\_time |  |  |
| 13 | 订单状态 | busi\_status | t\_bus | busi\_status |  |  |
| 14 | 订单状态名称 | busi\_status\_name | user\_dict c2 | ctext | c2.category= '209' and  c2.ccode=t\_bus.busi\_status |  |
| 15 | 业务金额 | busi\_amount | t\_bus | busi\_amount |  |  |
| 16 | 车厢号 | carriage\_number | t\_bus | carriage\_number |  |  |
| 17 | 座位号 | seat\_number | t\_bus | seat\_number |  |  |
| 18 | 发车时间 | start\_time | t\_bus | start\_time |  |  |
| 19 | 到达时间 | arrive\_time | t\_bus | arrive\_time |  |  |
| 20 | 出票状态 | ticket\_status | t\_bus | ticket\_status |  |  |
| 21 | 出票状态名称 | ticket\_status\_name | user\_dict c3 | ctext | c3.category= '210' and  c3.ccode=t\_bus.ticket\_status |  |
| 22 | 变更到站状态 | change\_station | t\_bus | change\_station |  |  |
| 23 | 变更到站状态名称 | change\_station\_name | user\_dict c4 | ctext | c4.category= '211' and  c4.ccode=t\_bus.change\_station |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：票务服务信息  create view y\_1\_1\_2\_1.v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, train\_no, train\_type, carriage\_no, carriage\_type, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.train\_no, c.train\_type, a.carriage\_no, d.carriage\_type, a.origin\_station, a.destination\_station, a.busi\_type, c1.ctext, a.do\_time, a.busi\_status, c2.ctext, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, c3.ctext, a.change\_station, c4.ctext  from t\_bus a, passenger b, train c, carriage d, user\_dict c1, user\_dict c2, user\_dict c3, user\_dict c4  where a.passenger\_no = b.no and a.train\_no=c. train\_no and a.carriage\_no = d.carriage\_no and c1.category= '208' and c1.ccode= a.busi\_type and c2.category= '209' and c2.ccode=a.busi\_status and c3.category= '210' and c3.ccode=a.ticket\_status and c4.category= '211' and c4.ccode=a.change\_station  ;  comment on table y\_1\_1\_2\_1.v\_ticket\_business\_mes is '票务服务信息';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.no is '编号';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.do\_time is '办理时间';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.busi\_amount is '业务金额';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.seat\_number is '座位号';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.change\_station is '变更到站状态';  comment on column y\_1\_1\_2\_1.v\_ticket\_business\_mes.change\_station\_name is '变更到站状态名称'; |

#### 单据

表5.2.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 订单信息 | order\_mes | 购买车票、退订车票、改签车票 |  |
| 2 | 余票信息 | surplus\_ticket\_mes | 购买车票、退订车票、改签车票 |  |

##### 订单信息

表5.2.4.2‑1视图order\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | ticket\_business | no |  |  |
| 2 | 车次编号 | train\_number | ticket\_business | train\_no | ticket\_business.train\_no = train\_no.no |  |
| 3 | 乘客出发站 | pa\_start\_sta | ticket\_business | origin\_station |  |  |
| 4 | 乘客到达站 | pa\_arrive\_sta | ticket\_business | destination\_station |  |  |
| 5 | 乘客姓名 | pa\_name | ticket\_business | passenger\_name |  |  |
| 6 | 票价 | ticket\_price | ticket\_business | busi\_amount |  |  |
| 7 | 车厢号 | carr\_num | ticket\_business | carriage\_number | ticket\_business.carriage\_number = carriage.no |  |
| 8 | 车座种类 | seat\_type | carriage | seat\_type |  |  |
| 9 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 10 | 订票日期 | reser\_date | ticket\_business | do\_time |  |  |
| 11 | 到达时间 | arri\_time | ticket\_business | arrive\_time |  |  |
| 12 | 发车时间 | str\_time | ticket\_business | start\_time |  |  |
| 13 | 订单状态 | order\_status | ticket\_business | busi\_status |  |  |
| 14 | 出票状态 | ticket\_out\_if | ticket\_business | ticket\_status |  |  |
| 15 | 变更到站状态 | change\_sta\_if | ticket\_business | change\_station |  |  |

执行脚本（Oracle，y\_1\_1\_2\_1）

|  |
| --- |
| -- 创建视图：订单信息  create view y\_1\_1\_2\_1.order\_mes(order\_number, train\_number, pa\_start\_sta, pa\_arrive\_sta, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select a.no, a.train\_no, a.origin\_station, a.destination\_station, a.passenger\_name, a.busi\_amount, a.carriage\_number, b.seat\_type, a.seat\_number, a.do\_time, a.arrive\_time, a.start\_time, a.busi\_status, a.ticket\_status, a.change\_station  from ticket\_business a, carriage b  where a.train\_no = train\_no.no and a.carriage\_number = b.no  ;  comment on table y\_1\_1\_2\_1.order\_mes is '订单信息';  comment on column y\_1\_1\_2\_1.order\_mes.order\_number is '订单号';  comment on column y\_1\_1\_2\_1.order\_mes.train\_number is '车次编号';  comment on column y\_1\_1\_2\_1.order\_mes.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_1\_2\_1.order\_mes.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_1\_2\_1.order\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_1\_2\_1.order\_mes.ticket\_price is '票价';  comment on column y\_1\_1\_2\_1.order\_mes.carr\_num is '车厢号';  comment on column y\_1\_1\_2\_1.order\_mes.seat\_type is '车座种类';  comment on column y\_1\_1\_2\_1.order\_mes.seat\_number is '座位号';  comment on column y\_1\_1\_2\_1.order\_mes.reser\_date is '订票日期';  comment on column y\_1\_1\_2\_1.order\_mes.arri\_time is '到达时间 ';  comment on column y\_1\_1\_2\_1.order\_mes.str\_time is '发车时间';  comment on column y\_1\_1\_2\_1.order\_mes.order\_status is '订单状态';  comment on column y\_1\_1\_2\_1.order\_mes.ticket\_out\_if is '出票状态';  comment on column y\_1\_1\_2\_1.order\_mes.change\_sta\_if is '变更到站状态'; |

#### 报表

表5.2.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表5.2.4.3‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 函数

表5.2‑3函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 过程

表5.2‑4过程列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表5.2‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

## 管理员业务

### 序列

表5.3‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 2 | 1 | 1 | 1 | 99 | 区域编号 |  |
| 2 | seq\_company\_no | 2 | 1 | 1 | 1 | 99 | 分公司编号 |  |
| 3 | seq\_department\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 4 | seq\_station\_no | 2 | 1 | 1 | 1 | 99 | 火车站编号 |  |
| 5 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 6 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 7 | seq\_pass\_by\_num | 12 | 1 | 1 | 1 | 999999999999 | 经过序号 |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_3\_1.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：分公司编号  create sequence y\_1\_1\_3\_1.seq\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：部门编号  create sequence y\_1\_1\_3\_1.seq\_department\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：火车站编号  create sequence y\_1\_1\_3\_1.seq\_station\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_3\_1.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：岗位编号  create sequence y\_1\_1\_3\_1.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：经过序号  create sequence y\_1\_1\_3\_1.seq\_pass\_by\_num start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache; |

### 表

表5.3.2‑1 表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | company |  |
| 3 | 部门 | department |  |
| 4 | 火车站 | station |  |
| 5 | 列车 | train |  |
| 6 | 车厢 | carriage |  |
| 7 | 员工 | administe |  |
| 8 | 岗位 | post |  |
| 9 | 拥有 | possess |  |
| 10 | 从事 | work\_on |  |
| 11 | 经过 | pass\_by |  |
| 12 | 上级 | superior |  |
| 13 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表5.3.2.1‑1 area（area\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | area\_no | char(3) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | area\_name | varchar2(300) | n |  | y |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_3\_1.area  (  area\_no char(3) default (to\_char(seq\_area\_no.nextval,'09')) not null ,  area\_name varchar2(300) unique not null ,  primary key(area\_no)  )  ;  comment on table y\_1\_1\_3\_1.area is '区域';  comment on column y\_1\_1\_3\_1.area.area\_no is '区域编号';  comment on column y\_1\_1\_3\_1.area.area\_name is '区域名称'; |

##### 分公司

表5.3.2.1‑2 company（company\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 分公司编号 | company\_no | char(3) | n |  |  | 来自序列seq\_company\_no |
| 2 | 分公司名称 | company\_name | varchar2(300) | n |  | y |  |
| 3 | 区域编号 | area\_no | area(area\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_1\_3\_1.company  (  company\_no char(3) default (to\_char(seq\_company\_no.nextval,'09')) not null ,  company\_name varchar2(300) unique not null ,  area\_no references y\_1\_1\_3\_1.area(area\_no) not null ,  primary key(company\_no)  )  ;  comment on table y\_1\_1\_3\_1.company is '分公司';  comment on column y\_1\_1\_3\_1.company.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_1.company.company\_name is '分公司名称';  comment on column y\_1\_1\_3\_1.company.area\_no is '区域编号'; |

##### 部门

表5.3.2.1‑3 department（department\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | department\_no | char(3) | n |  |  | 来自序列seq\_department\_no |
| 2 | 部门名称 | department\_name | varchar2(60) | n |  | y |  |
| 3 | 分公司编号 | company\_no | company(company\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_3\_1.department  (  department\_no char(3) default (to\_char(seq\_department\_no.nextval,'09')) not null ,  department\_name varchar2(60) unique not null ,  company\_no references y\_1\_1\_3\_1.company(company\_no) not null ,  primary key(department\_no)  )  ;  comment on table y\_1\_1\_3\_1.department is '部门';  comment on column y\_1\_1\_3\_1.department.department\_no is '部门编号';  comment on column y\_1\_1\_3\_1.department.department\_name is '部门名称';  comment on column y\_1\_1\_3\_1.department.company\_no is '分公司编号'; |

##### 火车站

表5.3.2.1‑4 station（station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | station\_no | char(5) | n |  |  | 来自序列seq\_station\_no |
| 2 | 车站中文名 | chinese\_name | varchar2(30) | n |  |  |  |
| 3 | 车站英文名 | english\_name | varchar2(60) | n |  |  |  |
| 4 | 车站等级 | station\_level | char(1) | n |  |  | 301 |
| 5 | 车站次序 | station\_order | number(4,0) | n |  |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | char(1) | n |  |  | 302 |
| 7 | 分公司编号 | company\_no | company(company\_no) | n |  |  |  |
| 8 | 部门编号 | department\_no | department(department\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_3\_1.station  (  station\_no char(5) default (to\_char(seq\_station\_no.nextval,'0999')) not null ,  chinese\_name varchar2(30) not null ,  english\_name varchar2(60) not null ,  station\_level char(1) not null ,  station\_order number(4,0) not null ,  statin\_provide\_flag char(1) not null ,  company\_no references y\_1\_1\_3\_1.company(company\_no) not null ,  department\_no references y\_1\_1\_3\_1.department(department\_no) not null ,  primary key(station\_no)  )  ;  comment on table y\_1\_1\_3\_1.station is '火车站';  comment on column y\_1\_1\_3\_1.station.station\_no is '编号';  comment on column y\_1\_1\_3\_1.station.chinese\_name is '车站中文名';  comment on column y\_1\_1\_3\_1.station.english\_name is '车站英文名';  comment on column y\_1\_1\_3\_1.station.station\_level is '车站等级';  comment on column y\_1\_1\_3\_1.station.station\_order is '车站次序';  comment on column y\_1\_1\_3\_1.station.statin\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_3\_1.station.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_1.station.department\_no is '部门编号'; |

##### 列车

表5.3.2.1‑5 train（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar2(5) | n |  |  |  |
| 2 | 类型 | train\_type | char(1) | n |  |  | 303 |
| 3 | 运行时间 | train\_runtime | interval day(1) to second(2) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_3\_1.train  (  train\_id varchar2(5) not null ,  train\_type char(1) not null ,  train\_runtime interval day(1) to second(2) not null ,  primary key(train\_id)  )  ;  comment on table y\_1\_1\_3\_1.train is '列车';  comment on column y\_1\_1\_3\_1.train.train\_id is '车次号';  comment on column y\_1\_1\_3\_1.train.train\_type is '类型';  comment on column y\_1\_1\_3\_1.train.train\_runtime is '运行时间'; |

##### 车厢

表5.3.2.1‑6 carriage（carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | carriage\_no | char(3) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类型 | carriage\_type | char(1) | n |  |  | 304 |
| 3 | 座位总数 | carriage\_sit\_num | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_3\_1.carriage  (  carriage\_no char(3) default (to\_char(seq\_carriage\_no.nextval,'09')) not null ,  carriage\_type char(1) not null ,  carriage\_sit\_num number(3,0) not null ,  primary key(carriage\_no)  )  ;  comment on table y\_1\_1\_3\_1.carriage is '车厢';  comment on column y\_1\_1\_3\_1.carriage.carriage\_no is '编号';  comment on column y\_1\_1\_3\_1.carriage.carriage\_type is '车厢类型';  comment on column y\_1\_1\_3\_1.carriage.carriage\_sit\_num is '座位总数'; |

##### 员工

表5.3.2.1‑7 administe（administer\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工账号 | administer\_id | char(11) | n |  |  |  |
| 2 | 密码 | administer\_pw | varchar2(20) | n |  |  |  |
| 3 | 员工姓名 | administer\_name | varchar2(24) | n |  |  |  |
| 4 | 身份证号 | id\_card\_num | char(18) | n |  |  |  |
| 5 | 员工类型 | employee\_type | char(1) | n |  |  | 305 |
| 6 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_1\_3\_1.administe  (  administer\_id char(11) not null ,  administer\_pw varchar2(20) not null ,  administer\_name varchar2(24) not null ,  id\_card\_num char(18) not null ,  employee\_type char(1) not null ,  station\_no references y\_1\_1\_3\_1.station(station\_no) not null ,  primary key(administer\_id)  )  ;  comment on table y\_1\_1\_3\_1.administe is '员工';  comment on column y\_1\_1\_3\_1.administe.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_1.administe.administer\_pw is '密码';  comment on column y\_1\_1\_3\_1.administe.administer\_name is '员工姓名';  comment on column y\_1\_1\_3\_1.administe.id\_card\_num is '身份证号';  comment on column y\_1\_1\_3\_1.administe.employee\_type is '员工类型';  comment on column y\_1\_1\_3\_1.administe.station\_no is '火车站编号'; |

##### 岗位

表5.3.2.1‑8 post（post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 岗位编号 | post\_no | char(3) | n |  |  | 来自序列seq\_post\_no |
| 2 | 岗位名称 | post\_name | varchar2(60) | n |  | y |  |
| 3 | 职责 | duty | varchar2(600) | n |  |  |  |
| 4 | 部门编号 | department\_no | department(department\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_1\_3\_1.post  (  post\_no char(3) default (to\_char(seq\_post\_no.nextval,'09')) not null ,  post\_name varchar2(60) unique not null ,  duty varchar2(600) not null ,  department\_no references y\_1\_1\_3\_1.department(department\_no) not null ,  primary key(post\_no)  )  ;  comment on table y\_1\_1\_3\_1.post is '岗位';  comment on column y\_1\_1\_3\_1.post.post\_no is '岗位编号';  comment on column y\_1\_1\_3\_1.post.post\_name is '岗位名称';  comment on column y\_1\_1\_3\_1.post.duty is '职责';  comment on column y\_1\_1\_3\_1.post.department\_no is '部门编号'; |

##### 拥有

表5.3.2.1‑9 possess（train\_id, carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | train(train\_id) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 3 | 此类车厢分布号 | carriage\_range | varchar2(44) | n |  |  |  |
| 4 | 车厢数量 | carriage\_amount | number(2,0) | n |  |  |  |
| 5 | 发车时间 | starttime | date |  |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：拥有  create table y\_1\_1\_3\_1.possess  (  train\_id references y\_1\_1\_3\_1.train(train\_id) not null ,  carriage\_no references y\_1\_1\_3\_1.carriage(carriage\_no) not null ,  carriage\_range varchar2(44) not null ,  carriage\_amount number(2,0) not null ,  starttime date ,  primary key(train\_id, carriage\_no)  )  ;  comment on table y\_1\_1\_3\_1.possess is '拥有';  comment on column y\_1\_1\_3\_1.possess.train\_id is '车次号';  comment on column y\_1\_1\_3\_1.possess.carriage\_no is '车厢编号';  comment on column y\_1\_1\_3\_1.possess.carriage\_range is '此类车厢分布号';  comment on column y\_1\_1\_3\_1.possess.carriage\_amount is '车厢数量';  comment on column y\_1\_1\_3\_1.possess.starttime is '发车时间'; |

##### 从事

表5.3.2.1‑10 work\_on（administer\_id, post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工账号 | administer\_id | administe(administer\_id) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(post\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_1\_3\_1.work\_on  (  administer\_id references y\_1\_1\_3\_1.administe(administer\_id) not null ,  post\_no references y\_1\_1\_3\_1.post(post\_no) not null ,  primary key(administer\_id, post\_no)  )  ;  comment on table y\_1\_1\_3\_1.work\_on is '从事';  comment on column y\_1\_1\_3\_1.work\_on.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_1.work\_on.post\_no is '岗位编号'; |

##### 经过

表5.3.2.1‑11 pass\_by（num）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 序号 | num | char(13) | n |  |  | 来自序列seq\_pass\_by\_num |
| 2 | 车次号 | train\_id | train(train\_id) | n |  |  |  |
| 3 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |
| 4 | 停车时间 | stoptime | date |  |  |  | 小于发车时间 |
| 5 | 发车时间 | starttime | date |  |  |  |  |
| 6 | 里程数 | mileage | number(7,2) | n |  |  |  |
| 7 | 区间基础票价 | base\_fare | number(5,1) | n |  |  |  |
| 8 | 票价上浮比率 | fare\_rate | char(60) | n |  |  |  |
| 9 | 站点次序 | station\_order | number(2,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_3\_1.pass\_by  (  num char(13) default (to\_char(seq\_pass\_by\_num.nextval,'099999999999')) not null ,  train\_id references y\_1\_1\_3\_1.train(train\_id) not null ,  station\_no references y\_1\_1\_3\_1.station(station\_no) not null ,  stoptime date ,  starttime date ,  mileage number(7,2) not null ,  base\_fare number(5,1) not null ,  fare\_rate char(60) not null ,  station\_order number(2,0) not null ,  primary key(num)  )  ;  comment on table y\_1\_1\_3\_1.pass\_by is '经过';  comment on column y\_1\_1\_3\_1.pass\_by.num is '序号';  comment on column y\_1\_1\_3\_1.pass\_by.train\_id is '车次号';  comment on column y\_1\_1\_3\_1.pass\_by.station\_no is '火车站编号';  comment on column y\_1\_1\_3\_1.pass\_by.stoptime is '停车时间';  comment on column y\_1\_1\_3\_1.pass\_by.starttime is '发车时间';  comment on column y\_1\_1\_3\_1.pass\_by.mileage is '里程数';  comment on column y\_1\_1\_3\_1.pass\_by.base\_fare is '区间基础票价';  comment on column y\_1\_1\_3\_1.pass\_by.fare\_rate is '票价上浮比率';  comment on column y\_1\_1\_3\_1.pass\_by.station\_order is '站点次序'; |

##### 上级

表5.3.2.1‑12 superior（department\_no, supper\_department\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | department\_no | department(department\_no) | n |  |  |  |
| 2 | 上级部门编号 | supper\_department\_no | department(department\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：上级  create table y\_1\_1\_3\_1.superior  (  department\_no references y\_1\_1\_3\_1.department(department\_no) not null ,  supper\_department\_no references y\_1\_1\_3\_1.department(department\_no) not null ,  primary key(department\_no, supper\_department\_no)  )  ;  comment on table y\_1\_1\_3\_1.superior is '上级';  comment on column y\_1\_1\_3\_1.superior.department\_no is '部门编号';  comment on column y\_1\_1\_3\_1.superior.supper\_department\_no is '上级部门编号'; |

##### 字典

表5.3.2.1‑13 user\_dict（category,ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | category | char(3) | n |  |  |  |
| 2 | 编号 | ccode | varchar2(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar2(300) |  |  |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_3\_1.user\_dict  (  category char(3) not null ,  ccode varchar2(6) not null ,  ctext varchar2(300) ,  primary key(category,ccode)  )  ;  comment on table y\_1\_1\_3\_1.user\_dict is '字典';  comment on column y\_1\_1\_3\_1.user\_dict.category is '大类编号';  comment on column y\_1\_1\_3\_1.user\_dict.ccode is '编号';  comment on column y\_1\_1\_3\_1.user\_dict.ctext is '内容'; |

#### 添加检查约束

表5.1.2‑2语句

|  |
| --- |
| alter table pass\_by add check (starttime > stoptime); |

### 同义词

表5.1‑2同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | com | company | 分公司别称 |  |
| 2 | adm | administe | 员工别称 |  |
| 3 | dep | department | 部门别称 |  |
| 4 | sup | superior | 上级别称 |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| --创建同义词：分公司别称  create synonym y\_1\_1\_3\_1.com for y\_1\_1\_3\_1.company;  --创建同义词：员工别称  create synonym y\_1\_1\_3\_1.adm for y\_1\_1\_3\_1.administe;  --创建同义词：部门别称  create synonym y\_1\_1\_3\_1.dep for y\_1\_1\_3\_1.department;  --创建同义词：上级别称  create synonym y\_1\_1\_3\_1.sup for y\_1\_1\_3\_1.superior; |

### 视图

#### 参照信息

表5.1.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 部门信息 | v\_department\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 3 | 火车站信息 | v\_station\_mes | 显示带车站等级名称、供给站标志名称、分公司名称、部门名称的火车站 | 将车站等级名称、供给站标志名称、分公司名称、部门名称加进来 |
| 4 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 5 | 车厢信息 | v\_carriage\_mes | 显示带车厢类型名称的车厢 | 将车厢类型名称加进来 |
| 6 | 员工信息 | v\_administer\_mes | 显示带员工类型名称、站点名的员工 | 将员工类型名称、站点名加进来 |
| 7 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 8 | 拥有信息 | v\_possess\_mes | 显示带列车类型、车厢类型的拥有 | 将列车类型、车厢类型加进来 |
| 9 | 从事信息 | v\_work\_on\_mes | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 10 | 经过信息 | v\_pass\_by\_mes | 显示带站点名的经过 | 将站点名加进来 |
| 11 | 上级信息 | v\_superior\_mes | 显示带部门名称的上级 | 将部门名称加进来 |

##### 分公司信息

表5.3.4.1‑1视图v\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 分公司编号 | company\_no | com | company\_no |  |  |
| 2 | 分公司名称 | company\_name | com | company\_name |  |  |
| 3 | 区域编号 | area\_no | com | area\_no |  |  |
| 4 | 区域名称 | area\_name | area | area\_name | com.area\_no= area.area\_no |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：分公司信息  create view y\_1\_1\_3\_1.v\_company\_mes(company\_no, company\_name, area\_no, area\_name)  as  select a.company\_no, a.company\_name, a.area\_no, b.area\_name  from com a, area b  where a. area\_no= b. area\_no  ;  comment on table y\_1\_1\_3\_1.v\_company\_mes is '分公司信息';  comment on column y\_1\_1\_3\_1.v\_company\_mes.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_1.v\_company\_mes.company\_name is '分公司名称';  comment on column y\_1\_1\_3\_1.v\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_1\_3\_1.v\_company\_mes.area\_name is '区域名称'; |

##### 部门信息

表5.3.4.1‑2视图v\_department\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | department\_no | dep | department\_no |  |  |
| 2 | 部门名称 | department\_name | dep | department\_name |  |  |
| 3 | 分公司编号 | company\_no | dep | company\_no |  |  |
| 4 | 分公司名称 | company\_name | com | company\_name | com.company\_no=dep.company\_no |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：部门信息  create view y\_1\_1\_3\_1.v\_department\_mes(department\_no, department\_name, company\_no, company\_name)  as  select a.department\_no, a.department\_name, a.company\_no, b.company\_name  from dep a, com b  where b.company\_no=a.company\_no  ;  comment on table y\_1\_1\_3\_1.v\_department\_mes is '部门信息';  comment on column y\_1\_1\_3\_1.v\_department\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_1.v\_department\_mes.department\_name is '部门名称';  comment on column y\_1\_1\_3\_1.v\_department\_mes.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_1.v\_department\_mes.company\_name is '分公司名称'; |

##### 火车站信息

表5.3.4.1‑3视图v\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | station | station\_no |  |  |
| 2 | 车站中文名 | chinese\_name | station | chinese\_name |  |  |
| 3 | 车站英文名 | english\_name | station | english\_name |  |  |
| 4 | 车站等级 | station\_level | station | station\_level |  |  |
| 5 | 车站等级名称 | station\_level\_name | user\_dict c1 | ctext | c1.category='301' and  c1.ccode=station. station\_level |  |
| 6 | 车站次序 | station\_order | station | station\_order |  |  |
| 7 | 供给站标志 | statin\_provide\_flag | station | statin\_provide\_flag |  |  |
| 8 | 供给站标志名称 | statin\_provide\_flag\_name | user\_dict c2 | ctext | c2.category='302'  and c2.ccode=station.statin\_provide\_flag |  |
| 9 | 分公司编号 | company\_no | station | company\_no |  |  |
| 10 | 分公司名称 | company\_name | com | company\_name | com.company\_no=station. company\_no |  |
| 11 | 部门编号 | department\_no | station | department\_no |  |  |
| 12 | 部门名称 | department\_name | dep | department\_name | dep.department\_no=station.department\_no |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：火车站信息  create view y\_1\_1\_3\_1.v\_station\_mes(station\_no, chinese\_name, english\_name, station\_level, station\_level\_name, station\_order, statin\_provide\_flag, statin\_provide\_flag\_name, company\_no, company\_name, department\_no, department\_name)  as  select a.station\_no, a.chinese\_name, a.english\_name, a.station\_level, c1.ctext, a.station\_order, a.statin\_provide\_flag, c2.ctext, a.company\_no, d.company\_name, a.department\_no, e.department\_name  from station a, user\_dict c1, user\_dict c2, com d, dep e  where c1.category='301' and c1.ccode=a. station\_level and c2.category='302' and c2.ccode=a.statin\_provide\_flag and d.company\_no=a. company\_no and e.department\_no=a.department\_no  ;  comment on table y\_1\_1\_3\_1.v\_station\_mes is '火车站信息';  comment on column y\_1\_1\_3\_1.v\_station\_mes.station\_no is '编号';  comment on column y\_1\_1\_3\_1.v\_station\_mes.chinese\_name is '车站中文名';  comment on column y\_1\_1\_3\_1.v\_station\_mes.english\_name is '车站英文名';  comment on column y\_1\_1\_3\_1.v\_station\_mes.station\_level is '车站等级';  comment on column y\_1\_1\_3\_1.v\_station\_mes.station\_level\_name is '车站等级名称';  comment on column y\_1\_1\_3\_1.v\_station\_mes.station\_order is '车站次序';  comment on column y\_1\_1\_3\_1.v\_station\_mes.statin\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_3\_1.v\_station\_mes.statin\_provide\_flag\_name is '供给站标志名称';  comment on column y\_1\_1\_3\_1.v\_station\_mes.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_1.v\_station\_mes.company\_name is '分公司名称';  comment on column y\_1\_1\_3\_1.v\_station\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_1.v\_station\_mes.department\_name is '部门名称'; |

##### 列车信息

表5.3.4.1‑4视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train | train\_id |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.category= '303' and  user\_dict.ccode=train.train\_type |  |
| 4 | 运行时间 | train\_runtime | train | train\_runtime |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：列车信息  create view y\_1\_1\_3\_1.v\_train\_mes(train\_id, train\_type, train\_type\_name, train\_runtime)  as  select a.train\_id, a.train\_type, b.ctext, a.train\_runtime  from train a, user\_dict b  where b.category= '303' and b.ccode=a.train\_type  ;  comment on table y\_1\_1\_3\_1.v\_train\_mes is '列车信息';  comment on column y\_1\_1\_3\_1.v\_train\_mes.train\_id is '车次号';  comment on column y\_1\_1\_3\_1.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_1\_3\_1.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_1\_3\_1.v\_train\_mes.train\_runtime is '运行时间'; |

##### 车厢信息

表5.3.4.1‑5视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | carriage | carriage\_no |  |  |
| 2 | 车厢类型 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 车厢类型名称 | carriage\_type\_name | user\_dict | ctext | user\_dict.category='304' and  user\_dict.ccode=carriage.carriage\_type |  |
| 4 | 座位总数 | carriage\_sit\_num | carriage | carriage\_sit\_num |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_1\_3\_1.v\_carriage\_mes(carriage\_no, carriage\_type, carriage\_type\_name, carriage\_sit\_num)  as  select a.carriage\_no, a.carriage\_type, b.ctext, a.carriage\_sit\_num  from carriage a, user\_dict b  where b.category='304' and b.ccode=a.carriage\_type  ;  comment on table y\_1\_1\_3\_1.v\_carriage\_mes is '车厢信息';  comment on column y\_1\_1\_3\_1.v\_carriage\_mes.carriage\_no is '编号';  comment on column y\_1\_1\_3\_1.v\_carriage\_mes.carriage\_type is '车厢类型';  comment on column y\_1\_1\_3\_1.v\_carriage\_mes.carriage\_type\_name is '车厢类型名称';  comment on column y\_1\_1\_3\_1.v\_carriage\_mes.carriage\_sit\_num is '座位总数'; |

##### 员工信息

表5.3.4.1‑6视图v\_administer\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工账号 | administer\_id | adm | administer\_id |  |  |
| 2 | 密码 | administer\_pw | adm | administer\_pw |  |  |
| 3 | 员工姓名 | administer\_name | adm | administer\_name |  |  |
| 4 | 身份证号 | id\_card\_num | adm | id\_card\_num |  |  |
| 5 | 员工类型 | employee\_type | adm | employee\_type |  |  |
| 6 | 员工类型名称 | employee\_type\_name | user\_dict | ctext | user\_dict.category='305' and  user\_dict.ccode=adm.employee\_type |  |
| 7 | 火车站编号 | station\_no | adm | station\_no |  |  |
| 8 | 火车站中文名称 | chinese\_name | station | chinese\_name | adm.station\_no=station.station\_no |  |
| 9 | 火车站英文名称 | english\_name | station | english\_name | adm.station\_no=station.station\_no |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：员工信息  create view y\_1\_1\_3\_1.v\_administer\_mes(administer\_id, administer\_pw, administer\_name, id\_card\_num, employee\_type, employee\_type\_name, station\_no, chinese\_name, english\_name)  as  select a.administer\_id, a.administer\_pw, a.administer\_name, a.id\_card\_num, a.employee\_type, b.ctext, a.station\_no, c.chinese\_name, c.english\_name  from adm a, user\_dict b, station c  where b.category='305' and b.ccode=a.employee\_type and a.station\_no=c.station\_no and a.station\_no=c.station\_no  ;  comment on table y\_1\_1\_3\_1.v\_administer\_mes is '员工信息';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.administer\_pw is '密码';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.administer\_name is '员工姓名';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.id\_card\_num is '身份证号';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.employee\_type is '员工类型';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.employee\_type\_name is '员工类型名称';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.station\_no is '火车站编号';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.chinese\_name is '火车站中文名称';  comment on column y\_1\_1\_3\_1.v\_administer\_mes.english\_name is '火车站英文名称'; |

##### 岗位信息

表5.3.4.1‑7视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 岗位编号 | post\_no | post | post\_no |  |  |
| 2 | 岗位名称 | post\_name | post | post\_name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门编号 | department\_no | post | department\_no |  |  |
| 5 | 部门名称 | department\_name | dep | department\_name | post.department\_no=dep.department\_no |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：岗位信息  create view y\_1\_1\_3\_1.v\_post\_mes(post\_no, post\_name, duty, department\_no, department\_name)  as  select a.post\_no, a.post\_name, a.duty, a.department\_no, b.department\_name  from post a, dep b  where a.department\_no=b.department\_no  ;  comment on table y\_1\_1\_3\_1.v\_post\_mes is '岗位信息';  comment on column y\_1\_1\_3\_1.v\_post\_mes.post\_no is '岗位编号';  comment on column y\_1\_1\_3\_1.v\_post\_mes.post\_name is '岗位名称';  comment on column y\_1\_1\_3\_1.v\_post\_mes.duty is '职责';  comment on column y\_1\_1\_3\_1.v\_post\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_1.v\_post\_mes.department\_name is '部门名称'; |

##### 拥有信息

表5.3.4.1‑8视图v\_possess\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | possess | train\_id |  |  |
| 2 | 列车类型 | train\_type | train | train\_type | possess.train\_id = train.train\_id |  |
| 3 | 车厢编号 | carriage\_no | possess | carriage\_no |  |  |
| 4 | 车厢类型 | carriage\_type | carriage | carriage\_type | possess.carriage\_no=carriage. carriage\_no |  |
| 5 | 此类车厢分布号 | carriage\_range | possess | carriage\_range |  |  |
| 6 | 车厢数量 | carriage\_amount | possess | carriage\_amount |  |  |
| 7 | 发车时间 | starttime | possess | starttime |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：拥有信息  create view y\_1\_1\_3\_1.v\_possess\_mes(train\_id, train\_type, carriage\_no, carriage\_type, carriage\_range, carriage\_amount, starttime)  as  select a.train\_id, b.train\_type, a.carriage\_no, c.carriage\_type, a.carriage\_range, a.carriage\_amount, a.starttime  from possess a, train b, carriage c  where a.train\_id = b.train\_id and a.carriage\_no=c. carriage\_no  ;  comment on table y\_1\_1\_3\_1.v\_possess\_mes is '拥有信息';  comment on column y\_1\_1\_3\_1.v\_possess\_mes.train\_id is '车次号';  comment on column y\_1\_1\_3\_1.v\_possess\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_3\_1.v\_possess\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_3\_1.v\_possess\_mes.carriage\_type is '车厢类型';  comment on column y\_1\_1\_3\_1.v\_possess\_mes.carriage\_range is '此类车厢分布号';  comment on column y\_1\_1\_3\_1.v\_possess\_mes.carriage\_amount is '车厢数量';  comment on column y\_1\_1\_3\_1.v\_possess\_mes.starttime is '发车时间'; |

##### 从事信息

表5.3.4.1‑8视图v\_work\_on的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工账号 | administer\_id | work\_on | administer\_id |  |  |
| 2 | 员工姓名 | administer\_name | adm | administer\_name | work\_on.administer\_id=adm.administer\_id |  |
| 3 | 岗位编号 | post\_no | work\_on | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | post\_name | work\_on.post\_no=post.post\_no |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：从事信息  create view y\_1\_1\_3\_1.v\_work\_on(administer\_id, administer\_name, post\_no, post\_name)  as  select a.administer\_id, b.administer\_name, a.post\_no, c.post\_name  from work\_on a, adm b, post c  where a.administer\_id=b.administer\_id and a.post\_no=c.post\_no  ;  comment on table y\_1\_1\_3\_1.v\_work\_on is '从事信息';  comment on column y\_1\_1\_3\_1.v\_work\_on.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_1.v\_work\_on.administer\_name is '员工姓名';  comment on column y\_1\_1\_3\_1.v\_work\_on.post\_no is '岗位编号';  comment on column y\_1\_1\_3\_1.v\_work\_on.post\_name is '岗位名称'; |

##### 经过信息

表5.3.4.1‑9视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 序号 | num | pass\_by | num |  |  |
| 2 | 车次号 | train\_id | pass\_by | train\_id |  |  |
| 3 | 列车类型 | train\_type | train | train\_type | pass\_by.train\_id =train.train\_id |  |
| 4 | 火车站编号 | station\_no | pass\_by | station\_no |  |  |
| 5 | 火车站中文名 | chinese\_name | station | chinese\_name | pass\_by.station\_no=station. station\_no |  |
| 6 | 火车站英文名 | english\_name | station | english\_name | pass\_by.station\_no=station. station\_no |  |
| 7 | 停车时间 | stoptime | pass\_by | stoptime |  |  |
| 8 | 发车时间 | starttime | pass\_by | starttime |  |  |
| 9 | 里程数 | mileage | pass\_by | mileage |  |  |
| 10 | 区间基础票价 | base\_fare | pass\_by | base\_fare |  |  |
| 11 | 票价上浮比率 | fare\_rate | pass\_by | fare\_rate |  |  |
| 12 | 站点次序 | station\_order | pass\_by | station\_order |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：经过信息  create view y\_1\_1\_3\_1.v\_pass\_by\_mes(num, train\_id, train\_type, station\_no, chinese\_name, english\_name, stoptime, starttime, mileage, base\_fare, fare\_rate, station\_order)  as  select a.num, a.train\_id, b.train\_type, a.station\_no, c.chinese\_name, c.english\_name, a.stoptime, a.starttime, a.mileage, a.base\_fare, a.fare\_rate, a.station\_order  from pass\_by a, train b, station c  where a.train\_id =b.train\_id and a.station\_no=c. station\_no and a.station\_no=c. station\_no  ;  comment on table y\_1\_1\_3\_1.v\_pass\_by\_mes is '经过信息';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.num is '序号';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.train\_id is '车次号';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.station\_no is '火车站编号';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.chinese\_name is '火车站中文名';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.english\_name is '火车站英文名';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.stoptime is '停车时间';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.starttime is '发车时间';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.mileage is '里程数';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.base\_fare is '区间基础票价';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.fare\_rate is '票价上浮比率';  comment on column y\_1\_1\_3\_1.v\_pass\_by\_mes.station\_order is '站点次序'; |

##### 上级信息

表5.3.4.1‑10视图v\_superior\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | department\_no | sup | department\_no |  |  |
| 2 | 部门名称 | department\_name | dep | department\_name | sup.department\_no=dep. department\_no |  |
| 3 | 上级部门编号 | supper\_department\_no | sup | supper\_department\_no |  |  |

执行脚本（Oracle，y\_1\_1\_3\_1）

|  |
| --- |
| -- 创建视图：上级信息  create view y\_1\_1\_3\_1.v\_superior\_mes(department\_no, department\_name, supper\_department\_no)  as  select a.department\_no, b.department\_name, a.supper\_department\_no  from sup a, dep b  where a.department\_no=b. department\_no  ;  comment on table y\_1\_1\_3\_1.v\_superior\_mes is '上级信息';  comment on column y\_1\_1\_3\_1.v\_superior\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_1.v\_superior\_mes.department\_name is '部门名称';  comment on column y\_1\_1\_3\_1.v\_superior\_mes.supper\_department\_no is '上级部门编号'; |

#### 单据

表5.1.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表5.1.4.2‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 报表

表5.1.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表5.1.4.3‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 函数

表5.1‑3函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 过程

表5.1‑4过程列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表5.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

# 局部数据实现2

## 售票员业务

### 序列

表6.1-1 序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 6 | 1 | 1 | 1 | 999999 | 区域编号 |  |
| 2 | seq\_comp\_no | 8 | 1 | 1 | 1 | 99999999 | 铁路分公司编号 |  |
| 3 | seq\_dept\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 4 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 5 | seq\_emp\_no | 12 | 1 | 1 | 1 | 999999999999 | 员工编号 |  |
| 6 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 7 | seq\_transit\_no | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 8 | seq\_ticket\_no | 12 | 1 | 1 | 1 | 999999999999 | 车票编号 |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_1\_2.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 999999 ;  --创建序列，用于：铁路分公司编号  create sequence y\_1\_1\_1\_2.seq\_comp\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：部门编号  create sequence y\_1\_1\_1\_2.seq\_dept\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：岗位编号  create sequence y\_1\_1\_1\_2.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：员工编号  create sequence y\_1\_1\_1\_2.seq\_emp\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_1\_2.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：经过编号  create sequence y\_1\_1\_1\_2.seq\_transit\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车票编号  create sequence y\_1\_1\_1\_2.seq\_ticket\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_area\_no'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_comp\_no'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_dept\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_post\_no'  exec sp\_addextendedproperty 'MS\_Description','员工编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_emp\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','经过编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_transit\_no'  exec sp\_addextendedproperty 'MS\_Description','车票编号','SCHEMA','y\_1\_1\_1\_2','SEQUENCE','seq\_ticket\_no' |

### 表

表6.1.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 铁路分公司 | rail\_company |  |
| 3 | 火车站 | rail\_station |  |
| 4 | 部门 | depart |  |
| 5 | 岗位 | post |  |
| 6 | 员工 | employee |  |
| 7 | 列车 | train |  |
| 8 | 车厢 | carriage |  |
| 9 | 乘客 | passenger |  |
| 10 | 从事 | deal\_with |  |
| 11 | 包含 | include |  |
| 12 | 经过 | pass\_by |  |
| 13 | 车票业务 | ticket\_business |  |
| 14 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表6.1.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | no | char(6) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | name | varchar(200) | n |  | y |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_1\_2.area  (  no char(6) default ( next value for y\_1\_1\_1\_2.seq\_area\_no) not null ,  name varchar(200) unique not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','区域','SCHEMA','y\_1\_1\_1\_2','TABLE','area'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_1\_2','TABLE','area','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','区域名称','SCHEMA','y\_1\_1\_1\_2','TABLE','area','COLUMN','name' |

##### 铁路分公司

表6.1.2.1‑2 rail\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 铁路分公司编号 | no | char(8) | n |  |  | 来自序列seq\_comp\_no |
| 2 | 铁路分公司名称 | name | varchar(200) | n |  | y |  |
| 3 | 地址 | address | varchar(200) | n |  | y |  |
| 4 | 联系电话 | phone | varchar(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：铁路分公司  create table y\_1\_1\_1\_2.rail\_company  (  no char(8) default ( next value for y\_1\_1\_1\_2.seq\_comp\_no) not null ,  name varchar(200) unique not null ,  address varchar(200) unique not null ,  phone varchar(20) not null ,  area\_no char(6) references y\_1\_1\_1\_2.area(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','铁路分公司','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_company'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司编号','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_company','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司名称','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_company','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','地址','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_company','COLUMN','address'  exec sp\_addextendedproperty 'MS\_Description','联系电话','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_company','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_company','COLUMN','area\_no' |

##### 火车站

表6.1.2.1‑3 rail\_station（name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 站点名 | name | varchar(81) | n |  |  |  |
| 2 | 车站等级 | station\_level | char(1) | n |  |  | 101 |
| 3 | 供给站标志 | station\_provide\_flag | char(1) | n |  |  | 102 |
| 4 | 铁路分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_1\_2.rail\_station  (  name varchar(81) not null ,  station\_level char(1) not null ,  station\_provide\_flag char(1) not null ,  comp\_no char(8) references y\_1\_1\_1\_2.rail\_company(no) not null ,  primary key(name)  )  ;  exec sp\_addextendedproperty 'MS\_Description','火车站','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_station'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_station','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_station','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_station','COLUMN','station\_provide\_flag'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司编号','SCHEMA','y\_1\_1\_1\_2','TABLE','rail\_station','COLUMN','comp\_no' |

##### 部门

表6.1.2.1‑4 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | no | char(2) | n |  |  | 来自序列seq\_dept\_no |
| 2 | 部门名称 | name | varchar(40) | n |  | y |  |
| 3 | 简介 | introduce | varchar(1000) |  |  |  |  |
| 4 | 火车站名 | station\_name | rail\_station(name) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_1\_2.depart  (  no char(2) default ( next value for y\_1\_1\_1\_2.seq\_dept\_no) not null ,  name varchar(40) unique not null ,  introduce varchar(1000) ,  station\_name varchar(81) references y\_1\_1\_1\_2.rail\_station(name) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','部门','SCHEMA','y\_1\_1\_1\_2','TABLE','depart'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_1\_2','TABLE','depart','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_1\_2','TABLE','depart','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','简介','SCHEMA','y\_1\_1\_1\_2','TABLE','depart','COLUMN','introduce'  exec sp\_addextendedproperty 'MS\_Description','火车站名','SCHEMA','y\_1\_1\_1\_2','TABLE','depart','COLUMN','station\_name' |

##### 岗位

表6.1.2.1‑5 post（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 岗位编号 | no | char(2) | n |  |  | 来自序列seq\_post\_no |
| 2 | 岗位名称 | name | varchar(40) | n |  | y |  |
| 3 | 职责 | duty | varchar(400) | n |  |  |  |
| 4 | 部门号 | dept\_no | depart(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_1\_1\_2.post  (  no char(2) default ( next value for y\_1\_1\_1\_2.seq\_post\_no) not null ,  name varchar(40) unique not null ,  duty varchar(400) not null ,  dept\_no char(2) references y\_1\_1\_1\_2.depart(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','岗位','SCHEMA','y\_1\_1\_1\_2','TABLE','post'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_1\_2','TABLE','post','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','岗位名称','SCHEMA','y\_1\_1\_1\_2','TABLE','post','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','职责','SCHEMA','y\_1\_1\_1\_2','TABLE','post','COLUMN','duty'  exec sp\_addextendedproperty 'MS\_Description','部门号','SCHEMA','y\_1\_1\_1\_2','TABLE','post','COLUMN','dept\_no' |

##### 员工

表6.1.2.1‑6 employee（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | no | dec(12) | n |  |  | 来自序列seq\_emp\_no |
| 2 | 员工姓名 | name | varchar(30) | n |  |  |  |
| 3 | 性别 | sex | char(1) | n |  |  | 103 |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |
| 5 | 密码 | password | varchar(20) |  |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_1\_1\_2.employee  (  no dec(12) default ( next value for y\_1\_1\_1\_2.seq\_emp\_no) not null ,  name varchar(30) not null ,  sex char(1) not null ,  phone char(11) not null ,  password varchar(20) ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','员工','SCHEMA','y\_1\_1\_1\_2','TABLE','employee'  exec sp\_addextendedproperty 'MS\_Description','员工编号','SCHEMA','y\_1\_1\_1\_2','TABLE','employee','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_1\_1\_2','TABLE','employee','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_1\_1\_2','TABLE','employee','COLUMN','sex'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_1\_2','TABLE','employee','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_1\_1\_2','TABLE','employee','COLUMN','password' |

##### 列车

表6.1.2.1‑7 train（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次编号 | no | varchar(5) | n |  |  | 0到1位英文字符，1到4位英文数字 |
| 2 | 类型 | train\_type | char(1) | n |  |  | 104 |
| 3 | 速度 | speed | dec(3) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_1\_2.train  (  no varchar(5) not null ,  train\_type char(1) not null ,  speed dec(3) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','列车','SCHEMA','y\_1\_1\_1\_2','TABLE','train'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','TABLE','train','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_1\_1\_2','TABLE','train','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','速度','SCHEMA','y\_1\_1\_1\_2','TABLE','train','COLUMN','speed' |

##### 车厢

表6.1.2.1‑8 carriage（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类别 | carriage\_type | varchar(2) | n |  |  | 105 |
| 3 | 实际类别 | seat\_type | varchar(2) | n |  |  | 106 |
| 4 | 座位总数 | seat\_total | dec(3) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_1\_2.carriage  (  no char(2) default ( next value for y\_1\_1\_1\_2.seq\_carriage\_no) not null ,  carriage\_type varchar(2) not null ,  seat\_type varchar(2) not null ,  seat\_total dec(3) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车厢','SCHEMA','y\_1\_1\_1\_2','TABLE','carriage'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','TABLE','carriage','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_1\_2','TABLE','carriage','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','实际类别','SCHEMA','y\_1\_1\_1\_2','TABLE','carriage','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_1\_2','TABLE','carriage','COLUMN','seat\_total' |

##### 乘客

表6.1.2.1‑9 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | no | char(18) | n |  |  | 用触发器tri\_passenger\_no检查 |
| 2 | 姓名 | name | varchar(30) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_1\_1\_2.passenger  (  no char(18) not null ,  name varchar(30) not null ,  phone char(11) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','乘客','SCHEMA','y\_1\_1\_1\_2','TABLE','passenger'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_1\_2','TABLE','passenger','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_1\_1\_2','TABLE','passenger','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_1\_2','TABLE','passenger','COLUMN','phone' |

##### 从事

表6.1.2.1‑10 deal\_with（emp\_no,post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | emp\_no | employee(no) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_1\_1\_2.deal\_with  (  emp\_no dec(12) references y\_1\_1\_1\_2.employee(no) not null ,  post\_no char(2) references y\_1\_1\_1\_2.post(no) not null ,  primary key(emp\_no,post\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','从事','SCHEMA','y\_1\_1\_1\_2','TABLE','deal\_with'  exec sp\_addextendedproperty 'MS\_Description','员工编号','SCHEMA','y\_1\_1\_1\_2','TABLE','deal\_with','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_1\_2','TABLE','deal\_with','COLUMN','post\_no' |

##### 包含

表6.1.2.1‑11 include（train\_no, carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车编号 | train\_no | train(no) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 3 | 车厢号分布范围 | carriage\_range | varchar(44) | n |  |  | 2个数字，用半角逗号分隔 |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_1\_1\_2.include  (  train\_no varchar(5) references y\_1\_1\_1\_2.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_1\_2.carriage(no) not null ,  carriage\_range varchar(44) not null ,  primary key(train\_no, carriage\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','包含','SCHEMA','y\_1\_1\_1\_2','TABLE','include'  exec sp\_addextendedproperty 'MS\_Description','列车编号','SCHEMA','y\_1\_1\_1\_2','TABLE','include','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_1\_2','TABLE','include','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢号分布范围','SCHEMA','y\_1\_1\_1\_2','TABLE','include','COLUMN','carriage\_range' |

##### 经过

表6.1.2.1‑12 pass\_by（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(12) | n |  |  | 来自序列seq\_transit\_no |
| 2 | 车次编号 | train\_no | train(no) | n |  |  |  |
| 3 | 站点名 | station\_name | rail\_station(name) | n |  |  |  |
| 4 | 发车时间 | start\_time | datetime | n | getdate() |  |  |
| 5 | 到达时间 | arrive\_time | datetime | n |  |  | 大于发车时间 |
| 6 | 站点序 | station\_order | dec(2) | n |  |  |  |
| 7 | 区间基础票价 | base\_price | money | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | money | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_1\_2.pass\_by  (  no char(12) default ( next value for y\_1\_1\_1\_2.seq\_transit\_no) not null ,  train\_no varchar(5) references y\_1\_1\_1\_2.train(no) not null ,  station\_name varchar(81) references y\_1\_1\_1\_2.rail\_station(name) not null ,  start\_time datetime default (getdate()) not null ,  arrive\_time datetime not null ,  station\_order dec(2) not null ,  base\_price money not null ,  up\_rate money not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','经过','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','站点序','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','区间基础票价','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','base\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_1\_2','TABLE','pass\_by','COLUMN','up\_rate' |

##### 车票业务

表6.1.2.1‑13 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_ticket\_no |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 员工号 | emp\_no | employee(no) | n |  |  |  |
| 4 | 车次编号 | train\_no | train(no) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 107 |
| 9 | 办理时间 | do\_time | datetime | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 108 |
| 11 | 业务金额 | busi\_amount | money | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(4) | n |  |  |  |
| 14 | 发车时间 | start\_time | datetime | n | getdate() |  |  |
| 15 | 到达时间 | arrive\_time | datetime | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：车票业务  create table y\_1\_1\_1\_2.ticket\_business  (  no dec(12) default ( next value for y\_1\_1\_1\_2.seq\_ticket\_no) not null ,  passenger\_no char(18) references y\_1\_1\_1\_2.passenger(no) not null ,  emp\_no dec(12) references y\_1\_1\_1\_2.employee(no) not null ,  train\_no varchar(5) references y\_1\_1\_1\_2.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_1\_2.carriage(no) not null ,  origin\_station varchar(81) references y\_1\_1\_1\_2.rail\_station(name) not null ,  destination\_station varchar(81) references y\_1\_1\_1\_2.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time datetime not null ,  busi\_status char(1) not null ,  busi\_amount money not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(4) not null ,  start\_time datetime default (getdate()) not null ,  arrive\_time datetime not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车票业务','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','员工号','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_1\_2','TABLE','ticket\_business','COLUMN','arrive\_time' |

##### 字典

表6.1.2.1‑14 user\_dict（categary, ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | categary | char(3) | n |  |  | 首位为1 |
| 2 | 编号 | ccode | varchar(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar(200) |  |  |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_1\_2.user\_dict  (  categary char(3) not null ,  ccode varchar(6) not null ,  ctext varchar(200) ,  primary key(categary, ccode)  )  ;  exec sp\_addextendedproperty 'MS\_Description','字典','SCHEMA','y\_1\_1\_1\_2','TABLE','user\_dict'  exec sp\_addextendedproperty 'MS\_Description','大类编号','SCHEMA','y\_1\_1\_1\_2','TABLE','user\_dict','COLUMN','categary'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','TABLE','user\_dict','COLUMN','ccode'  exec sp\_addextendedproperty 'MS\_Description','内容','SCHEMA','y\_1\_1\_1\_2','TABLE','user\_dict','COLUMN','ctext' |

#### 添加检查约束

表6.1.2‑2语句

|  |
| --- |
| alter table train add check (speed>=0);  alter table carriage add check (seat\_total>=1);  alter table pass\_by add check (arrive\_time<start\_time);  alter table pass\_by add check (base\_price >0);  alter table ticket\_business add check (busi\_amount>0);  alter table ticket\_business add check (arrive\_time> start\_time); |

### 同义词

表6.1‑3同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | dep | depart | 部门别称 |  |
| 2 | emp | employee | 员工别称 |  |
| 3 | busi | ticket\_business | 车票业务别称 |  |
| 4 | inc | include | 包含别称 |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| --创建同义词：部门别称  create synonym y\_1\_1\_1\_2.dep for y\_1\_1\_1\_2.depart;  --创建同义词：员工别称  create synonym y\_1\_1\_1\_2.emp for y\_1\_1\_1\_2.employee;  --创建同义词：业务别称  create synonym y\_1\_1\_1\_2.busi for y\_1\_1\_1\_2.ticket\_business;  --创建同义词：包含别称  create synonym y\_1\_1\_1\_2.inc for y\_1\_1\_1\_2.include;  exec sp\_addextendedproperty 'MS\_Description','部门别称','SCHEMA','y\_1\_1\_1\_2','SYNONYM','dep'  exec sp\_addextendedproperty 'MS\_Description','员工别称','SCHEMA','y\_1\_1\_1\_2','SYNONYM','emp'  exec sp\_addextendedproperty 'MS\_Description','业务别称','SCHEMA','y\_1\_1\_1\_2','SYNONYM','busi'  exec sp\_addextendedproperty 'MS\_Description','包含别称','SCHEMA','y\_1\_1\_1\_2','SYNONYM','inc' |

### 视图

#### 参照信息

表6.1.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 铁路分公司信息 | v\_rail\_company\_mes | 显示带区域名称的铁路分公司 | 将区域名称加进来 |
| 2 | 火车站信息 | v\_rail\_station\_mes | 显示带铁路分公司名称、车站等级名称、供给站标志名称的火车站 | 将铁路分公司名称、车站等级名称、供给站标志名称加进来 |
| 3 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 4 | 员工信息 | v\_employee\_mes | 显示带性别名称的员工 | 将性别名称加进来 |
| 5 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 6 | 车厢信息 | v\_carriage\_mes | 显示带车厢类别名称、实际类别名称的车厢 | 将车厢类别名称、实际类别名称加进来 |
| 7 | 从事信息 | v\_deal\_with\_mes | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 8 | 包含信息 | v\_include\_mes | 显示带列车类型、车厢类别、车厢实际类别的包含 | 将列车类型、车厢类别、车厢实际类别加进来 |
| 9 | 经过信息 | v\_pass\_by\_mes | 显示带列车类型、车站等级的经过 | 将列车类型、车站等级加进来 |
| 10 | 车票业务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、员工姓名、业务类别名称、订单状态名称的车票业务 | 将乘客姓名、员工姓名、业务类别名称、订单状态名称加进来 |

##### 铁路分公司信息

表6.1.4.1‑1视图v\_rail\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 铁路分公司编号 | no | rail\_company | no |  |  |
| 2 | 铁路分公司名称 | name | rail\_company | name |  |  |
| 3 | 地址 | address | rail\_company | address |  |  |
| 4 | 联系电话 | phone | rail\_company | phone |  |  |
| 5 | 区域编号 | area\_no | rail\_company | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | rail\_company.area\_no=area.no |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：铁路分公司信息  create view y\_1\_1\_1\_2.v\_rail\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from rail\_company a, area b  where a.area\_no=b.no  ;  exec sp\_addextendedproperty 'MS\_Description','铁路分公司信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_company\_mes'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_company\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_company\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','地址','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_company\_mes','COLUMN','address'  exec sp\_addextendedproperty 'MS\_Description','联系电话','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_company\_mes','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_company\_mes','COLUMN','area\_no'  exec sp\_addextendedproperty 'MS\_Description','区域名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_company\_mes','COLUMN','area\_name' |

##### 火车站信息

表6.1.4.1‑2视图v\_rail\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 站点名 | name | rail\_station | name |  |  |
| 2 | 车站等级 | station\_level | rail\_station | station\_level |  |  |
| 3 | 供给站标志 | station\_provide\_flag | rail\_station | station\_provide\_flag |  |  |
| 4 | 铁路分公司编号 | comp\_no | rail\_station | comp\_no |  |  |
| 5 | 铁路分公司名称 | comp\_name | rail\_company | name | rail\_station.comp\_no= rail\_company.no |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：火车站信息  create view y\_1\_1\_1\_2.v\_rail\_station\_mes(name, station\_level, station\_provide\_flag, comp\_no, comp\_name)  as  select a.name, a.station\_level, a.station\_provide\_flag, a.comp\_no, b.name  from rail\_station a, rail\_company b  where a.comp\_no= b.no  ;  exec sp\_addextendedproperty 'MS\_Description','火车站信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_station\_mes'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_station\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_station\_mes','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_station\_mes','COLUMN','station\_provide\_flag'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_station\_mes','COLUMN','comp\_no'  exec sp\_addextendedproperty 'MS\_Description','铁路分公司名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_rail\_station\_mes','COLUMN','comp\_name' |

##### 岗位信息

表6.1.4.1‑3视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 岗位编号 | no | post | no |  |  |
| 2 | 岗位名称 | name | post | name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门号 | dept\_no | post | dept\_no |  |  |
| 5 | 部门名称 | dept\_name | depart | name | post.dept\_no = depart.no |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：岗位信息  create view y\_1\_1\_1\_2.v\_post\_mes(no, name, duty, dept\_no, dept\_name)  as  select a.no, a.name, a.duty, a.dept\_no, b.name  from post a, depart b  where a.dept\_no = b.no  ;  exec sp\_addextendedproperty 'MS\_Description','岗位信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_post\_mes'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_post\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','岗位名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_post\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','职责','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_post\_mes','COLUMN','duty'  exec sp\_addextendedproperty 'MS\_Description','部门号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_post\_mes','COLUMN','dept\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_post\_mes','COLUMN','dept\_name' |

##### 员工信息

表6.1.4.1‑4视图v\_employee\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | no | emp | no |  |  |
| 2 | 员工姓名 | name | emp | name |  |  |
| 3 | 性别 | sex | emp | sex |  |  |
| 4 | 性别名称 | sex\_name | user\_dict | ctext | user\_dict.categary= '103' and  user\_dict.ccode= emp.sex |  |
| 5 | 手机号码 | phone | emp | phone |  |  |
| 6 | 密码 | password | emp | password |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：员工信息  create view y\_1\_1\_1\_2.v\_employee\_mes(no, name, sex, sex\_name, phone, password)  as  select a.no, a.name, a.sex, b.ctext, a.phone, a.password  from emp a, user\_dict b  where b.categary= '103' and b.ccode= a.sex  ;  exec sp\_addextendedproperty 'MS\_Description','员工信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_employee\_mes'  exec sp\_addextendedproperty 'MS\_Description','员工编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_employee\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_employee\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_employee\_mes','COLUMN','sex'  exec sp\_addextendedproperty 'MS\_Description','性别名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_employee\_mes','COLUMN','sex\_name'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_employee\_mes','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_employee\_mes','COLUMN','password' |

##### 列车信息

表6.1.4.1‑5 视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次编号 | no | train | no |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.categary= '104' and  user\_dict.ccode=train.train\_type |  |
| 4 | 速度 | speed | train | speed |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：列车信息  create view y\_1\_1\_1\_2.v\_train\_mes(no, train\_type, train\_type\_name, speed)  as  select a.no, a.train\_type, b.ctext, a.speed  from train a, user\_dict b  where b.categary= '104' and b.ccode=a.train\_type  ;  exec sp\_addextendedproperty 'MS\_Description','列车信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_train\_mes'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_train\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_train\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','类型名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_train\_mes','COLUMN','train\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','速度','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_train\_mes','COLUMN','speed' |

##### 车厢信息

表6.1.4.1‑6视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | carriage | no |  |  |
| 2 | 车厢类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 车厢类别名称 | carriage\_type\_name | user\_dict n1 | ctext | n1.categary= '105' and  n1.ccode=carriage.carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict h1 | ctext | h1.categary= '105' and  h1.ccode=carriage.seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_1\_1\_2.v\_carriage\_mes(no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total)  as  select a.no, a.carriage\_type, n1.ctext, a.seat\_type, h1.ctext, a.seat\_total  from carriage a, user\_dict n1, user\_dict h1  where n1.categary= '105' and n1.ccode=a.carriage\_type and h1.categary= '105' and h1.ccode=a.seat\_type  ;  exec sp\_addextendedproperty 'MS\_Description','车厢信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_carriage\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_carriage\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','车厢类别名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','实际类别','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','实际类别名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_total' |

##### 从事信息

表6.1.4.1‑7视图v\_deal\_with\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | emp\_no | deal\_with | emp\_no |  |  |
| 2 | 员工姓名 | emp\_name | employee | name | deal\_with.emp\_no = employee.no |  |
| 3 | 岗位编号 | post\_no | deal\_with | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | name | deal\_with.post\_no = post.no |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：从事信息  create view y\_1\_1\_1\_2.v\_deal\_with\_mes(emp\_no, emp\_name, post\_no, post\_name)  as  select a.emp\_no, b.name, a.post\_no, c.name  from deal\_with a, employee b, post c  where a.emp\_no = b.no and a.post\_no = c.no  ;  exec sp\_addextendedproperty 'MS\_Description','从事信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_deal\_with\_mes'  exec sp\_addextendedproperty 'MS\_Description','员工编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_deal\_with\_mes','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_deal\_with\_mes','COLUMN','emp\_name'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_deal\_with\_mes','COLUMN','post\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_deal\_with\_mes','COLUMN','post\_name' |

##### 包含信息

表6.1.4.1‑8视图v\_include\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次编号 | train\_no | include | train\_no |  |  |
| 2 | 列车类型 | train\_type | train | train\_type | include.train\_no= train.no |  |
| 3 | 车厢编号 | carriage\_no | include | carriage\_no |  |  |
| 4 | 车厢实际类别 | seat\_type | carriage | seat\_type | include.carriage\_no= carriage.no |  |
| 5 | 车厢号分布范围 | carriage\_range | include | carriage\_range |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：包含信息  create view y\_1\_1\_1\_2.v\_include\_mes(train\_no, train\_type, carriage\_no, seat\_type, carriage\_range)  as  select a.train\_no, b.train\_type, a.carriage\_no, c.seat\_type, a.carriage\_range  from include a, train b, carriage c  where a.train\_no= b.no and a.carriage\_no= c.no  ;  exec sp\_addextendedproperty 'MS\_Description','包含信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_include\_mes'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_include\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','列车类型','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_include\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_include\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢实际类别','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_include\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','车厢号分布范围','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_include\_mes','COLUMN','carriage\_range' |

##### 经过信息

表6.1.4.1‑9视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | pass\_by | no |  |  |
| 2 | 车次编号 | train\_no | pass\_by | train\_no |  |  |
| 3 | 列车类型 | train\_type | train | train\_type | pass\_by.train\_no = train.no |  |
| 4 | 站点名 | station\_name | pass\_by | station\_name |  |  |
| 5 | 车站等级 | station\_level | rail\_station | station\_level | rail\_station.name=pass\_by.station\_name |  |
| 6 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 7 | 到达时间 | arrive\_time | pass\_by | arrive\_time |  |  |
| 8 | 站点序 | station\_order | pass\_by | station\_order |  |  |
| 9 | 区间基础票价 | base\_price | pass\_by | base\_price |  |  |
| 10 | 票价上浮比率 | up\_rate | pass\_by | up\_rate |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：经过信息  create view y\_1\_1\_1\_2.v\_pass\_by\_mes(no, train\_no, train\_type, station\_name, station\_level, start\_time, arrive\_time, station\_order, base\_price, up\_rate)  as  select a.no, a.train\_no, b.train\_type, a.station\_name, c.station\_level, a.start\_time, a.arrive\_time, a.station\_order, a.base\_price, a.up\_rate  from pass\_by a, train b, rail\_station c  where a.train\_no = b.no and c.name=a.station\_name  ;  exec sp\_addextendedproperty 'MS\_Description','经过信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','列车类型','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','站点序','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','区间基础票价','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','base\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_pass\_by\_mes','COLUMN','up\_rate' |

##### 车票业务信息

表6.1.4.1‑10视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | ticket\_business | no |  |  |
| 2 | 乘客号 | passenger\_no | ticket\_business | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | ticket\_business.passenger\_no  =passenger.no |  |
| 4 | 员工号 | emp\_no | ticket\_business | emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | employee | name | ticket\_business.emp\_no = employee.no |  |
| 6 | 车次编号 | train\_no | ticket\_business | train\_no |  |  |
| 7 | 车厢编号 | carriage\_no | ticket\_business | carriage\_no |  |  |
| 8 | 乘客出发站 | origin\_station | ticket\_business | origin\_station |  |  |
| 9 | 乘客到达站 | destination\_station | ticket\_business | destination\_station |  |  |
| 10 | 业务类别 | busi\_type | ticket\_business | busi\_type |  |  |
| 11 | 业务类别名称 | busi\_type\_name | user\_dict n2 | ctext | n2.categary= '107' and  n2.ccode= ticket\_business.busi\_type |  |
| 12 | 办理时间 | do\_time | ticket\_business | do\_time |  |  |
| 13 | 订单状态 | busi\_status | ticket\_business | busi\_status |  |  |
| 14 | 订单状态名称 | busi\_status\_name | user\_dict n3 | ctext | n3.categary= '108' and  n3.ccode=ticket\_business. busi\_status |  |
| 15 | 业务金额 | busi\_amount | ticket\_business | busi\_amount |  |  |
| 16 | 车厢号 | carriage\_number | ticket\_business | carriage\_number |  |  |
| 17 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 18 | 发车时间 | start\_time | ticket\_business | start\_time |  |  |
| 19 | 到达时间 | arrive\_time | ticket\_business | arrive\_time |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：车票业务信息  create view y\_1\_1\_1\_2.v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, carriage\_no, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, a.carriage\_no, a.origin\_station, a.destination\_station, a.busi\_type, n2.ctext, a.do\_time, a.busi\_status, n3.ctext, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time  from ticket\_business a, passenger b, employee c, user\_dict n2, user\_dict n3  where a.passenger\_no =b.no and a.emp\_no = c.no and n2.categary= '107' and n2.ccode= a.busi\_type and n3.categary= '108' and n3.ccode=a. busi\_status  ;  exec sp\_addextendedproperty 'MS\_Description','车票业务信息','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','passenger\_name'  exec sp\_addextendedproperty 'MS\_Description','员工号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','emp\_name'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','业务类别名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','订单状态名称','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_1\_2','VIEW','v\_ticket\_business\_mes','COLUMN','arrive\_time' |

#### 单据

表6.1.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 乘客车票订单 | order\_info | 售票员订票 |  |
| 2 | 退票详细信息 | refund\_info | 售票员撤销 |  |
| 3 | 改签详细信息 | rebook\_info | 售票员改签 |  |
| 4 | 余票信息 | ticketleft\_info | 售票员查询余票 |  |

##### 乘客车票订单

表6.1.4.2‑1 视图order\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_id | order\_info | order\_id |  |  |
| 2 | 乘客号 | passenger\_id | passenger | no |  |  |
| 3 | 编号 | id | order\_info | id |  |  |
| 4 | 乘客出发站 | origin\_station | rail\_station | origin\_station |  |  |
| 5 | 乘客到达站 | destination\_station | rail\_station | destination\_station |  |  |
| 6 | 车厢号 | carriage\_number | carriage | carriage\_number |  |  |
| 7 | 座位号 | seat\_number | order\_info | seat\_number |  |  |
| 8 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 9 | 到达时间 | arrive\_time | pass\_by o | arrive\_time |  |  |
| 10 | 订购时间 | order\_time | order\_info | order\_time |  |  |
| 11 | 票价 | price | ticket\_business | price |  |  |
| 12 | 订单状态 | order\_status | ticket\_business | order\_status |  |  |
| 13 | 车座种类 | seat\_type | carriage | seat\_type |  |  |
| 14 | 售票员号 | conductor\_id | employee | conductor\_id |  |  |
| 15 | 车次编号 | train\_id | train | train\_id |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：乘客车票订单  create view y\_1\_1\_1\_2.order\_info(order\_id, passenger\_id, id, origin\_station, destination\_station, carriage\_number, seat\_number, start\_time, arrive\_time, order\_time, price, order\_status, seat\_type, conductor\_id, train\_id)  as  select order\_id, passenger\_id, id, origin\_station, destination\_station, carriage\_number, seat\_number, start\_time, arrive\_time, order\_time, price, order\_status, seat\_type, conductor\_id, train\_id  from order\_info  ;  exec sp\_addextendedproperty 'MS\_Description','乘客车票订单','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','order\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','订购时间','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','order\_time'  exec sp\_addextendedproperty 'MS\_Description','票价','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','price'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','order\_status'  exec sp\_addextendedproperty 'MS\_Description','车座种类','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','conductor\_id'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','order\_info','COLUMN','train\_id' |

##### 退票详细订单

表6.1.4.2‑2 视图refund\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 退票号 | refund\_id | refund\_info | refund\_id |  |  |
| 2 | 订单号 | order\_id | refund\_info | order\_id |  |  |
| 3 | 乘客号 | passenger\_id | refund\_info | passenger\_id |  |  |
| 4 | 车次编号 | train\_id | refund\_info | train\_id |  |  |
| 5 | 票价 | price | refund\_info | price |  |  |
| 6 | 退款金额 | refund\_money | refund\_info | refund\_money |  |  |
| 7 | 退票时间 | refund\_time | refund\_info | refund\_time |  |  |
| 8 | 售票员号 | conductor\_id | refund\_info | conductor\_id |  |  |
| 9 | 退票号 | refund\_id | refund\_info | refund\_id |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：退票详细订单  create view y\_1\_1\_1\_2.refund\_info(refund\_id, order\_id, passenger\_id, train\_id, price, refund\_money, refund\_time, conductor\_id, refund\_id)  as  select refund\_id, order\_id, passenger\_id, train\_id, price, refund\_money, refund\_time, conductor\_id, refund\_id  from refund\_info  ;  exec sp\_addextendedproperty 'MS\_Description','退票详细订单','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info'  exec sp\_addextendedproperty 'MS\_Description','退票号','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','refund\_id'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','order\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','票价','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','price'  exec sp\_addextendedproperty 'MS\_Description','退款金额','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','refund\_money'  exec sp\_addextendedproperty 'MS\_Description','退票时间','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','refund\_time'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','conductor\_id'  exec sp\_addextendedproperty 'MS\_Description','退票号','SCHEMA','y\_1\_1\_1\_2','VIEW','refund\_info','COLUMN','refund\_id' |

##### 改签详细订单

表6.1.4.2‑3 视图rebook\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 改签号 | rebook\_id | rebook\_info | rebook\_id |  |  |
| 2 | 订单号 | order\_id | rebook\_info | order\_id |  |  |
| 3 | 乘客号 | passenger\_id | rebook\_info | passenger\_id |  |  |
| 4 | 原车次编号 | train\_id | rebook\_info | train\_id |  |  |
| 5 | 改签车次编号 | al\_train\_id | rebook\_info | al\_train\_id |  |  |
| 6 | 原票价 | price | rebook\_info | price |  |  |
| 7 | 新票价 | al\_price | rebook\_info | al\_price |  |  |
| 8 | 改签时间 | refund\_time | rebook\_info | refund\_time |  |  |
| 9 | 原车厢号 | carriage\_number | rebook\_info | carriage\_number |  |  |
| 10 | 改签车厢号 | al\_carriage\_number | rebook\_info | al\_carriage\_number |  |  |
| 11 | 原座位种类 | seat\_type | rebook\_info | seat\_type |  |  |
| 12 | 改签座位种类 | al\_seat\_type | rebook\_info | al\_seat\_type |  |  |
| 13 | 原座位号 | seat\_number | rebook\_info | seat\_number |  |  |
| 14 | 改签座位号 | al\_seat\_number | rebook\_info | al\_seat\_number |  |  |
| 15 | 售票员号 | conductor\_id | rebook\_info | conductor\_id |  |  |
| 16 | 编号 | id | rebook\_info | id |  |  |
| 17 | 原发车时间 | start\_time | rebook\_info | start\_time |  |  |
| 18 | 改签发车时间 | arrive\_time | rebook\_info | arrive\_time |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：改签详细订单  create view y\_1\_1\_1\_2.rebook\_info(rebook\_id, order\_id, passenger\_id, train\_id, al\_train\_id, price, al\_price, refund\_time, carriage\_number, al\_carriage\_number, seat\_type, al\_seat\_type, seat\_number, al\_seat\_number, conductor\_id, id, start\_time, arrive\_time)  as  select rebook\_id, order\_id, passenger\_id, train\_id, al\_train\_id, price, al\_price, refund\_time, carriage\_number, al\_carriage\_number, seat\_type, al\_seat\_type, seat\_number, al\_seat\_number, conductor\_id, id, start\_time, arrive\_time  from rebook\_info  ;  exec sp\_addextendedproperty 'MS\_Description','改签详细订单','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info'  exec sp\_addextendedproperty 'MS\_Description','改签号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','rebook\_id'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','order\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','原车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','改签车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','al\_train\_id'  exec sp\_addextendedproperty 'MS\_Description','原票价','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','price'  exec sp\_addextendedproperty 'MS\_Description','新票价','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','al\_price'  exec sp\_addextendedproperty 'MS\_Description','改签时间','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','refund\_time'  exec sp\_addextendedproperty 'MS\_Description','原车厢号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','改签车厢号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','al\_carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','原座位种类','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','改签座位种类','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','al\_seat\_type'  exec sp\_addextendedproperty 'MS\_Description','原座位号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','改签座位号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','al\_seat\_number'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','conductor\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','原发车时间','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','改签发车时间','SCHEMA','y\_1\_1\_1\_2','VIEW','rebook\_info','COLUMN','arrive\_time' |

##### 余票信息

表6.1.4.2‑4 视图ticketleft\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 余票编号 | ticketleft\_id | ticketleft\_info | ticketleft\_id |  |  |
| 2 | 车次编号 | train\_id | ticketleft\_info | train\_id |  |  |
| 3 | 编号 | id | ticketleft\_info | id |  |  |
| 4 | 站点名 | station\_name | ticketleft\_info | station\_name |  |  |
| 5 | 车厢号 | carriage\_number | ticketleft\_info | carriage\_number |  |  |
| 6 | 车厢类别 | carriage\_type | ticketleft\_info | carriage\_type |  |  |
| 7 | 座位总数 | seat\_total | ticketleft\_info | seat\_total |  |  |
| 8 | 当前正售座位号 | seat\_number | ticketleft\_info | seat\_number |  |  |
| 9 | 余票 | ticketleft\_total | ticketleft\_info | ticketleft\_total |  |  |
| 10 | 余票编号 | ticketleft\_id | ticketleft\_info | ticketleft\_id |  |  |
| 11 | 车次编号 | train\_id | ticketleft\_info | train\_id |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：余票信息  create view y\_1\_1\_1\_2.ticketleft\_info(ticketleft\_id, train\_id, id, station\_name, carriage\_number, carriage\_type, seat\_total, seat\_number, ticketleft\_total, ticketleft\_id, train\_id)  as  select ticketleft\_id, train\_id, id, station\_name, carriage\_number, carriage\_type, seat\_total, seat\_number, ticketleft\_total, ticketleft\_id, train\_id  from ticketleft\_info  ;  exec sp\_addextendedproperty 'MS\_Description','余票信息','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info'  exec sp\_addextendedproperty 'MS\_Description','余票编号','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','ticketleft\_id'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','seat\_total'  exec sp\_addextendedproperty 'MS\_Description','当前正售座位号','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','余票','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','ticketleft\_total'  exec sp\_addextendedproperty 'MS\_Description','余票编号','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','ticketleft\_id'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','ticketleft\_info','COLUMN','train\_id' |

#### 报表

表6.1.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 乘客信息 | passenger\_info | 购买车票、退票、改签 |  |
| 2 | 车次信息 | train\_info | 途经地点 |  |
| 3 | 票价信息 | price\_info | 用于购买车票、改签、退票进行参考 |  |
| 4 | 售票员信息 | conductor\_info | 购买车票、改签、退票 |  |

##### 乘客信息

表6.1.4.3‑1视图passenger\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 乘客号 | passenger\_id | passenger\_info | passenger\_id |  |  |
| 2 | 姓名 | name | passenger\_info | name |  |  |
| 3 | 性别 | gender | passenger\_info | gender |  |  |
| 4 | 手机号码 | phone | passenger\_info | phone |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：乘客信息  create view y\_1\_1\_1\_2.passenger\_info(passenger\_id, name, gender, phone)  as  select passenger\_id, name, gender, phone  from passenger\_info  ;  exec sp\_addextendedproperty 'MS\_Description','乘客信息','SCHEMA','y\_1\_1\_1\_2','VIEW','passenger\_info'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_1\_2','VIEW','passenger\_info','COLUMN','passenger\_id'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_1\_1\_2','VIEW','passenger\_info','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_1\_1\_2','VIEW','passenger\_info','COLUMN','gender'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_1\_2','VIEW','passenger\_info','COLUMN','phone' |

##### 车次信息

表6.1.4.3‑2视图train\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | id | train\_info | id |  |  |
| 2 | 站点名 | station\_name | train\_info | station\_name |  |  |
| 3 | 站点次序 | station\_order | train\_info | station\_order |  |  |
| 4 | 车次编号 | train\_id | train\_info | train\_id |  |  |
| 5 | 车厢数 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_total | train\_info | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_total |  |  |
| 6 | 发车时间 | start\_time | train\_info | start\_time |  |  |
| 7 | 到达时间 | arrive\_time | train\_info | arrive\_time |  |  |
| 8 | 车次始发站 | orgion\_station | train\_info | orgion\_station |  |  |
| 9 | 车次终点站 | destination\_station | train\_info | destination\_station |  |  |
| 10 | 经过站点数 | pass\_num | train\_info | pass\_num |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：车次信息  create view y\_1\_1\_1\_2.train\_info(id, station\_name, station\_order, train\_id, carriage\_total, start\_time, arrive\_time, orgion\_station, destination\_station, pass\_num)  as  select id, station\_name, station\_order, train\_id, carriage\_total, start\_time, arrive\_time, orgion\_station, destination\_station, pass\_num  from train\_info  ;  exec sp\_addextendedproperty 'MS\_Description','车次信息','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','车厢数','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','carriage\_total'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','车次始发站','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','orgion\_station'  exec sp\_addextendedproperty 'MS\_Description','车次终点站','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','经过站点数','SCHEMA','y\_1\_1\_1\_2','VIEW','train\_info','COLUMN','pass\_num' |

##### 票价信息

表6.1.4.3‑3视图price\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 票价编号 | price\_id | price\_info | price\_id |  |  |
| 2 | 编号 | id | price\_info | id |  |  |
| 3 | 站点名 | station\_name | price\_info | station\_name |  |  |
| 4 | 站点次序 | station\_order | price\_info | station\_order |  |  |
| 5 | 车厢类别 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_type | price\_info | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_type |  |  |
| 6 | 铺位类别 | seat\_type | price\_info | seat\_type |  |  |
| 7 | 站点区间基础票价 | base\_price | price\_info | base\_price |  |  |
| 8 | 票价上浮比率 | up\_rate | price\_info | up\_rate |  |  |
| 9 | 站点区间总票价 | total\_price | price\_info | total\_price |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：票价信息  create view y\_1\_1\_1\_2.price\_info(price\_id, id, station\_name, station\_order, carriage\_type, seat\_type, base\_price, up\_rate, total\_price)  as  select price\_id, id, station\_name, station\_order, carriage\_type, seat\_type, base\_price, up\_rate, total\_price  from price\_info  ;  exec sp\_addextendedproperty 'MS\_Description','票价信息','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info'  exec sp\_addextendedproperty 'MS\_Description','票价编号','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','price\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','铺位类别','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','站点区间基础票价','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','base\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','up\_rate'  exec sp\_addextendedproperty 'MS\_Description','站点区间总票价','SCHEMA','y\_1\_1\_1\_2','VIEW','price\_info','COLUMN','total\_price' |

##### 售票员信息

表6.1.4.3‑4视图conductor\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 售票员号 | conductor\_id | conductor\_info | conductor\_id |  |  |
| 2 | 姓名 | name | conductor\_info | name |  |  |
| 3 | 性别 | gender | conductor\_info | gender |  |  |
| 4 | 手机号码 | phone | conductor\_info | phone |  |  |
| 5 | 密码 | password | conductor\_info | password |  |  |

执行脚本（SQL Server，y\_1\_1\_1\_2）

|  |
| --- |
| -- 创建视图：售票员信息  create view y\_1\_1\_1\_2.conductor\_info(conductor\_id, name, gender, phone, password)  as  select conductor\_id, name, gender, phone, password  from conductor\_info  ;  exec sp\_addextendedproperty 'MS\_Description','售票员信息','SCHEMA','y\_1\_1\_1\_2','VIEW','conductor\_info'  exec sp\_addextendedproperty 'MS\_Description','售票员号','SCHEMA','y\_1\_1\_1\_2','VIEW','conductor\_info','COLUMN','conductor\_id'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_1\_1\_2','VIEW','conductor\_info','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_1\_1\_2','VIEW','conductor\_info','COLUMN','gender'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_1\_2','VIEW','conductor\_info','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_1\_1\_2','VIEW','conductor\_info','COLUMN','password' |

### 函数

表6.1‑4函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 过程

表6.1‑5过程列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表6.1‑6触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

## 乘客业务

### 序列

表6.2‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 4 | 1 | 1 | 1 | 9999 | 区域编号 |  |
| 2 | seq\_comp\_no | 8 | 1 | 1 | 1 | 99999999 | 分公司编号 |  |
| 3 | seq\_train\_no | 2 | 1 | 1 | 1 | 99 | 列车号 |  |
| 4 | seq\_dept\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 5 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 6 | seq\_terminal\_no | 8 | 1 | 1 | 1 | 99999999 | 终端编号 |  |
| 7 | seq\_contain\_no | 2 | 1 | 1 | 1 | 99 | 包含编号 |  |
| 8 | seq\_buffet\_no | 12 | 1 | 1 | 1 | 999999999999 | 自助编号 |  |
| 9 | seq\_transit\_no | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_no | 12 | 1 | 1 | 1 | 999999999999 | 票务编号 |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_2\_2.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 9999 ;  --创建序列，用于：分公司编号  create sequence y\_1\_1\_2\_2.seq\_comp\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：列车号  create sequence y\_1\_1\_2\_2.seq\_train\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：部门编号  create sequence y\_1\_1\_2\_2.seq\_dept\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_2\_2.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：终端编号  create sequence y\_1\_1\_2\_2.seq\_terminal\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：包含编号  create sequence y\_1\_1\_2\_2.seq\_contain\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：自助编号  create sequence y\_1\_1\_2\_2.seq\_buffet\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：经过编号  create sequence y\_1\_1\_2\_2.seq\_transit\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：票务编号  create sequence y\_1\_1\_2\_2.seq\_ticket\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_area\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_comp\_no'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_train\_no'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_dept\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_terminal\_no'  exec sp\_addextendedproperty 'MS\_Description','包含编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_contain\_no'  exec sp\_addextendedproperty 'MS\_Description','自助编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_buffet\_no'  exec sp\_addextendedproperty 'MS\_Description','经过编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_transit\_no'  exec sp\_addextendedproperty 'MS\_Description','票务编号','SCHEMA','y\_1\_1\_2\_2','SEQUENCE','seq\_ticket\_no' |

### 表

表6.2.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | rail\_company |  |
| 3 | 列车 | train |  |
| 4 | 火车站 | rail\_station |  |
| 5 | 部门 | depart |  |
| 6 | 车厢 | carriage |  |
| 7 | 网络售票终端 | terminal |  |
| 8 | 乘客 | passenger |  |
| 9 | 包含 | contain |  |
| 10 | 自助操作 | self­\_service |  |
| 11 | 经过 | pass\_by |  |
| 12 | 票务服务 | ticket\_business |  |
| 13 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表6.2.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | no | char(4) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | name | varchar(200) | n |  | y |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_2\_2.area  (  no char(4) default ( next value for y\_1\_1\_2\_2.seq\_area\_no) not null ,  name varchar(200) unique not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','区域','SCHEMA','y\_1\_1\_2\_2','TABLE','area'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_2\_2','TABLE','area','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','区域名称','SCHEMA','y\_1\_1\_2\_2','TABLE','area','COLUMN','name' |

##### 分公司

表6.2.2.1‑2 rail\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 分公司编号 | no | char(8) | n |  |  | 来自序列seq\_comp\_no |
| 2 | 分公司名称 | name | varchar(200) | n |  | y |  |
| 3 | 地址 | address | varchar(200) | n |  | y |  |
| 4 | 联系电话 | phone | varchar(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_1\_2\_2.rail\_company  (  no char(8) default ( next value for y\_1\_1\_2\_2.seq\_comp\_no) not null ,  name varchar(200) unique not null ,  address varchar(200) unique not null ,  phone varchar(20) not null ,  area\_no char(4) references y\_1\_1\_2\_2.area(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','分公司','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_company'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_company','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_company','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','地址','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_company','COLUMN','address'  exec sp\_addextendedproperty 'MS\_Description','联系电话','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_company','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_company','COLUMN','area\_no' |

##### 列车

表6.2.2.1‑3 train（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车号 | no | char(2) | n |  |  | 来自序列seq\_train\_no |
| 2 | 类型 | train\_type | char(1) | n |  |  | 201 |
| 3 | 速度 | speed | dec(3) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_2\_2.train  (  no char(2) default ( next value for y\_1\_1\_2\_2.seq\_train\_no) not null ,  train\_type char(1) not null ,  speed dec(3) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','列车','SCHEMA','y\_1\_1\_2\_2','TABLE','train'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','TABLE','train','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_1\_2\_2','TABLE','train','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','速度','SCHEMA','y\_1\_1\_2\_2','TABLE','train','COLUMN','speed' |

##### 火车站

表6.2.2.1‑4 rail\_station（name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 站点名 | name | varchar(20) | n |  |  |  |
| 2 | 车站等级 | station\_level | char(1) | n |  |  | 202 |
| 3 | 供给站标志 | supply\_sign | char(1) | n |  |  | 203 |
| 4 | 分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_2\_2.rail\_station  (  name varchar(20) not null ,  station\_level char(1) not null ,  supply\_sign char(1) not null ,  comp\_no char(8) references y\_1\_1\_2\_2.rail\_company(no) not null ,  primary key(name)  )  ;  exec sp\_addextendedproperty 'MS\_Description','火车站','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_station'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_station','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_station','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_station','COLUMN','supply\_sign'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_2\_2','TABLE','rail\_station','COLUMN','comp\_no' |

##### 部门

表6.2.2.1‑5 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | no | char(2) | n |  |  | 来自序列seq\_dept\_no |
| 2 | 部门名称 | name | varchar(40) | n |  | y |  |
| 3 | 简介 | introduce | varchar(1000) |  |  |  |  |
| 4 | 分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_2\_2.depart  (  no char(2) default ( next value for y\_1\_1\_2\_2.seq\_dept\_no) not null ,  name varchar(40) unique not null ,  introduce varchar(1000) ,  comp\_no char(8) references y\_1\_1\_2\_2.rail\_company(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','部门','SCHEMA','y\_1\_1\_2\_2','TABLE','depart'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_2\_2','TABLE','depart','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_2\_2','TABLE','depart','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','简介','SCHEMA','y\_1\_1\_2\_2','TABLE','depart','COLUMN','introduce'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_2\_2','TABLE','depart','COLUMN','comp\_no' |

##### 车厢

表6.2.2.1‑6 carriage（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类别 | carriage\_type | varchar(2) | n |  |  | 204 |
| 3 | 实际类别 | seat\_type | varchar(2) | n |  |  | 205 |
| 4 | 座位总数 | seat\_total | dec(3) | n |  |  |  |
| 5 | 列车号 | train\_no | train(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_2\_2.carriage  (  no char(2) default ( next value for y\_1\_1\_2\_2.seq\_carriage\_no) not null ,  carriage\_type varchar(2) not null ,  seat\_type varchar(2) not null ,  seat\_total dec(3) not null ,  train\_no char(2) references y\_1\_1\_2\_2.train(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车厢','SCHEMA','y\_1\_1\_2\_2','TABLE','carriage'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','TABLE','carriage','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_2\_2','TABLE','carriage','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','实际类别','SCHEMA','y\_1\_1\_2\_2','TABLE','carriage','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_2\_2','TABLE','carriage','COLUMN','seat\_total'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','TABLE','carriage','COLUMN','train\_no' |

##### 网络售票终端

表6.2.2.1‑7 terminal（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 终端编号 | no | char(8) | n |  |  | 来自序列seq\_terminal\_no |
| 2 | 终端语言类型 | terminal\_type | char(1) | n |  |  | 206 |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：网络售票终端  create table y\_1\_1\_2\_2.terminal  (  no char(8) default ( next value for y\_1\_1\_2\_2.seq\_terminal\_no) not null ,  terminal\_type char(1) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','网络售票终端','SCHEMA','y\_1\_1\_2\_2','TABLE','terminal'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_1\_2\_2','TABLE','terminal','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','终端语言类型','SCHEMA','y\_1\_1\_2\_2','TABLE','terminal','COLUMN','terminal\_type' |

##### 乘客

表6.2.2.1‑8 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | no | char(18) | n |  |  | 身份证号 |
| 2 | 姓名 | name | varchar(30) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |
| 4 | 性别 | gender | char(1) | n |  |  | 207 |
| 5 | 登录密码 | password | varchar(50) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_1\_2\_2.passenger  (  no char(18) not null ,  name varchar(30) not null ,  phone char(11) not null ,  gender char(1) not null ,  password varchar(50) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','乘客','SCHEMA','y\_1\_1\_2\_2','TABLE','passenger'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_2\_2','TABLE','passenger','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_1\_2\_2','TABLE','passenger','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_2\_2','TABLE','passenger','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_1\_2\_2','TABLE','passenger','COLUMN','gender'  exec sp\_addextendedproperty 'MS\_Description','登录密码','SCHEMA','y\_1\_1\_2\_2','TABLE','passenger','COLUMN','password' |

##### 包含

表6.2.2.1‑9 contain（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_contain\_no |
| 2 | 列车号 | train\_no | train(no) | n |  |  |  |
| 3 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_1\_2\_2.contain  (  no char(2) default ( next value for y\_1\_1\_2\_2.seq\_contain\_no) not null ,  train\_no char(2) references y\_1\_1\_2\_2.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_2\_2.carriage(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','包含','SCHEMA','y\_1\_1\_2\_2','TABLE','contain'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','TABLE','contain','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','TABLE','contain','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_2\_2','TABLE','contain','COLUMN','carriage\_no' |

##### 自助操作

表6.2.2.1‑10 self\_service（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_buffet\_no |
| 2 | 终端编号 | terminal\_no | terminal(no) | n |  |  |  |
| 3 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 4 | 列车号 | train\_no | train(no) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 208 |
| 9 | 办理时间 | do\_time | datetime | n | getdate() |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 209 |
| 11 | 业务金额 | busi\_amount | dec(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(4) | n |  |  |  |
| 14 | 发车时间 | start\_time | datetime | n |  |  |  |
| 15 | 到达时间 | arrive\_time | datetime | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 210 |
| 17 | 变更到站状态 | change\_station | char(1) | n |  |  | 211 |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：自助操作  create table y\_1\_1\_2\_2.self\_service  (  no dec(12) default ( next value for y\_1\_1\_2\_2.seq\_buffet\_no) not null ,  terminal\_no char(8) references y\_1\_1\_2\_2.terminal(no) not null ,  passenger\_no char(18) references y\_1\_1\_2\_2.passenger(no) not null ,  train\_no char(2) references y\_1\_1\_2\_2.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_2\_2.carriage(no) not null ,  origin\_station varchar(20) references y\_1\_1\_2\_2.rail\_station(name) not null ,  destination\_station varchar(20) references y\_1\_1\_2\_2.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time datetime default (getdate()) not null ,  busi\_status char(1) not null ,  busi\_\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(4) not null ,  start\_time datetime not null ,  arrive\_time datetime not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','自助操作','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','terminal\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','busi\_\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_1\_2\_2','TABLE','self\_service','COLUMN','change\_station' |

##### 经过

表6.2.2.1‑11 pass\_by（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(12) | n |  |  | 来自序列seq\_transit\_no |
| 2 | 列车号 | train\_no | train(no) | n |  |  |  |
| 3 | 站点名 | station\_name | rail\_station(name) | n |  |  |  |
| 4 | 发车时间 | start\_time | datetime | n |  |  |  |
| 5 | 到达时间 | arrive\_time | datetime | n |  |  |  |
| 6 | 站点序 | station\_order | dec(2) | n |  |  |  |
| 7 | 区间基础票价 | base\_price | dec(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | dec(6,4) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_2\_2.pass\_by  (  no char(12) default ( next value for y\_1\_1\_2\_2.seq\_transit\_no) not null ,  train\_no char(2) references y\_1\_1\_2\_2.train(no) not null ,  station\_name varchar(20) references y\_1\_1\_2\_2.rail\_station(name) not null ,  start\_time datetime not null ,  arrive\_time datetime not null ,  station\_order dec(2) not null ,  base\_price dec(6,2) not null ,  up\_rate dec(6,4) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','经过','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','站点序','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','区间基础票价','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','base\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_2\_2','TABLE','pass\_by','COLUMN','up\_rate' |

##### 票务服务

表6.2.2.1‑12 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_ticket\_no |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 列车号 | train\_no | train(no) | n |  |  |  |
| 4 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 5 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 6 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 7 | 业务类别 | busi\_type | char(1) | n |  |  | 208 |
| 8 | 办理时间 | do\_time | datetime | n |  |  |  |
| 9 | 订单状态 | busi\_status | char(1) | n |  |  | 209 |
| 10 | 业务金额 | busi\_amount | dec(5,2) | n |  |  |  |
| 11 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 12 | 座位号 | seat\_number | varchar(4) | n |  |  |  |
| 13 | 发车时间 | start\_time | datetime | n |  |  |  |
| 14 | 到达时间 | arrive\_time | datetime | n |  |  |  |
| 15 | 出票状态 | ticket\_status | char(1) | n |  |  | 210 |
| 16 | 变更到站状态 | change\_station | char(1) | n |  |  | 211 |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：票务服务  create table y\_1\_1\_2\_2.ticket\_business  (  no dec(12) default ( next value for y\_1\_1\_2\_2.seq\_ticket\_no) not null ,  passenger\_no char(18) references y\_1\_1\_2\_2.passenger(no) not null ,  train\_no char(2) references y\_1\_1\_2\_2.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_2\_2.carriage(no) not null ,  origin\_station varchar(20) references y\_1\_1\_2\_2.rail\_station(name) not null ,  destination\_station varchar(20) references y\_1\_1\_2\_2.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time datetime not null ,  busi\_status char(1) not null ,  busi\_\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(4) not null ,  start\_time datetime not null ,  arrive\_time datetime not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','票务服务','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','busi\_\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_1\_2\_2','TABLE','ticket\_business','COLUMN','change\_station' |

##### 字典

表6.2.2.1‑13 user\_dict（categary,ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | categary | char(3) | n |  |  | 第1位是2 |
| 2 | 编号 | ccode | varchar(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar(200) |  |  |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_2\_2.user\_dict  (  categary char(3) not null ,  ccode varchar(6) not null ,  ctext varchar(200) ,  primary key(categary,ccode)  )  ;  exec sp\_addextendedproperty 'MS\_Description','字典','SCHEMA','y\_1\_1\_2\_2','TABLE','user\_dict'  exec sp\_addextendedproperty 'MS\_Description','大类编号','SCHEMA','y\_1\_1\_2\_2','TABLE','user\_dict','COLUMN','categary'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','TABLE','user\_dict','COLUMN','ccode'  exec sp\_addextendedproperty 'MS\_Description','内容','SCHEMA','y\_1\_1\_2\_2','TABLE','user\_dict','COLUMN','ctext' |

#### 添加检查约束

表6.2.2‑2语句

|  |
| --- |
| alter table self\_service add check (arrive\_time > start\_time);  alter table pass\_by add check (start\_time > arrive\_time);  alter table ticket\_business add check (arrive\_time > start\_time); |

### 同义词

表6.2‑3同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | r\_com | rail\_company | 铁路分公司别称 |  |
| 2 | r\_station | rail\_station | 火车站别称 |  |
| 3 | t\_bus | ticket\_business | 车票业务别称 |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| --创建同义词：铁路分公司别称  create synonym y\_1\_1\_2\_2.r\_com for y\_1\_1\_2\_2.rail\_company;  --创建同义词：火车站别称  create synonym y\_1\_1\_2\_2.r\_station for y\_1\_1\_2\_2.rail\_station;  --创建同义词：车票业务别称  create synonym y\_1\_1\_2\_2.t\_bus for y\_1\_1\_2\_2.ticket\_business;  exec sp\_addextendedproperty 'MS\_Description','铁路分公司别称','SCHEMA','y\_1\_1\_2\_2','SYNONYM','r\_com'  exec sp\_addextendedproperty 'MS\_Description','火车站别称','SCHEMA','y\_1\_1\_2\_2','SYNONYM','r\_station'  exec sp\_addextendedproperty 'MS\_Description','车票业务别称','SCHEMA','y\_1\_1\_2\_2','SYNONYM','t\_bus' |

### 视图

#### 参照信息

表6.2.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_rail\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 3 | 火车站信息 | v\_rail\_station\_mes | 显示带分公司名称、车站等级名称、供给站标志名称的火车站 | 将分公司名称、车站等级名称、供给站名称加进来 |
| 4 | 部门信息 | v\_depart\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 5 | 车厢信息 | v\_carriage\_mes | 显示带车厢类别名称、实际类别名称的车厢 | 将车厢类别名称、实际类别名称加进来 |
| 6 | 网络售票终端信息 | v\_terminal\_mes | 显示带终端语言类型名称的网络售票终端 | 将终端语言类型名称加进来 |
| 7 | 乘客信息 | v\_passenger\_mes | 显示带性别名称的乘客 | 将性别名称加进来 |
| 8 | 包含信息 | v\_contain\_mes | 显示带列车类型、车厢类别、车厢实际类别的包含 | 将列车类型、车厢类别、车厢实际类别加进来 |
| 9 | 自助操作信息 | v\_self\_service\_mes | 显示带乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的自助操作 | 将乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |
| 10 | 经过信息 | v\_pass\_by\_mes | 显示带列车类型、车站等级的经过 | 将列车类型、车站等级加进来 |
| 11 | 票务服务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的票务服务 | 将乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |

##### 分公司信息

表6.2.4.1‑1视图v\_rail\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 分公司编号 | no | r\_com | no |  |  |
| 2 | 分公司名称 | name | r\_com | name |  |  |
| 3 | 地址 | address | r\_com | address |  |  |
| 4 | 联系电话 | phone | r\_com | phone |  |  |
| 5 | 区域编号 | area\_no | r\_com | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | r\_com.area\_no = area.no |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：分公司信息  create view y\_1\_1\_2\_2.v\_rail\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from r\_com a, area b  where a.area\_no = b.no  ;  exec sp\_addextendedproperty 'MS\_Description','分公司信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_company\_mes'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_company\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_company\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','地址','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_company\_mes','COLUMN','address'  exec sp\_addextendedproperty 'MS\_Description','联系电话','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_company\_mes','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_company\_mes','COLUMN','area\_no'  exec sp\_addextendedproperty 'MS\_Description','区域名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_company\_mes','COLUMN','area\_name' |

##### 列车信息

表6.2.4.1‑2视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 列车号 | no | train | no |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.category= '201' and  user\_dict.ccode=train.train\_type |  |
| 4 | 速度 | speed | train | speed |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：列车信息  create view y\_1\_1\_2\_2.v\_train\_mes(no, train\_type, train\_type\_name, speed)  as  select a.no, a.train\_type, b.ctext, a.speed  from train a, user\_dict b  where b.category= '201' and b.ccode=a.train\_type  ;  exec sp\_addextendedproperty 'MS\_Description','列车信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_train\_mes'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_train\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_train\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','类型名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_train\_mes','COLUMN','train\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','速度','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_train\_mes','COLUMN','speed' |

##### 火车站信息

表6.2.4.1‑3视图v\_rail\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 站点名 | name | r\_station | name |  |  |
| 2 | 车站等级 | station\_level | r\_station | station\_level |  |  |
| 3 | 车站等级名称 | station\_level\_name | user\_dict n5 | ctext | n5.category= '202' and  n5.ccode=r\_station. station\_level |  |
| 4 | 供给站标志 | supply\_sign | r\_station | supply\_sign |  |  |
| 5 | 供给站标志名称 | supply\_sign\_name | user\_dict n6 | ctext | n6.category= '203' and  n6.ccode=r\_station. supply\_sign |  |
| 6 | 分公司编号 | comp\_no | r\_station | comp\_no |  |  |
| 7 | 分公司名称 | comp\_name | r\_com | name | r\_station.comp\_no = r\_com.no |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：火车站信息  create view y\_1\_1\_2\_2.v\_rail\_station\_mes(name, station\_level, station\_level\_name, supply\_sign, supply\_sign\_name, comp\_no, comp\_name)  as  select a.name, a.station\_level, n5.ctext, a.supply\_sign, n6.ctext, a.comp\_no, d.name  from r\_station a, user\_dict n5, user\_dict n6, r\_com d  where n5.category= '202' and n5.ccode=a. station\_level and n6.category= '203' and n6.ccode=a. supply\_sign and a.comp\_no = d.no  ;  exec sp\_addextendedproperty 'MS\_Description','火车站信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','车站等级名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes','COLUMN','station\_level\_name'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes','COLUMN','supply\_sign'  exec sp\_addextendedproperty 'MS\_Description','供给站标志名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes','COLUMN','supply\_sign\_name'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes','COLUMN','comp\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_rail\_station\_mes','COLUMN','comp\_name' |

##### 部门信息

表6.2.4.1‑4视图v\_depart\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | no | depart | no |  |  |
| 2 | 部门名称 | name | depart | name |  |  |
| 3 | 简介 | introduce | depart | introduce |  |  |
| 4 | 分公司编号 | comp\_no | depart | comp\_no |  |  |
| 5 | 分公司名称 | comp\_name | r\_com | name | depart.comp\_no = r\_com.no |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：部门信息  create view y\_1\_1\_2\_2.v\_depart\_mes(no, name, introduce, comp\_no, comp\_name)  as  select a.no, a.name, a.introduce, a.comp\_no, b.name  from depart a, r\_com b  where a.comp\_no = b.no  ;  exec sp\_addextendedproperty 'MS\_Description','部门信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_depart\_mes'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_depart\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_depart\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','简介','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_depart\_mes','COLUMN','introduce'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_depart\_mes','COLUMN','comp\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_depart\_mes','COLUMN','comp\_name' |

##### 车厢信息

表6.2.4.1‑5视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | carriage | no |  |  |
| 2 | 车厢类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 车厢类别名称 | carriage\_type\_name | user\_dict n7 | ctext | n7.category= '204' and  n7.ccode=carriage.carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict n8 | ctext | n8.category= '205' and  n8.ccode=carriage. seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_1\_2\_2.v\_carriage\_mes(no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total)  as  select a.no, a.carriage\_type, n7.ctext, a.seat\_type, n8.ctext, a.seat\_total  from carriage a, user\_dict n7, user\_dict n8  where n7.category= '204' and n7.ccode=a.carriage\_type and n8.category= '205' and n8.ccode=a. seat\_type  ;  exec sp\_addextendedproperty 'MS\_Description','车厢信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_carriage\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_carriage\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','车厢类别名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','实际类别','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','实际类别名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_total' |

##### 网络售票终端信息

表6.2.4.1‑6视图v\_terminal\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 终端编号 | no | terminal | no |  |  |
| 2 | 终端语言类型 | terminal\_type | terminal | terminal\_type |  |  |
| 3 | 终端语言类型名称 | terminal\_type\_name | user\_dict | ctext | user\_dict.category= '206' and  user\_dict.ccode= terminal. terminal\_type |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：网络售票终端信息  create view y\_1\_1\_2\_2.v\_terminal\_mes(no, terminal\_type, terminal\_type\_name)  as  select a.no, a.terminal\_type, b.ctext  from terminal a, user\_dict b  where b.category= '206' and b.ccode= a. terminal\_type  ;  exec sp\_addextendedproperty 'MS\_Description','网络售票终端信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_terminal\_mes'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_terminal\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','终端语言类型','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_terminal\_mes','COLUMN','terminal\_type'  exec sp\_addextendedproperty 'MS\_Description','终端语言类型名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_terminal\_mes','COLUMN','terminal\_type\_name' |

##### 乘客信息

表6.2.4.1‑7视图v\_passenger\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 乘客号 | no | passenger | no |  |  |
| 2 | 姓名 | name | passenger | name |  |  |
| 3 | 手机号码 | phone | passenger | phone |  |  |
| 4 | 性别 | gender | passenger | gender |  |  |
| 5 | 性别名称 | gender\_name | user\_dict | ctext | user\_dict.category= '207' and  user\_dict.ccode= passenger.gender |  |
| 6 | 登录密码 | password | passenger | password |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：乘客信息  create view y\_1\_1\_2\_2.v\_passenger\_mes(no, name, phone, gender, gender\_name, password)  as  select a.no, a.name, a.phone, a.gender, b.ctext, a.password  from passenger a, user\_dict b  where b.category= '207' and b.ccode= a.gender  ;  exec sp\_addextendedproperty 'MS\_Description','乘客信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_passenger\_mes'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_passenger\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_passenger\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_passenger\_mes','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_passenger\_mes','COLUMN','gender'  exec sp\_addextendedproperty 'MS\_Description','性别名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_passenger\_mes','COLUMN','gender\_name'  exec sp\_addextendedproperty 'MS\_Description','登录密码','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_passenger\_mes','COLUMN','password' |

##### 自助操作信息

表6.2.4.1‑8视图v\_self\_service\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | self\_service | no |  |  |
| 2 | 终端编号 | terminal\_no | self\_service | terminal\_no |  |  |
| 3 | 终端语言类型 | terminal\_type | terminal | terminal\_type | terminal.no=self\_service.terminal\_no |  |
| 4 | 乘客号 | passenger\_no | self\_service | passenger\_no |  |  |
| 5 | 乘客姓名 | passenger\_name | passenger | name | self\_service.passenger\_no=passenger.no |  |
| 6 | 列车号 | train\_no | self\_service | train\_no |  |  |
| 7 | 列车类型 | train\_type | train | train\_type | self\_service.train\_no= train.no |  |
| 8 | 车厢编号 | carriage\_no | self\_service | carriage\_no |  |  |
| 10 | 车厢实际类别 | seat\_type | carriage | seat\_type | self\_service.carriage\_no= carriage.no |  |
| 11 | 乘客出发站 | origin\_station | self\_service | origin\_station |  |  |
| 12 | 乘客到达站 | destination\_station | self\_service | destination\_station |  |  |
| 13 | 业务类别 | busi\_type | self\_service | busi\_type |  |  |
| 14 | 业务类别名称 | busi\_type\_name | user\_dict n9 | ctext | n9.categary='208' and n9.ccode=self\_service.busi\_type |  |
| 15 | 办理时间 | do\_time | self\_service | do\_time |  |  |
| 16 | 订单状态 | busi\_status | self\_service | busi\_status |  |  |
| 17 | 订单状态名称 | busi\_status\_name | user\_dict n10 | ctext | n10.categary='209' and  n10.ccode=self\_service.busi\_status |  |
| 18 | 业务金额 | busi\_amount | self\_service | busi\_amount |  |  |
| 19 | 车厢号 | carriage\_number | self\_service | carriage\_number |  |  |
| 20 | 座位号 | seat\_number | self\_service | seat\_number |  |  |
| 21 | 发车时间 | start\_time | self\_service | start\_time |  |  |
| 22 | 到达时间 | arrive\_time | self\_service | arrive\_time |  |  |
| 23 | 出票状态 | ticket\_status | self\_service | ticket\_status |  |  |
| 24 | 出票状态名称 | ticket\_status\_name | user\_dict h3 | ctext | h3.categary= '210' and  h3.ccode=self\_service.ticket\_status |  |
| 25 | 变更到站状态 | change\_station | self\_service | change\_station |  |  |
| 26 | 变更到站状态名称 | change\_station\_name | user\_dict h4 | ctext | h4.categary= '211' and  h4.ccode= self\_service.change\_station |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：自助操作信息  create view y\_1\_1\_2\_2.v\_self\_service\_mes(no, terminal\_no, terminal\_type, passenger\_no, passenger\_name, train\_no, train\_type, carriage\_no, seat\_type, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.terminal\_no, b.terminal\_type, a.passenger\_no, c.name, a.train\_no, d.train\_type, a.carriage\_no, e.seat\_type, a.origin\_station, a.destination\_station, a.busi\_type, n9.ctext, a.do\_time, a.busi\_status, n10.ctext, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, h3.ctext, a.change\_station, h4.ctext  from self\_service a, terminal b, passenger c, train d, carriage e, user\_dict n9, user\_dict n10, user\_dict h3, user\_dict h4  where b.no=a.terminal\_no and a.passenger\_no=c.no and a.train\_no= d.no and a.carriage\_no= e.no and n9.categary='208' and n9.ccode=a.busi\_type and n10.categary='209' and n10.ccode=a.busi\_status and h3.categary= '210' and h3.ccode=a.ticket\_status and h4.categary= '211' and h4.ccode= a.change\_station  ;  exec sp\_addextendedproperty 'MS\_Description','自助操作信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','terminal\_no'  exec sp\_addextendedproperty 'MS\_Description','终端语言类型','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','terminal\_type'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','passenger\_name'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','列车类型','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢实际类别','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','业务类别名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','订单状态名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','ticket\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','change\_station'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_self\_service\_mes','COLUMN','change\_station\_name' |

##### 票务服务信息

表6.2.4.1‑9视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | t\_bus | no |  |  |
| 2 | 乘客号 | passenger\_no | t\_bus | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | t\_bus.passenger\_no = passenger.no |  |
| 4 | 列车号 | train\_no | t\_bus | train\_no |  |  |
| 5 | 车厢编号 | carriage\_no | t\_bus | carriage\_no |  |  |
| 6 | 乘客出发站 | origin\_station | t\_bus | origin\_station |  |  |
| 7 | 乘客到达站 | destination\_station | t\_bus | destination\_station |  |  |
| 8 | 业务类别 | busi\_type | t\_bus | busi\_type |  |  |
| 9 | 业务类别名称 | busi\_type\_name | user\_dict h5 | ctext | h5.category= '208' and  h5.ccode= t\_bus.busi\_type |  |
| 10 | 办理时间 | do\_time | t\_bus | do\_time |  |  |
| 11 | 订单状态 | busi\_status | t\_bus | busi\_status |  |  |
| 12 | 订单状态名称 | busi\_status\_name | user\_dict h6 | ctext | h6.category= '209' and  h6.ccode=t\_bus.busi\_status |  |
| 13 | 业务金额 | busi\_amount | t\_bus | busi\_amount |  |  |
| 14 | 车厢号 | carriage\_number | t\_bus | carriage\_number |  |  |
| 15 | 座位号 | seat\_number | t\_bus | seat\_number |  |  |
| 16 | 发车时间 | start\_time | t\_bus | start\_time |  |  |
| 17 | 到达时间 | arrive\_time | t\_bus | arrive\_time |  |  |
| 18 | 出票状态 | ticket\_status | t\_bus | ticket\_status |  |  |
| 19 | 出票状态名称 | ticket\_status\_name | user\_dict h7 | ctext | h7.category= '210' and  h7.ccode=t\_bus.ticket\_status |  |
| 20 | 变更到站状态 | change\_station | t\_bus | change\_station |  |  |
| 21 | 变更到站状态名称 | change\_station\_name | user\_dict h8 | ctext | h8.category= '211' and  h8.ccode=t\_bus.change\_station |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：票务服务信息  create view y\_1\_1\_2\_2.v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, train\_no, carriage\_no, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.train\_no, a.carriage\_no, a.origin\_station, a.destination\_station, a.busi\_type, h5.ctext, a.do\_time, a.busi\_status, h6.ctext, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, h7.ctext, a.change\_station, h8.ctext  from t\_bus a, passenger b, user\_dict h5, user\_dict h6, user\_dict h7, user\_dict h8  where a.passenger\_no = b.no and h5.category= '208' and h5.ccode= a.busi\_type and h6.category= '209' and h6.ccode=a.busi\_status and h7.category= '210' and h7.ccode=a.ticket\_status and h8.category= '211' and h8.ccode=a.change\_station  ;  exec sp\_addextendedproperty 'MS\_Description','票务服务信息','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','passenger\_name'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','业务类别名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','订单状态名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','ticket\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','change\_station'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态名称','SCHEMA','y\_1\_1\_2\_2','VIEW','v\_ticket\_business\_mes','COLUMN','change\_station\_name' |

#### 单据

表6.2.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 订单信息 | order\_mes | 乘客订票 |  |
| 2 | 余票信息 | surplus\_ticket\_mes | 乘客查看剩余的票数 |  |

##### 订单信息

表6.2.4.2‑1视图order\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | order\_mes | order\_number |  |  |
| 2 | 车次编号 | train\_number | order\_mes | train\_number |  |  |
| 3 | 车号 | train\_id\_num | order\_mes | train\_id\_num |  |  |
| 4 | 乘客出发站 | pa\_start\_sta | order\_mes | pa\_start\_sta |  |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | order\_mes | pa\_arrive\_sta |  |  |
| 6 | 身份证号 | pa\_id | order\_mes | pa\_id |  |  |
| 7 | 乘客姓名 | pa\_name | order\_mes | pa\_name |  |  |
| 8 | 票价 | ticket\_price | order\_mes | ticket\_price |  |  |
| 9 | 车厢号 | carr\_num | order\_mes | carr\_num |  |  |
| 10 | 车座种类 | seat\_type | order\_mes | seat\_type |  |  |
| 11 | 座位号 | seat\_number | order\_mes | seat\_number |  |  |
| 12 | 订票日期 | reser\_date | order\_mes | reser\_date |  |  |
| 13 | 到达时间 | arri\_time | order\_mes | arri\_time |  |  |
| 14 | 发车时间 | str\_time | order\_mes | str\_time |  |  |
| 15 | 订单状态 | order\_status | order\_mes | order\_status |  |  |
| 16 | 出票状态 | ticket\_out\_if | order\_mes | ticket\_out\_if |  |  |
| 17 | 变更到站状态 | change\_sta\_if | order\_mes | change\_sta\_if |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：订单信息  create view y\_1\_1\_2\_2.order\_mes(order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if  from order\_mes  ;  exec sp\_addextendedproperty 'MS\_Description','订单信息','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','order\_number'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','train\_number'  exec sp\_addextendedproperty 'MS\_Description','车号','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','pa\_start\_sta'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','pa\_arrive\_sta'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','pa\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','pa\_name'  exec sp\_addextendedproperty 'MS\_Description','票价','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','ticket\_price'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','carr\_num'  exec sp\_addextendedproperty 'MS\_Description','车座种类','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','订票日期','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','reser\_date'  exec sp\_addextendedproperty 'MS\_Description','到达时间 ','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','arri\_time'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','str\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','order\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','ticket\_out\_if'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_1\_2\_2','VIEW','order\_mes','COLUMN','change\_sta\_if' |

##### 余票信息

表6.2.4.2‑2视图surplus\_ticket\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 余票编号 | surplus\_ticket\_id | surplus\_ticket\_mes | surplus\_ticket\_id |  |  |
| 2 | 编号 | train\_id\_num | surplus\_ticket\_mes | train\_id\_num |  |  |
| 3 | 车次编号 | train\_num | surplus\_ticket\_mes | train\_num |  |  |
| 4 | 站点名 | station\_name | surplus\_ticket\_mes | station\_name |  |  |
| 5 | 车厢号 | carr\_num | surplus\_ticket\_mes | carr\_num |  |  |
| 6 | 车厢类别 | carr\_type | surplus\_ticket\_mes | carr\_type |  |  |
| 7 | 座位总数 | total\_seats | surplus\_ticket\_mes | total\_seats |  |  |
| 8 | 当前正售座位号 | cur\_seat\_num | surplus\_ticket\_mes | cur\_seat\_num |  |  |
| 9 | 余票 | sur\_tick\_num | surplus\_ticket\_mes | sur\_tick\_num |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：余票信息  create view y\_1\_1\_2\_2.surplus\_ticket\_mes(surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num)  as  select surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num  from surplus\_ticket\_mes  ;  exec sp\_addextendedproperty 'MS\_Description','余票信息','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes'  exec sp\_addextendedproperty 'MS\_Description','余票编号','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','surplus\_ticket\_id'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','carr\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','carr\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','total\_seats'  exec sp\_addextendedproperty 'MS\_Description','当前正售座位号','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','cur\_seat\_num'  exec sp\_addextendedproperty 'MS\_Description','余票','SCHEMA','y\_1\_1\_2\_2','VIEW','surplus\_ticket\_mes','COLUMN','sur\_tick\_num' |

#### 报表

表6.2.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 乘客信息 | passenger\_mes | 乘客购买车票、退票、改签 |  |
| 2 | 车次信息 | train\_num\_mes | 乘客查询途经地点 |  |
| 3 | 票价信息 | ticket\_price\_mes | 用于购买车票、改签、退票进行参考 |  |

##### 乘客信息

表6.2.4.3‑1视图passenger\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 身份证号 | pa\_id | passenger\_mes | pa\_id |  |  |
| 2 | 乘客姓名 | pa\_name | passenger\_mes | pa\_name |  |  |
| 3 | 性别 | pa\_sex | passenger\_mes | pa\_sex |  |  |
| 4 | 手机号码 | phone\_num | passenger\_mes | phone\_num |  |  |
| 5 | 登录密码 | password | passenger\_mes | password |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：乘客信息  create view y\_1\_1\_2\_2.passenger\_mes(pa\_id, pa\_name, pa\_sex, phone\_num, password)  as  select pa\_id, pa\_name, pa\_sex, phone\_num, password  from passenger\_mes  ;  exec sp\_addextendedproperty 'MS\_Description','乘客信息','SCHEMA','y\_1\_1\_2\_2','VIEW','passenger\_mes'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_1\_2\_2','VIEW','passenger\_mes','COLUMN','pa\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_1\_2\_2','VIEW','passenger\_mes','COLUMN','pa\_name'  exec sp\_addextendedproperty 'MS\_Description','性别','SCHEMA','y\_1\_1\_2\_2','VIEW','passenger\_mes','COLUMN','pa\_sex'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_1\_2\_2','VIEW','passenger\_mes','COLUMN','phone\_num'  exec sp\_addextendedproperty 'MS\_Description','登录密码','SCHEMA','y\_1\_1\_2\_2','VIEW','passenger\_mes','COLUMN','password' |

##### 车次信息

表6.2.4.3‑2视图train\_num\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_id\_num | train\_num\_mes | train\_id\_num |  |  |
| 2 | 站点名 | train\_name | train\_num\_mes | train\_name |  |  |
| 3 | 站点次序 | train\_sequ | train\_num\_mes | train\_sequ |  |  |
| 4 | 车次编号 | train\_num | train\_num\_mes | train\_num |  |  |
| 5 | 车厢数 | carr\_sum | train\_num\_mes | carr\_sum |  |  |
| 6 | 发车时间 | depart\_time | train\_num\_mes | depart\_time |  |  |
| 7 | 到达时间 | arri\_time | train\_num\_mes | arri\_time |  |  |
| 8 | 车次始发站 | depart\_stat | train\_num\_mes | depart\_stat |  |  |
| 9 | 车次终点站 | arri\_stat | train\_num\_mes | arri\_stat |  |  |
| 10 | 经过站点数 | pass\_stat\_sum | train\_num\_mes | pass\_stat\_sum |  |  |
| 11 | 票价比率 | price\_ratio | train\_num\_mes | price\_ratio |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：车次信息  create view y\_1\_1\_2\_2.train\_num\_mes(train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio)  as  select train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio  from train\_num\_mes  ;  exec sp\_addextendedproperty 'MS\_Description','车次信息','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','train\_name'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','train\_sequ'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢数','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','carr\_sum'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','depart\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','arri\_time'  exec sp\_addextendedproperty 'MS\_Description','车次始发站','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','depart\_stat'  exec sp\_addextendedproperty 'MS\_Description','车次终点站','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','arri\_stat'  exec sp\_addextendedproperty 'MS\_Description','经过站点数','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','pass\_stat\_sum'  exec sp\_addextendedproperty 'MS\_Description','票价比率','SCHEMA','y\_1\_1\_2\_2','VIEW','train\_num\_mes','COLUMN','price\_ratio' |

##### 票价信息

表6.2.4.3‑3视图ticket\_price\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 票价编号 | ticket\_id | ticket\_price\_mes | ticket\_id |  |  |
| 2 | 站点名 | stat\_name | ticket\_price\_mes | stat\_name |  |  |
| 3 | 车厢类别 | carr\_type | ticket\_price\_mes | carr\_type |  |  |
| 4 | 铺位类别 | seat\_type | ticket\_price\_mes | seat\_type |  |  |
| 5 | 站点区间基础票价 | basic\_price | ticket\_price\_mes | basic\_price |  |  |
| 6 | 票价上浮比率 | price\_ratio | ticket\_price\_mes | price\_ratio |  |  |
| 7 | 站点区间总票价 | ticket\_price | ticket\_price\_mes | ticket\_price |  |  |
| 8 | 车次号 | train\_id\_num | ticket\_price\_mes | train\_id\_num |  |  |
| 9 | 站点序号 | stat\_sequ | ticket\_price\_mes | stat\_sequ |  |  |

执行脚本（SQL Server，y\_1\_1\_2\_2）

|  |
| --- |
| -- 创建视图：票价信息  create view y\_1\_1\_2\_2.ticket\_price\_mes(ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ)  as  select ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ  from ticket\_price\_mes  ;  exec sp\_addextendedproperty 'MS\_Description','票价信息','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes'  exec sp\_addextendedproperty 'MS\_Description','票价编号','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','ticket\_id'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','stat\_name'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','carr\_type'  exec sp\_addextendedproperty 'MS\_Description','铺位类别','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','站点区间基础票价','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','basic\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','price\_ratio'  exec sp\_addextendedproperty 'MS\_Description','站点区间总票价','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','ticket\_price'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','站点序号','SCHEMA','y\_1\_1\_2\_2','VIEW','ticket\_price\_mes','COLUMN','stat\_sequ' |

### 函数

表6.2‑4函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 过程

表6.2‑5过程列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表6.2‑6触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

## 管理员业务

### 序列

表6.3‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 2 | 1 | 1 | 1 | 99 | 区域编号 |  |
| 2 | seq\_company\_no | 2 | 1 | 1 | 1 | 99 | 分公司编号 |  |
| 3 | seq\_department\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 4 | seq\_station\_no | 4 | 1 | 1 | 1 | 9999 | 火车站编号 |  |
| 5 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 6 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 7 | seq\_num | 12 | 1 | 1 | 1 | 999999999999 | 经过序号 |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_3\_2.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：分公司编号  create sequence y\_1\_1\_3\_2.seq\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：部门编号  create sequence y\_1\_1\_3\_2.seq\_department\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：火车站编号  create sequence y\_1\_1\_3\_2.seq\_station\_no start with 1 increment by 1 minvalue 1 maxvalue 9999 ;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_3\_2.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：岗位编号  create sequence y\_1\_1\_3\_2.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：经过序号  create sequence y\_1\_1\_3\_2.seq\_num start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_3\_2','SEQUENCE','seq\_area\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_3\_2','SEQUENCE','seq\_company\_no'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','SEQUENCE','seq\_department\_no'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_1\_3\_2','SEQUENCE','seq\_station\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_3\_2','SEQUENCE','seq\_carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_3\_2','SEQUENCE','seq\_post\_no'  exec sp\_addextendedproperty 'MS\_Description','经过序号','SCHEMA','y\_1\_1\_3\_2','SEQUENCE','seq\_num' |

### 表

表6.3.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | company |  |
| 3 | 部门 | department |  |
| 4 | 火车站 | station |  |
| 5 | 列车 | train |  |
| 6 | 车厢 | carriage |  |
| 7 | 员工 | administe |  |
| 8 | 岗位 | post |  |
| 9 | 拥有 | possess |  |
| 10 | 从事 | work\_on |  |
| 11 | 经过 | pass\_by |  |
| 12 | 上级 | superior |  |
| 13 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表6.3.2.1‑1 area（area\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | area\_no | char(2) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | area\_name | varchar(200) | n |  | y |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_3\_2.area  (  area\_no char(2) default ( next value for y\_1\_1\_3\_2.seq\_area\_no) not null ,  area\_name varchar(200) unique not null ,  primary key(area\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','区域','SCHEMA','y\_1\_1\_3\_2','TABLE','area'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_3\_2','TABLE','area','COLUMN','area\_no'  exec sp\_addextendedproperty 'MS\_Description','区域名称','SCHEMA','y\_1\_1\_3\_2','TABLE','area','COLUMN','area\_name' |

##### 分公司

表6.3.2.1‑2 company（company\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 分公司编号 | company\_no | char(2) | n |  |  | 来自序列seq\_company\_no |
| 2 | 分公司名称 | company\_name | varchar(200) | n |  | y |  |
| 3 | 区域编号 | area\_no | area(area\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_1\_3\_2.company  (  company\_no char(2) default ( next value for y\_1\_1\_3\_2.seq\_company\_no) not null ,  company\_name varchar(200) unique not null ,  area\_no char(2) references y\_1\_1\_3\_2.area(area\_no) not null ,  primary key(company\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','分公司','SCHEMA','y\_1\_1\_3\_2','TABLE','company'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_3\_2','TABLE','company','COLUMN','company\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_3\_2','TABLE','company','COLUMN','company\_name'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_3\_2','TABLE','company','COLUMN','area\_no' |

##### 部门

表6.3.2.1‑3 department（department\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | department\_no | char(2) | n |  |  | 来自序列seq\_department\_no |
| 2 | 部门名称 | department\_name | varchar(40) | n |  | y |  |
| 3 | 分公司编号 | company\_no | company(company\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_3\_2.department  (  department\_no char(2) default ( next value for y\_1\_1\_3\_2.seq\_department\_no) not null ,  department\_name varchar(40) unique not null ,  company\_no char(2) references y\_1\_1\_3\_2.company(company\_no) not null ,  primary key(department\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','部门','SCHEMA','y\_1\_1\_3\_2','TABLE','department'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','TABLE','department','COLUMN','department\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_3\_2','TABLE','department','COLUMN','department\_name'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_3\_2','TABLE','department','COLUMN','company\_no' |

##### 火车站

表6.3.2.1‑4 station（station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | station\_no | char(4) | n |  |  | 来自序列seq\_station\_no |
| 2 | 车站中文名 | chinese\_name | varchar(20) | n |  |  |  |
| 3 | 车站英文名 | english\_name | varchar(60) | n |  |  |  |
| 4 | 车站等级 | station\_level | char(1) | n |  |  | 301 |
| 5 | 车站次序 | station\_order | dec(4) | n |  |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | char(1) | n |  |  | 302 |
| 7 | 分公司编号 | company\_no | company(company\_no) | n |  |  |  |
| 8 | 部门编号 | department\_no | department(department\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_3\_2.station  (  station\_no char(4) default ( next value for y\_1\_1\_3\_2.seq\_station\_no) not null ,  chinese\_name varchar(20) not null ,  english\_name varchar(60) not null ,  station\_level char(1) not null ,  station\_order dec(4) not null ,  statin\_provide\_flag char(1) not null ,  company\_no char(2) references y\_1\_1\_3\_2.company(company\_no) not null ,  department\_no char(2) references y\_1\_1\_3\_2.department(department\_no) not null ,  primary key(station\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','火车站','SCHEMA','y\_1\_1\_3\_2','TABLE','station'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','车站中文名','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','chinese\_name'  exec sp\_addextendedproperty 'MS\_Description','车站英文名','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','english\_name'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','车站次序','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','statin\_provide\_flag'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','company\_no'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','TABLE','station','COLUMN','department\_no' |

##### 列车

表6.3.2.1‑5 train（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar(5) | n |  |  |  |
| 2 | 类型 | train\_type | char(1) | n |  |  | 303 |
| 3 | 运行时间 | train\_runtime | datetime | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_3\_2.train  (  train\_id varchar(5) not null ,  train\_type char(1) not null ,  train\_runtime datetime not null ,  primary key(train\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','列车','SCHEMA','y\_1\_1\_3\_2','TABLE','train'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','TABLE','train','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_1\_3\_2','TABLE','train','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','运行时间','SCHEMA','y\_1\_1\_3\_2','TABLE','train','COLUMN','train\_runtime' |

##### 车厢

表6.3.2.1‑6 carriage（carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | carriage\_no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类型 | carriage\_type | char(1) | n |  |  | 304 |
| 3 | 座位总数 | carriage\_sit\_num | dec(3) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_3\_2.carriage  (  carriage\_no char(2) default ( next value for y\_1\_1\_3\_2.seq\_carriage\_no) not null ,  carriage\_type char(1) not null ,  carriage\_sit\_num dec(3) not null ,  primary key(carriage\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车厢','SCHEMA','y\_1\_1\_3\_2','TABLE','carriage'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_3\_2','TABLE','carriage','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢类型','SCHEMA','y\_1\_1\_3\_2','TABLE','carriage','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_3\_2','TABLE','carriage','COLUMN','carriage\_sit\_num' |

##### 员工

表6.3.2.1‑7 administe（administer\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工账号 | administer\_id | char(11) | n |  |  | 手机号 |
| 2 | 密码 | administer\_pw | varchar(20) | n |  |  |  |
| 3 | 员工姓名 | administer\_name | varchar(16) | n |  |  |  |
| 4 | 身份证号 | id\_card\_num | char(18) | n |  |  |  |
| 5 | 员工类型 | employee\_type | char(1) | n |  |  | 305 |
| 6 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_1\_3\_2.administe  (  administer\_id char(11) not null ,  administer\_pw varchar(20) not null ,  administer\_name varchar(16) not null ,  id\_card\_num char(18) not null ,  employee\_type char(1) not null ,  station\_no char(4) references y\_1\_1\_3\_2.station(station\_no) not null ,  primary key(administer\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','员工','SCHEMA','y\_1\_1\_3\_2','TABLE','administe'  exec sp\_addextendedproperty 'MS\_Description','员工账号','SCHEMA','y\_1\_1\_3\_2','TABLE','administe','COLUMN','administer\_id'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_1\_3\_2','TABLE','administe','COLUMN','administer\_pw'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_1\_3\_2','TABLE','administe','COLUMN','administer\_name'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_1\_3\_2','TABLE','administe','COLUMN','id\_card\_num'  exec sp\_addextendedproperty 'MS\_Description','员工类型','SCHEMA','y\_1\_1\_3\_2','TABLE','administe','COLUMN','employee\_type'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_1\_3\_2','TABLE','administe','COLUMN','station\_no' |

##### 岗位

表6.3.2.1‑8 post（post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 岗位编号 | post\_no | char(2) | n |  |  | 来自序列seq\_post\_no |
| 2 | 岗位名称 | post\_name | varchar(40) | n |  | y |  |
| 3 | 职责 | duty | varchar(400) | n |  |  |  |
| 4 | 部门编号 | department\_no | Department(department\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_1\_3\_2.post  (  post\_no char(2) default ( next value for y\_1\_1\_3\_2.seq\_post\_no) not null ,  post\_name varchar(40) unique not null ,  duty varchar(400) not null ,  department\_no char(2) references y\_1\_1\_3\_2.department(department\_no) not null ,  primary key(post\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','岗位','SCHEMA','y\_1\_1\_3\_2','TABLE','post'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_3\_2','TABLE','post','COLUMN','post\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位名称','SCHEMA','y\_1\_1\_3\_2','TABLE','post','COLUMN','post\_name'  exec sp\_addextendedproperty 'MS\_Description','职责','SCHEMA','y\_1\_1\_3\_2','TABLE','post','COLUMN','duty'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','TABLE','post','COLUMN','department\_no' |

##### 拥有

表6.3.2.1‑9 possess（train\_id, carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | train(train\_id) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 3 | 此类车厢分布号 | carriage\_range | varchar(44) | n |  |  | x，y，z，w，…… |
| 4 | 车厢数量 | carriage\_amount | dec(2) | n |  |  |  |
| 5 | 发车时间 | starttime | datetime |  |  |  | x年y月z日m时n分 |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：拥有  create table y\_1\_1\_3\_2.possess  (  train\_id varchar(5) references y\_1\_1\_3\_2.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_1\_3\_2.carriage(carriage\_no) not null ,  carriage\_range varchar(44) not null ,  carriage\_amount dec(2) not null ,  starttime datetime ,  primary key(train\_id, carriage\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','拥有','SCHEMA','y\_1\_1\_3\_2','TABLE','possess'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','TABLE','possess','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_1\_3\_2','TABLE','possess','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','此类车厢分布号','SCHEMA','y\_1\_1\_3\_2','TABLE','possess','COLUMN','carriage\_range'  exec sp\_addextendedproperty 'MS\_Description','车厢数量','SCHEMA','y\_1\_1\_3\_2','TABLE','possess','COLUMN','carriage\_amount'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_3\_2','TABLE','possess','COLUMN','starttime' |

##### 从事

表6.3.2.1‑10 work\_on（administer\_id, post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工账号 | administer\_id | administe(administer\_id) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(post\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_1\_3\_2.work\_on  (  administer\_id char(11) references y\_1\_1\_3\_2.administe(administer\_id) not null ,  post\_no char(2) references y\_1\_1\_3\_2.post(post\_no) not null ,  primary key(administer\_id, post\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','从事','SCHEMA','y\_1\_1\_3\_2','TABLE','work\_on'  exec sp\_addextendedproperty 'MS\_Description','员工账号','SCHEMA','y\_1\_1\_3\_2','TABLE','work\_on','COLUMN','administer\_id'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_3\_2','TABLE','work\_on','COLUMN','post\_no' |

##### 经过

表6.3.2.1‑11 pass\_by（num）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 序号 | num | char(12) | n |  |  | 来自序列seq\_num |
| 2 | 车次号 | train\_id | Train(train\_id) | n |  |  |  |
| 3 | 火车站编号 | station\_no | Station(station\_no) | n |  |  |  |
| 4 | 停车时间 | stoptime | datetime |  |  |  |  |
| 5 | 发车时间 | starttime | datetime |  | getdate() |  |  |
| 6 | 里程数 | mileage | dec(7,2) | n |  |  | 量纲：公里 |
| 7 | 区间基础票价 | base\_fare | dec(5,1) | n |  |  |  |
| 8 | 票价上浮比率 | fare\_rate | char(60) | n |  |  |  |
| 9 | 站点次序 | station\_order | dec(2) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_3\_2.pass\_by  (  num char(12) default ( next value for y\_1\_1\_3\_2.seq\_num) not null ,  train\_id varchar(5) references y\_1\_1\_3\_2.train(train\_id) not null ,  station\_no char(4) references y\_1\_1\_3\_2.station(station\_no) not null ,  stoptime datetime ,  starttime datetime default (getdate()) ,  mileage dec(7,2) not null ,  base\_fare dec(5,1) not null ,  fare\_rate char(60) not null ,  station\_order dec(2) not null ,  primary key(num)  )  ;  exec sp\_addextendedproperty 'MS\_Description','经过','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by'  exec sp\_addextendedproperty 'MS\_Description','序号','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','num'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','停车时间','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','stoptime'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','starttime'  exec sp\_addextendedproperty 'MS\_Description','里程数','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','mileage'  exec sp\_addextendedproperty 'MS\_Description','区间基础票价','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','base\_fare'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','fare\_rate'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_1\_3\_2','TABLE','pass\_by','COLUMN','station\_order' |

##### 上级

表6.3.2.1‑12 superior（department\_no,supper-department\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | department\_no | department(department\_no) | n |  |  |  |
| 2 | 上级部门编号 | supper\_department\_no | department(department\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：上级  create table y\_1\_1\_3\_2.superior  (  department\_no char(2) references y\_1\_1\_3\_2.department(department\_no) not null ,  supper\_department\_no char(2) references y\_1\_1\_3\_2.department(department\_no) not null ,  primary key(department\_no,supper-department\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','上级','SCHEMA','y\_1\_1\_3\_2','TABLE','superior'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','TABLE','superior','COLUMN','department\_no'  exec sp\_addextendedproperty 'MS\_Description','上级部门编号','SCHEMA','y\_1\_1\_3\_2','TABLE','superior','COLUMN','supper\_department\_no' |

##### 字典

表6.3.2.1‑13 user\_dict（ccode,category）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | category | char(3) | n |  |  | 第1位为3 |
| 2 | 编号 | ccode | varchar(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar(200) |  |  |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_3\_2.user\_dict  (  category char(3) not null ,  ccode varchar(6) not null ,  ctext varchar(200) ,  primary key(ccode,category)  )  ;  exec sp\_addextendedproperty 'MS\_Description','字典','SCHEMA','y\_1\_1\_3\_2','TABLE','user\_dict'  exec sp\_addextendedproperty 'MS\_Description','大类编号','SCHEMA','y\_1\_1\_3\_2','TABLE','user\_dict','COLUMN','category'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_3\_2','TABLE','user\_dict','COLUMN','ccode'  exec sp\_addextendedproperty 'MS\_Description','内容','SCHEMA','y\_1\_1\_3\_2','TABLE','user\_dict','COLUMN','ctext' |

#### 添加检查约束

表6.3.2‑2语句

|  |
| --- |
| alter table carriage add check (carriage\_sit\_num >=1);  alter table possess add check(carriage\_amount>=1);  alter table pass\_by add check(starttime> stoptime);  alter table pass\_by add check(base\_fare>0); |

### 同义词

表6.3‑3同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | dep | department | 部门别称 |  |
| 2 | com | company | 分公司别称 |  |
| 3 | adm | administe | 员工别称 |  |
| 4 | sup | superior | 上级别称 |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| --创建同义词：部门别称  create synonym y\_1\_1\_3\_2.dep for y\_1\_1\_3\_2.department;  --创建同义词：分公司别称  create synonym y\_1\_1\_3\_2.com for y\_1\_1\_3\_2.company;  --创建同义词：员工别称  create synonym y\_1\_1\_3\_2.adm for y\_1\_1\_3\_2.administe;  --创建同义词：上级别称  create synonym y\_1\_1\_3\_2.sup for y\_1\_1\_3\_2.superior;  exec sp\_addextendedproperty 'MS\_Description','部门别称','SCHEMA','y\_1\_1\_3\_2','SYNONYM','dep'  exec sp\_addextendedproperty 'MS\_Description','分公司别称','SCHEMA','y\_1\_1\_3\_2','SYNONYM','com'  exec sp\_addextendedproperty 'MS\_Description','员工别称','SCHEMA','y\_1\_1\_3\_2','SYNONYM','adm'  exec sp\_addextendedproperty 'MS\_Description','上级别称','SCHEMA','y\_1\_1\_3\_2','SYNONYM','sup' |

### 视图

#### 参照信息

表6.3.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 部门信息 | v\_department\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 3 | 火车站信息 | v\_station\_mes | 显示带分公司名称、部门名称、车站等级名称、供给站标志名称的火车站 | 将分公司名称、部门名称、车站等级名称、供给站标志名称加进来 |
| 4 | 列车信息 | v\_train\_mes | 显示带列车类型名称的列车 | 将列车类型名称加进来 |
| 5 | 车厢信息 | v\_carriage\_mes | 显示带车厢类型名称的车厢 | 将车厢类型名称加进来 |
| 6 | 员工信息 | v\_administer\_mes | 显示带员工类型名称以及火车站名称的员工 | 将员工类型名称、火车站名称加进来 |
| 7 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 8 | 拥有信息 | v\_possess\_mes | 显示带列车类型、车厢类型的拥有 | 将列车类型、车厢类型加进来 |
| 9 | 从事信息 | v\_work\_on | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 10 | 经过信息 | v\_pass\_by\_mes | 显示带站点名的经过 | 将站点名加进来 |
| 11 | 上级信息 | v\_superior\_mes | 显示带部门名称的上级 | 将部门名称加进来 |

##### 分公司信息

表6.3.4.1‑1视图v\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 分公司编号 | company\_no | company | company\_no |  |  |
| 2 | 分公司名称 | company\_name | company | company\_name |  |  |
| 3 | 区域编号 | area\_no | company | area\_no |  |  |
| 4 | 区域名称 | area\_name | area | area\_name | company.area\_no= area. area\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：分公司信息  create view y\_1\_1\_3\_2.v\_company\_mes(company\_no, company\_name, area\_no, area\_name)  as  select a.company\_no, a.company\_name, a.area\_no, b.area\_name  from company a, area b  where a.area\_no= b. area\_no  ;  exec sp\_addextendedproperty 'MS\_Description','分公司信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_company\_mes'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_company\_mes','COLUMN','company\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_company\_mes','COLUMN','company\_name'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_company\_mes','COLUMN','area\_no'  exec sp\_addextendedproperty 'MS\_Description','区域名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_company\_mes','COLUMN','area\_name' |

##### 部门信息

表6.3.4.1‑2视图v\_department\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | department\_no | dep | department\_no |  |  |
| 2 | 部门名称 | department\_name | dep | department\_name |  |  |
| 3 | 分公司编号 | company\_no | dep | company\_no |  |  |
| 4 | 分公司名称 | company\_name | com | company\_name | com.company\_no=dep.company\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：部门信息  create view y\_1\_1\_3\_2.v\_department\_mes(department\_no, department\_name, company\_no, company\_name)  as  select a.department\_no, a.department\_name, a.company\_no, b.company\_name  from dep a, com b  where b.company\_no=a.company\_no  ;  exec sp\_addextendedproperty 'MS\_Description','部门信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_department\_mes'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_department\_mes','COLUMN','department\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_department\_mes','COLUMN','department\_name'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_department\_mes','COLUMN','company\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_department\_mes','COLUMN','company\_name' |

##### 火车站信息

表6.3.4.1‑3视图v\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | station | station\_no |  |  |
| 2 | 车站中文名 | chinese\_name | station | chinese\_name |  |  |
| 3 | 车站英文名 | english\_name | station | english\_name |  |  |
| 4 | 车站等级 | station\_level | station | station\_level |  |  |
| 5 | 车站等级名称 | station\_level\_name | user\_dict s1 | ctext | s1.category='301' and  s1.ccode=station. station\_level |  |
| 6 | 车站次序 | station\_order | station | station\_order |  |  |
| 7 | 供给站标志 | statin\_provide\_flag | station | statin\_provide\_flag |  |  |
| 8 | 供给站标志名称 | statin\_provide\_flag\_name | user\_dict s2 | ctext | s2.category='302' and s2.ccode=station.statin\_provide\_flag |  |
| 9 | 分公司编号 | company\_no | station | company\_no |  |  |
| 10 | 分公司名称 | company\_name | com | company\_name | com.company\_no=station. company\_no |  |
| 11 | 部门编号 | department\_no | station | department\_no |  |  |
| 12 | 部门名称 | department\_name | dep | department\_name | dep.department\_no=station.department\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：火车站信息  create view y\_1\_1\_3\_2.v\_station\_mes(station\_no, chinese\_name, english\_name, station\_level, station\_level\_name, station\_order, statin\_provide\_flag, statin\_provide\_flag\_name, company\_no, company\_name, department\_no, department\_name)  as  select a.station\_no, a.chinese\_name, a.english\_name, a.station\_level, s1.ctext, a.station\_order, a.statin\_provide\_flag, s2.ctext, a.company\_no, d.company\_name, a.department\_no, e.department\_name  from station a, user\_dict s1, user\_dict s2, com d, dep e  where s1.category='301'and s1.ccode=a. station\_level and s2.category='302'and s2.ccode=a.statin\_provide\_flag and d.company\_no=a. company\_no and e.department\_no=a.department\_no  ;  exec sp\_addextendedproperty 'MS\_Description','火车站信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','车站中文名','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','chinese\_name'  exec sp\_addextendedproperty 'MS\_Description','车站英文名','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','english\_name'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','车站等级名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','station\_level\_name'  exec sp\_addextendedproperty 'MS\_Description','车站次序','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','statin\_provide\_flag'  exec sp\_addextendedproperty 'MS\_Description','供给站标志名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','statin\_provide\_flag\_name'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','company\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','company\_name'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','department\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_station\_mes','COLUMN','department\_name' |

##### 列车信息

表6.3.4.1‑4视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train | train\_id |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 运行时间 | train\_runtime | train | train\_runtime |  |  |
| 4 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.category='303' and  user\_dict.ccode=train.train\_type |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：列车信息  create view y\_1\_1\_3\_2.v\_train\_mes(train\_id, train\_type, train\_runtime, train\_type\_name)  as  select a.train\_id, a.train\_type, a.train\_runtime, b.ctext  from train a, user\_dict b  where b.category='303'and b.ccode=a.train\_type  ;  exec sp\_addextendedproperty 'MS\_Description','列车信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_train\_mes'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_train\_mes','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_train\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','运行时间','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_train\_mes','COLUMN','train\_runtime'  exec sp\_addextendedproperty 'MS\_Description','类型名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_train\_mes','COLUMN','train\_type\_name' |

##### 车厢信息

表6.3.4.1‑5视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | carriage | carriage\_no |  |  |
| 2 | 车厢类型 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 座位总数 | carriage\_sit\_num | carriage | carriage\_sit\_num |  |  |
| 4 | 车厢类型名称 | carriage\_type\_name | user\_dict | ctext | user\_dict.category='304' and  user\_dict.ccode=carriage.carriage\_type |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_1\_3\_2.v\_carriage\_mes(carriage\_no, carriage\_type, carriage\_sit\_num, carriage\_type\_name)  as  select a.carriage\_no, a.carriage\_type, a.carriage\_sit\_num, b.ctext  from carriage a, user\_dict b  where b.category='304' and b.ccode=a.carriage\_type  ;  exec sp\_addextendedproperty 'MS\_Description','车厢信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_carriage\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢类型','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_sit\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢类型名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type\_name' |

##### 员工信息

表6.3.4.1‑6视图v\_administer\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工账号 | administer\_id | adm | administer\_id |  |  |
| 2 | 密码 | administer\_pw | adm | administer\_pw |  |  |
| 3 | 员工姓名 | administer\_name | adm | administer\_name |  |  |
| 4 | 身份证号 | id\_card\_num | adm | id\_card\_num |  |  |
| 5 | 员工类型 | employee\_type | adm | employee\_type |  |  |
| 6 | 火车站编号 | station\_no | adm | station\_no |  |  |
| 7 | 员工类型名称 | employee\_type\_name | user\_dict | ctext | user\_dict.category='305' and  user\_dict.ccode=adm.employee\_type |  |
| 8 | 火车站中文名称 | chinese\_name | station | chinese\_name | adm.station\_no=station.station\_no |  |
| 9 | 火车站英文名称 | english\_name | station | english\_name | adm.station\_no=station.station\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：员工信息  create view y\_1\_1\_3\_2.v\_administer\_mes(administer\_id, administer\_pw, administer\_name, id\_card\_num, employee\_type, station\_no, employee\_type\_name, chinese\_name, english\_name)  as  select a.administer\_id, a.administer\_pw, a.administer\_name, a.id\_card\_num, a.employee\_type, a.station\_no, b.ctext, c.chinese\_name, c.english\_name  from adm a, user\_dict b, station c  where b.category='305' and b.ccode=a.employee\_type and a.station\_no=c.station\_no and a.station\_no=c.station\_no  ;  exec sp\_addextendedproperty 'MS\_Description','员工信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes'  exec sp\_addextendedproperty 'MS\_Description','员工账号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','administer\_id'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','administer\_pw'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','administer\_name'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','id\_card\_num'  exec sp\_addextendedproperty 'MS\_Description','员工类型','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','employee\_type'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','员工类型名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','employee\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','火车站中文名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','chinese\_name'  exec sp\_addextendedproperty 'MS\_Description','火车站英文名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_administer\_mes','COLUMN','english\_name' |

##### 岗位信息

表6.3.4.1‑7视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 岗位编号 | post\_no | post | post\_no |  |  |
| 2 | 岗位名称 | post\_name | post | post\_name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门编号 | department\_no | post | department\_no |  |  |
| 5 | 部门名称 | department\_name | dep | department\_name | post.department\_no=dep.departmnt\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：岗位信息  create view y\_1\_1\_3\_2.v\_post\_mes(post\_no, post\_name, duty, department\_no, department\_name)  as  select a.post\_no, a.post\_name, a.duty, a.department\_no, b.department\_name  from post a, dep b  where a.department\_no=b.departmnt\_no  ;  exec sp\_addextendedproperty 'MS\_Description','岗位信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_post\_mes'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_post\_mes','COLUMN','post\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_post\_mes','COLUMN','post\_name'  exec sp\_addextendedproperty 'MS\_Description','职责','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_post\_mes','COLUMN','duty'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_post\_mes','COLUMN','department\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_post\_mes','COLUMN','department\_name' |

##### 从事信息

表6.3.4.1‑8视图v\_work\_on的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工账号 | administer\_id | work\_on | administer\_id |  |  |
| 2 | 岗位编号 | post\_no | work\_on | post\_no |  |  |
| 3 | 员工姓名 | administer\_name | adm | administer\_name | work\_on.administer\_id=adm.administer\_id |  |
| 4 | 岗位名称 | post\_name | post | post\_name | work\_on.post\_no=post. post\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：从事信息  create view y\_1\_1\_3\_2.v\_work\_on(administer\_id, post\_no, administer\_name, post\_name)  as  select a.administer\_id, a.post\_no, b.administer\_name, c.post\_name  from work\_on a, adm b, post c  where a.administer\_id=b.administer\_id and a.post\_no=c. post\_no  ;  exec sp\_addextendedproperty 'MS\_Description','从事信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_work\_on'  exec sp\_addextendedproperty 'MS\_Description','员工账号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_work\_on','COLUMN','administer\_id'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_work\_on','COLUMN','post\_no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_work\_on','COLUMN','administer\_name'  exec sp\_addextendedproperty 'MS\_Description','岗位名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_work\_on','COLUMN','post\_name' |

##### 经过信息

表6.3.4.1‑9视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 序号 | num | pass\_by | num |  |  |
| 2 | 车次号 | train\_id | pass\_by | train\_id |  |  |
| 3 | 火车站编号 | station\_no | pass\_by | station\_no |  |  |
| 4 | 停车时间 | stoptime | pass\_by | stoptime |  |  |
| 5 | 发车时间 | starttime | pass\_by | starttime |  |  |
| 6 | 里程数 | mileage | pass\_by | mileage |  |  |
| 7 | 区间基础票价 | base\_fare | pass\_by | base\_fare |  |  |
| 8 | 票价上浮比率 | fare\_rate | pass\_by | fare\_rate |  |  |
| 9 | 站点次序 | station\_order | pass\_by | station\_order |  |  |
| 10 | 火车站中文名 | chinese\_name | station | chinese\_name | pass\_by.station\_no=station. station\_no |  |
| 11 | 火车站英文名 | english\_name | station | english\_name | pass\_by.station\_no=station.station\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：经过信息  create view y\_1\_1\_3\_2.v\_pass\_by\_mes(num, train\_id, station\_no, stoptime, starttime, mileage, base\_fare, fare\_rate, station\_order, chinese\_name, english\_name)  as  select a.num, a.train\_id, a.station\_no, a.stoptime, a.starttime, a.mileage, a.base\_fare, a.fare\_rate, a.station\_order, b.chinese\_name, b.english\_name  from pass\_by a, station b  where a.station\_no=b. station\_no and a.station\_no=b.station\_no  ;  exec sp\_addextendedproperty 'MS\_Description','经过信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes'  exec sp\_addextendedproperty 'MS\_Description','序号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','num'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','停车时间','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','stoptime'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','starttime'  exec sp\_addextendedproperty 'MS\_Description','里程数','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','mileage'  exec sp\_addextendedproperty 'MS\_Description','区间基础票价','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','base\_fare'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','fare\_rate'  exec sp\_addextendedproperty 'MS\_Description','站点次序','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','火车站中文名','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','chinese\_name'  exec sp\_addextendedproperty 'MS\_Description','火车站英文名','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_pass\_by\_mes','COLUMN','english\_name' |

##### 上级信息

表6.3.4.1‑10视图v\_superior\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | department\_no | sup | department\_no |  |  |
| 2 | 上级部门编号 | supper\_department\_no | sup | supper\_department\_no |  |  |
| 3 | 部门名称 | department\_name | dep | department\_name | sup.department\_no=dep. department\_no |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：上级信息  create view y\_1\_1\_3\_2.v\_superior\_mes(department\_no, supper\_department\_no, department\_name)  as  select a.department\_no, a.supper\_department\_no, b.department\_name  from sup a, dep b  where a.department\_no=b. department\_no  ;  exec sp\_addextendedproperty 'MS\_Description','上级信息','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_superior\_mes'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_superior\_mes','COLUMN','department\_no'  exec sp\_addextendedproperty 'MS\_Description','上级部门编号','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_superior\_mes','COLUMN','supper\_department\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_1\_3\_2','VIEW','v\_superior\_mes','COLUMN','department\_name' |

#### 单据

表6.3.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 车次信息 | train\_info | 管理员查询、管理 |  |
| 2 | 站点信息 | train\_other\_info | 管理员查询、管理 |  |
| 3 | 车站信息 | station\_info | 管理员查询、管理 |  |
| 4 | 车厢信息 | compartment\_info | 管理员查询、管理 |  |

##### 车次信息

表6.3.4.2‑1视图train\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train\_info | train\_id |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | train\_info | train\_passstatin\_num |  |  |
| 3 | 运行时间 | train\_runtime | train\_info | train\_runtime |  |  |
| 4 | 全程里程数 | train\_runmile | train\_info | train\_runmile |  |  |
| 5 | 票价上浮比率 | fare\_rate | train\_info | fare\_rate |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：车次信息  create view y\_1\_1\_3\_2.train\_info(train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate)  as  select train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate  from train\_info  ;  exec sp\_addextendedproperty 'MS\_Description','车次信息','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_info'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_info','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','经过站点数','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_info','COLUMN','train\_passstatin\_num'  exec sp\_addextendedproperty 'MS\_Description','运行时间','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_info','COLUMN','train\_runtime'  exec sp\_addextendedproperty 'MS\_Description','全程里程数','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_info','COLUMN','train\_runmile'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_info','COLUMN','fare\_rate' |

##### 站点信息

表6.3.4.2‑2视图train\_other\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_other\_info\_id | train\_other\_info | train\_other\_info\_id |  |  |
| 2 | 站次 | train\_station\_order | train\_other\_info | train\_station\_order |  |  |
| 3 | 车次号 | train\_num | train\_other\_info | train\_num |  |  |
| 4 | 站点名 | station\_name | train\_other\_info | station\_name |  |  |
| 5 | 停车时间 | train\_stoptime | train\_other\_info | train\_stoptime |  |  |
| 6 | 发车时间 | train\_starttime | train\_other\_info | train\_starttime |  |  |
| 7 | 里程数 | train\_station\_runmile | train\_other\_info | train\_station\_runmile |  |  |
| 8 | 前序站点 | station\_p\_id | train\_other\_info | station\_p\_id |  |  |
| 9 | 后继站点 | station\_n\_id | train\_other\_info | station\_n\_id |  |  |
| 10 | 站点区间基础票价 | station\_base\_fare | train\_other\_info | station\_base\_fare |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：站点信息  create view y\_1\_1\_3\_2.train\_other\_info(train\_other\_info\_id, train\_station\_order, train\_num, station\_name, train\_stoptime, train\_starttime, train\_station\_runmile, station\_p\_id, station\_n\_id, station\_base\_fare)  as  select train\_other\_info\_id, train\_station\_order, train\_num, station\_name, train\_stoptime, train\_starttime, train\_station\_runmile, station\_p\_id, station\_n\_id, station\_base\_fare  from train\_other\_info  ;  exec sp\_addextendedproperty 'MS\_Description','站点信息','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','train\_other\_info\_id'  exec sp\_addextendedproperty 'MS\_Description','站次','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','train\_station\_order'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','停车时间','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','train\_stoptime'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','train\_starttime'  exec sp\_addextendedproperty 'MS\_Description','里程数','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','train\_station\_runmile'  exec sp\_addextendedproperty 'MS\_Description','前序站点','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','station\_p\_id'  exec sp\_addextendedproperty 'MS\_Description','后继站点','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','station\_n\_id'  exec sp\_addextendedproperty 'MS\_Description','站点区间基础票价','SCHEMA','y\_1\_1\_3\_2','VIEW','train\_other\_info','COLUMN','station\_base\_fare' |

##### 车站信息

表6.3.4.2‑3视图station\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车站名 | station\_name | station\_info | station\_name |  |  |
| 2 | 所属铁路局 | station\_railwayadmin | station\_info | station\_railwayadmin |  |  |
| 3 | 所属车务段 | station\_railwaymaster | station\_info | station\_railwaymaster |  |  |
| 4 | 车站等级 | station\_level | station\_info | station\_level |  |  |
| 5 | 车站次序 | station\_order | station\_info | station\_order |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | station\_info | statin\_provide\_flag |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：车站信息  create view y\_1\_1\_3\_2.station\_info(station\_name, station\_railwayadmin, station\_railwaymaster, station\_level, station\_order, statin\_provide\_flag)  as  select station\_name, station\_railwayadmin, station\_railwaymaster, station\_level, station\_order, statin\_provide\_flag  from station\_info  ;  exec sp\_addextendedproperty 'MS\_Description','车站信息','SCHEMA','y\_1\_1\_3\_2','VIEW','station\_info'  exec sp\_addextendedproperty 'MS\_Description','车站名','SCHEMA','y\_1\_1\_3\_2','VIEW','station\_info','COLUMN','station\_name'  exec sp\_addextendedproperty 'MS\_Description','所属铁路局','SCHEMA','y\_1\_1\_3\_2','VIEW','station\_info','COLUMN','station\_railwayadmin'  exec sp\_addextendedproperty 'MS\_Description','所属车务段','SCHEMA','y\_1\_1\_3\_2','VIEW','station\_info','COLUMN','station\_railwaymaster'  exec sp\_addextendedproperty 'MS\_Description','车站等级','SCHEMA','y\_1\_1\_3\_2','VIEW','station\_info','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','车站次序','SCHEMA','y\_1\_1\_3\_2','VIEW','station\_info','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_1\_3\_2','VIEW','station\_info','COLUMN','statin\_provide\_flag' |

##### 车厢信息

表6.3.4.2‑4视图compartment\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | compart\_info\_id | compart\_info | compart\_info\_id |  |  |
| 2 | 车次号 | train\_num | compart\_info | train\_num |  |  |
| 3 | 车厢号 | compart\_num | compart\_info | compart\_num |  |  |
| 4 | 车厢类型 | compart\_type | compart\_info | compart\_type |  |  |
| 5 | 座位总数 | compart\_siteamount | compart\_info | compart\_siteamount |  |  |

执行脚本（SQL Server，y\_1\_1\_3\_2）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_1\_3\_2.compartment\_info(compart\_info\_id, train\_num, compart\_num, compart\_type, compart\_siteamount)  as  select compart\_info\_id, train\_num, compart\_num, compart\_type, compart\_siteamount  from compart\_info  ;  exec sp\_addextendedproperty 'MS\_Description','车厢信息','SCHEMA','y\_1\_1\_3\_2','VIEW','compartment\_info'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_1\_3\_2','VIEW','compartment\_info','COLUMN','compart\_info\_id'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_1\_3\_2','VIEW','compartment\_info','COLUMN','train\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_1\_3\_2','VIEW','compartment\_info','COLUMN','compart\_num'  exec sp\_addextendedproperty 'MS\_Description','车厢类型','SCHEMA','y\_1\_1\_3\_2','VIEW','compartment\_info','COLUMN','compart\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_1\_3\_2','VIEW','compartment\_info','COLUMN','compart\_siteamount' |

#### 报表

表6.3.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 管理员信息 | administer\_info | 对车站进行管理 |  |

##### 管理员信息

表6.3.4.3‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（SQL Server，用户名）

|  |
| --- |
|  |

### 函数

表6.3‑4函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 过程

表6.3‑5过程列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表6.3‑6触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

# 局部数据实现3

## 售票员业务

### 序列

表7.1‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 6 | 1 | 1 | 1 | 999999 | 区域编号 |  |
| 2 | seq\_rail\_company\_no | 8 | 1 | 1 | 1 | 99999999 | 铁路分公司编号 |  |
| 3 | seq\_depart\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 4 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 5 | seq\_employee\_no | 12 | 1 | 1 | 1 | 999999999999 | 员工编号 |  |
| 6 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 7 | seq\_pass\_by\_no | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 8 | seq\_ticket\_business\_no | 12 | 1 | 1 | 1 | 999999999999 | 车票业务编号 |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_1\_3.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 999999 ;  --创建序列，用于：铁路分公司编号  create sequence y\_1\_1\_1\_3.seq\_rail\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：部门编号  create sequence y\_1\_1\_1\_3.seq\_depart\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：岗位编号  create sequence y\_1\_1\_1\_3.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：员工编号  create sequence y\_1\_1\_1\_3.seq\_employee\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_1\_3.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：经过编号  create sequence y\_1\_1\_1\_3.seq\_pass\_by\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车票业务编号  create sequence y\_1\_1\_1\_3.seq\_ticket\_business\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  comment on sequence y\_1\_1\_1\_3.seq\_area\_no is '区域编号'  comment on sequence y\_1\_1\_1\_3.seq\_rail\_company\_no is '铁路分公司编号'  comment on sequence y\_1\_1\_1\_3.seq\_depart\_no is '部门编号'  comment on sequence y\_1\_1\_1\_3.seq\_post\_no is '岗位编号'  comment on sequence y\_1\_1\_1\_3.seq\_employee\_no is '员工编号'  comment on sequence y\_1\_1\_1\_3.seq\_carriage\_no is '车厢编号'  comment on sequence y\_1\_1\_1\_3.seq\_pass\_by\_no is '经过编号'  comment on sequence y\_1\_1\_1\_3.seq\_ticket\_business\_no is '车票业务编号' |

### 表

表7.1.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 铁路分公司 | rail\_company |  |
| 3 | 火车站 | rail\_station |  |
| 4 | 部门 | depart |  |
| 5 | 岗位 | post |  |
| 6 | 员工 | employee |  |
| 7 | 列车 | train |  |
| 8 | 车厢 | carriage |  |
| 9 | 乘客 | passenger |  |
| 10 | 从事 | deal\_with |  |
| 11 | 包含 | include |  |
| 12 | 经过 | pass\_by |  |
| 13 | 车票业务 | ticket\_business |  |
| 14 | 字典 | user\_dict |  |

#### 创建表

##### 区域

表7.1.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | no | char(6) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | name | varchar(100) | n |  | y |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_1\_3.area  (  no char(6) default nextval('seq\_area\_no') not null ,  name varchar(100) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.area is '区域';  comment on column y\_1\_1\_1\_3.area.no is '区域编号';  comment on column y\_1\_1\_1\_3.area.name is '区域名称'; |

##### 铁路分公司

表7.1.2.1‑2 rail\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 铁路分公司编号 | no | char(8) | n |  |  | 来自序列seq\_rail\_company\_no |
| 2 | 铁路分公司名称 | name | varchar(100) | n |  | y |  |
| 3 | 地址 | address | varchar(100) | n |  | y |  |
| 4 | 联系电话 | phone | varchar(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：铁路分公司  create table y\_1\_1\_1\_3.rail\_company  (  no char(8) default nextval('seq\_rail\_company\_no') not null ,  name varchar(100) unique not null ,  address varchar(100) unique not null ,  phone varchar(20) not null ,  area\_no char(6) references y\_1\_1\_1\_3.area(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.rail\_company is '铁路分公司';  comment on column y\_1\_1\_1\_3.rail\_company.no is '铁路分公司编号';  comment on column y\_1\_1\_1\_3.rail\_company.name is '铁路分公司名称';  comment on column y\_1\_1\_1\_3.rail\_company.address is '地址';  comment on column y\_1\_1\_1\_3.rail\_company.phone is '联系电话';  comment on column y\_1\_1\_1\_3.rail\_company.area\_no is '区域编号'; |

##### 火车站

表7.1.2.1‑3 rail\_station（name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 站点名 | name | varchar(71) | n |  |  |  |
| 2 | 车站等级 | station\_level | char(1) | n |  |  | 101 |
| 3 | 供给站标志 | station\_provide\_flag | char(1) | n |  |  | 102 |
| 4 | 铁路分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_1\_3.rail\_station  (  name varchar(71) not null ,  station\_level char(1) not null ,  station\_provide\_flag char(1) not null ,  comp\_no char(8) references y\_1\_1\_1\_3.rail\_company(no) not null ,  primary key(name)  )  ;  comment on table y\_1\_1\_1\_3.rail\_station is '火车站';  comment on column y\_1\_1\_1\_3.rail\_station.name is '站点名';  comment on column y\_1\_1\_1\_3.rail\_station.station\_level is '车站等级';  comment on column y\_1\_1\_1\_3.rail\_station.station\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_1\_3.rail\_station.comp\_no is '铁路分公司编号'; |

##### 部门

表7.1.2.1‑4 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | no | char(2) | n |  |  | 来自序列seq\_depart\_no |
| 2 | 部门名称 | name | varchar(20) | n |  | y |  |
| 3 | 简介 | introduce | varchar(500) |  |  |  |  |
| 4 | 火车站名 | station\_name | rail\_station(name) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_1\_3.depart  (  no char(2) default nextval('seq\_depart\_no') not null ,  name varchar(20) unique not null ,  introduce varchar(500) ,  station\_name varchar(71) references y\_1\_1\_1\_3.rail\_station(name) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.depart is '部门';  comment on column y\_1\_1\_1\_3.depart.no is '部门编号';  comment on column y\_1\_1\_1\_3.depart.name is '部门名称';  comment on column y\_1\_1\_1\_3.depart.introduce is '简介';  comment on column y\_1\_1\_1\_3.depart.station\_name is '火车站名'; |

##### 岗位

表7.1.2.1‑5 post（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 岗位编号 | no | char(2) | n |  |  | 来自序列seq\_post\_no |
| 2 | 岗位名称 | name | varchar(20) | n |  | y |  |
| 3 | 职责 | duty | varchar(200) | n |  |  |  |
| 4 | 部门号 | dept\_no | depart(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_1\_1\_3.post  (  no char(2) default nextval('seq\_post\_no') not null ,  name varchar(20) unique not null ,  duty varchar(200) not null ,  dept\_no char(2) references y\_1\_1\_1\_3.depart(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.post is '岗位';  comment on column y\_1\_1\_1\_3.post.no is '岗位编号';  comment on column y\_1\_1\_1\_3.post.name is '岗位名称';  comment on column y\_1\_1\_1\_3.post.duty is '职责';  comment on column y\_1\_1\_1\_3.post.dept\_no is '部门号'; |

##### 员工

表7.1.2.1‑6 employee（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | no | dec(12) | n |  |  | 来自序列seq\_employee\_no |
| 2 | 员工姓名 | name | varchar(15) | n |  | y |  |
| 3 | 性别 | sex | char(1) | n |  |  | 103 |
| 4 | 手机号码 | phone | char(11) | n |  |  |  |
| 5 | 密码 | password | varchar(20) |  |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_1\_1\_3.employee  (  no dec(12) default nextval('seq\_employee\_no') not null ,  name varchar(15) unique not null ,  sex char(1) not null ,  phone char(11) not null ,  password varchar(20) ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.employee is '员工';  comment on column y\_1\_1\_1\_3.employee.no is '员工编号';  comment on column y\_1\_1\_1\_3.employee.name is '员工姓名';  comment on column y\_1\_1\_1\_3.employee.sex is '性别';  comment on column y\_1\_1\_1\_3.employee.phone is '手机号码';  comment on column y\_1\_1\_1\_3.employee.password is '密码'; |

##### 列车

表7.1.2.1‑7 train（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次编号 | no | varchar(5) | n |  |  |  |
| 2 | 类型 | train\_type | char(1) | n |  |  | 104 |
| 3 | 速度 | speed | dec(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_1\_3.train  (  no varchar(5) not null ,  train\_type char(1) not null ,  speed dec(3) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.train is '列车';  comment on column y\_1\_1\_1\_3.train.no is '车次编号';  comment on column y\_1\_1\_1\_3.train.train\_type is '类型';  comment on column y\_1\_1\_1\_3.train.speed is '速度'; |

##### 车厢

表7.1.2.1‑8 carriage（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类别 | carriage\_type | varchar(2) | n |  |  | 105 |
| 3 | 实际类别 | seat\_type | varchar(2) | n |  |  | 105 |
| 4 | 座位总数 | seat\_total | dec(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_1\_3.carriage  (  no char(2) default nextval('seq\_carriage\_no') not null ,  carriage\_type varchar(2) not null ,  seat\_type varchar(2) not null ,  seat\_total dec(3) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.carriage is '车厢';  comment on column y\_1\_1\_1\_3.carriage.no is '编号';  comment on column y\_1\_1\_1\_3.carriage.carriage\_type is '车厢类别';  comment on column y\_1\_1\_1\_3.carriage.seat\_type is '实际类别';  comment on column y\_1\_1\_1\_3.carriage.seat\_total is '座位总数'; |

##### 乘客

表7.1.2.1‑9 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | no | char(18) | n |  |  | 身份证号 |
| 2 | 姓名 | name | varchar(15) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_1\_1\_3.passenger  (  no char(18) not null ,  name varchar(15) not null ,  phone char(11) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.passenger is '乘客';  comment on column y\_1\_1\_1\_3.passenger.no is '乘客号';  comment on column y\_1\_1\_1\_3.passenger.name is '姓名';  comment on column y\_1\_1\_1\_3.passenger.phone is '手机号码'; |

##### 从事

表7.1.2.1‑10 deal\_with（emp\_no,post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | emp\_no | employee(no) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_1\_1\_3.deal\_with  (  emp\_no dec(12) references y\_1\_1\_1\_3.employee(no) not null ,  post\_no char(2) references y\_1\_1\_1\_3.post(no) not null ,  primary key(emp\_no,post\_no)  )  ;  comment on table y\_1\_1\_1\_3.deal\_with is '从事';  comment on column y\_1\_1\_1\_3.deal\_with.emp\_no is '员工编号';  comment on column y\_1\_1\_1\_3.deal\_with.post\_no is '岗位编号'; |

##### 包含

表7.1.2.1‑11 include（train\_no,carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车编号 | train\_no | train(no) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 3 | 车厢号分布范围 | carriage\_range | varchar(44) |  |  |  | 如01-04 |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_1\_1\_3.include  (  train\_no varchar(5) references y\_1\_1\_1\_3.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_1\_3.carriage(no) not null ,  carriage\_range varchar(44) ,  primary key(train\_no,carriage\_no)  )  ;  comment on table y\_1\_1\_1\_3.include is '包含';  comment on column y\_1\_1\_1\_3.include.train\_no is '列车编号';  comment on column y\_1\_1\_1\_3.include.carriage\_no is '车厢编号';  comment on column y\_1\_1\_1\_3.include.carriage\_range is '车厢号分布范围'; |

##### 经过

表7.1.2.1‑12 pass\_by（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(12) | n |  |  | 来自序列seq\_pass\_by\_no |
| 2 | 车次编号 | train\_no | train(no) | n |  |  |  |
| 3 | 站点名 | station\_name | rail\_station(name) | n |  |  |  |
| 4 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 5 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 6 | 站点序 | station\_order | dec(2) | n |  |  |  |
| 7 | 区间基础票价 | base\_price | dec(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | dec(6,4) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_1\_3.pass\_by  (  no char(12) default nextval('seq\_pass\_by\_no') not null ,  train\_no varchar(5) references y\_1\_1\_1\_3.train(no) not null ,  station\_name varchar(71) references y\_1\_1\_1\_3.rail\_station(name) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  station\_order dec(2) not null ,  base\_price dec(6,2) not null ,  up\_rate dec(6,4) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.pass\_by is '经过';  comment on column y\_1\_1\_1\_3.pass\_by.no is '编号';  comment on column y\_1\_1\_1\_3.pass\_by.train\_no is '车次编号';  comment on column y\_1\_1\_1\_3.pass\_by.station\_name is '站点名';  comment on column y\_1\_1\_1\_3.pass\_by.start\_time is '发车时间';  comment on column y\_1\_1\_1\_3.pass\_by.arrive\_time is '到达时间';  comment on column y\_1\_1\_1\_3.pass\_by.station\_order is '站点序';  comment on column y\_1\_1\_1\_3.pass\_by.base\_price is '区间基础票价';  comment on column y\_1\_1\_1\_3.pass\_by.up\_rate is '票价上浮比率'; |

##### 车票业务

表7.1.2.1‑13 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_ticket\_business\_no |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 员工号 | emp\_no | employee(no) | n |  |  |  |
| 4 | 车次编号 | train\_no | train(no) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 107 |
| 9 | 办理时间 | do\_time | timestamp | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 108 |
| 11 | 业务金额 | busi\_\_amount | dec(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(3) | n |  |  |  |
| 14 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 15 | 到达时间 | arrive\_time | timestamp | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：车票业务  create table y\_1\_1\_1\_3.ticket\_business  (  no dec(12) default nextval('seq\_ticket\_business\_no') not null ,  passenger\_no char(18) references y\_1\_1\_1\_3.passenger(no) not null ,  emp\_no dec(12) references y\_1\_1\_1\_3.employee(no) not null ,  train\_no varchar(5) references y\_1\_1\_1\_3.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_1\_3.carriage(no) not null ,  origin\_station varchar(71) references y\_1\_1\_1\_3.rail\_station(name) not null ,  destination\_station varchar(71) references y\_1\_1\_1\_3.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time timestamp not null ,  busi\_status char(1) not null ,  busi\_\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(3) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_1\_3.ticket\_business is '车票业务';  comment on column y\_1\_1\_1\_3.ticket\_business.no is '编号';  comment on column y\_1\_1\_1\_3.ticket\_business.passenger\_no is '乘客号';  comment on column y\_1\_1\_1\_3.ticket\_business.emp\_no is '员工号';  comment on column y\_1\_1\_1\_3.ticket\_business.train\_no is '车次编号';  comment on column y\_1\_1\_1\_3.ticket\_business.carriage\_no is '车厢编号';  comment on column y\_1\_1\_1\_3.ticket\_business.origin\_station is '乘客出发站';  comment on column y\_1\_1\_1\_3.ticket\_business.destination\_station is '乘客到达站';  comment on column y\_1\_1\_1\_3.ticket\_business.busi\_type is '业务类别';  comment on column y\_1\_1\_1\_3.ticket\_business.do\_time is '办理时间';  comment on column y\_1\_1\_1\_3.ticket\_business.busi\_status is '订单状态';  comment on column y\_1\_1\_1\_3.ticket\_business.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_1\_3.ticket\_business.carriage\_number is '车厢号';  comment on column y\_1\_1\_1\_3.ticket\_business.seat\_number is '座位号';  comment on column y\_1\_1\_1\_3.ticket\_business.start\_time is '发车时间';  comment on column y\_1\_1\_1\_3.ticket\_business.arrive\_time is '到达时间'; |

##### 字典

表7.1.2.1‑14 user\_dict（categary, ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | categary | char(3) | n |  |  | 第1位是1 |
| 2 | 编号 | ccode | varchar(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar(100) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_1\_3.user\_dict  (  categary char(3) not null ,  ccode varchar(6) not null ,  ctext varchar(100) not null ,  primary key(categary, ccode)  )  ;  comment on table y\_1\_1\_1\_3.user\_dict is '字典';  comment on column y\_1\_1\_1\_3.user\_dict.categary is '大类编号';  comment on column y\_1\_1\_1\_3.user\_dict.ccode is '编号';  comment on column y\_1\_1\_1\_3.user\_dict.ctext is '内容'; |

#### 添加检查约束

表7.1.2‑2语句

|  |
| --- |
| alter table y\_1\_1\_1\_3. ticket\_business add check (start\_time < arrive\_time);  alter table y\_1\_1\_1\_3. pass\_by add check (start\_time >arrive\_time); |

### 同义词

表7.1‑3同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | dep | depart | 部门别称 |  |
| 2 | inc | include | 包含别称 |  |
| 3 | emp | employee | 员工别称 |  |
| 4 | busi | ticket\_business | 车票业务别称 |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| --创建同义词：部门别称  create view y\_1\_1\_1\_3.dep as select \* from y\_1\_1\_1\_3.depart;  --创建同义词：包含别称  create view y\_1\_1\_1\_3.inc as select \* from y\_1\_1\_1\_3.include;  --创建同义词：员工别称  create view y\_1\_1\_1\_3.emp as select \* from y\_1\_1\_1\_3.employee;  --创建同义词：业务别称  create view y\_1\_1\_1\_3.busi as select \* from y\_1\_1\_1\_3. ticket\_business;  comment on view y\_1\_1\_1\_3.dep is '部门别称';  comment on view y\_1\_1\_1\_3.inc is '包含别称';  comment on view y\_1\_1\_1\_3.emp is '员工别称';  comment on view y\_1\_1\_1\_3.busi is '车票业务别称'; |

### 视图

#### 参照信息

表7.1.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 铁路分公司信息 | v\_rail\_company\_mes | 显示带区域名称的铁路分公司 | 将区域名称加进来 |
| 2 | 火车站信息 | v\_rail\_station\_mes | 显示带铁路分公司名称的火车站、车站等级名称、供给站标志名称的火车站 | 将铁路分公司名称加进来、车站等级名称、供给站标志名称的火车站 |
| 3 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 4 | 员工信息 | v\_employee\_mes | 显示带性别的员工 | 将性别加进来 |
| 5 | 列车信息 | v\_train\_mes | 显示带类型的列车 | 将类型加进来 |
| 6 | 车厢信息 | v\_carriage\_mes | 显示带车厢类别和实际类别的车厢 | 将车厢类别、实际类别加进来 |
| 7 | 从事信息 | v\_deal\_with\_mes | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 8 | 车票业务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、员工姓名、列车编号、车厢编号、乘客出发站点名、乘客到达站点名、业务类别名称、订单状态名称的车票业务 | 将乘客姓名、员工姓名、列车编号、车厢编号、乘客乘客出发站点名、乘客到达站点名、业务类别名称、订单状态名称加进来 |
| 9 | 包含信息 | v\_inc\_mes | 显示带车车厢类别名称的包含信息 | 将车厢类别名称加进来 |
| 10 | 经过信息 | v\_ pass\_by\_mes | 显示带列车类型名称的经过信息 | 将列车类型名称加进来 |

##### 铁路分公司信息

表7.1.4.1‑1视图 v\_rail\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 铁路分公司编号 | no | rail\_company | no |  |  |
| 2 | 铁路分公司名称 | name | rail\_company | name |  |  |
| 3 | 地址 | address | rail\_company | address |  |  |
| 4 | 联系电话 | phone | rail\_company | phone |  |  |
| 5 | 区域编号 | area\_no | rail\_company | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | rail\_company.area\_no=area.no |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：铁路分公司信息  create view v\_rail\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from rail\_company a, area b  where a. area\_no=b.no  ;  comment on view y\_1\_1\_1\_3.v\_rail\_company\_mes is '铁路分公司信息';  comment on column y\_1\_1\_1\_3.v\_rail\_company\_mes.no is '铁路分公司编号';  comment on column y\_1\_1\_1\_3.v\_rail\_company\_mes.name is '铁路分公司名称';  comment on column y\_1\_1\_1\_3.v\_rail\_company\_mes.address is '地址';  comment on column y\_1\_1\_1\_3.v\_rail\_company\_mes.phone is '联系电话';  comment on column y\_1\_1\_1\_3.v\_rail\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_1\_1\_3.v\_rail\_company\_mes.area\_name is '区域名称'; |

##### 火车站信息

表7.1.4.1‑2视图 v\_rail\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 站点名 | name | rail\_station | name |  |  |
| 2 | 车站等级 | station\_level | rail\_station | station\_level |  |  |
| 3 | 车站等级名称 | station\_level\_name | user\_dict d1 | ctext | d1.categary='101' and  d1.ccode=rail\_station.station\_level |  |
| 4 | 供给站标志 | station\_provide\_flag | rail\_station | station\_provide\_flag |  |  |
| 5 | 供给站标志名称 | provide\_flag\_name | user\_dict d2 | ctext | d2.categary='102' and  d2.ccode=rail\_station.station\_provide\_flag |  |
| 6 | 铁路分公司编号 | comp\_no | rail\_station | comp\_no |  |  |
| 7 | 铁路分公司名称 | comp\_name | rail\_company | name | rail\_company.no=rail\_station.comp\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：火车站信息  create view v\_rail\_station\_mes(name, station\_level, station\_level\_name, station\_provide\_flag, provide\_flag\_name, comp\_no, comp\_name)  as  select a.name, a.station\_level, d1.ctext, a.station\_provide\_flag, d2.ctext, a.comp\_no, d.name  from rail\_station a, user\_dict d1, user\_dict d2, rail\_company d  where d1.categary='101' and d1.ccode=a. station\_level and d2.categary='102' and d2.ccode=a.station\_provide\_flag and d.no=a.comp\_no  ;  comment on view y\_1\_1\_1\_3.v\_rail\_station\_mes is '火车站信息';  comment on column y\_1\_1\_1\_3.v\_rail\_station\_mes.name is '站点名';  comment on column y\_1\_1\_1\_3.v\_rail\_station\_mes.station\_level is '车站等级';  comment on column y\_1\_1\_1\_3.v\_rail\_station\_mes.station\_level\_name is '车站等级名称';  comment on column y\_1\_1\_1\_3.v\_rail\_station\_mes.station\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_1\_3.v\_rail\_station\_mes.provide\_flag\_name is '供给站标志名称';  comment on column y\_1\_1\_1\_3.v\_rail\_station\_mes.comp\_no is '铁路分公司编号';  comment on column y\_1\_1\_1\_3.v\_rail\_station\_mes.comp\_name is '铁路分公司名称'; |

##### 岗位信息

表7.1.4.1‑3视图 v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 岗位编号 | no | post | no |  |  |
| 2 | 岗位名称 | name | post | name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门号 | dept\_no | post | dept\_no |  |  |
| 5 | 部门名称 | dept\_name | dep | name | dep.no=post.dept\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：岗位信息  create view v\_post\_mes(no, name, duty, dept\_no, dept\_name)  as  select a.no, a.name, a.duty, a.dept\_no, b.name  from post a, dep b  where b.no = a.dept\_no  ;  comment on view y\_1\_1\_1\_3.v\_post\_mes is '岗位信息';  comment on column y\_1\_1\_1\_3.v\_post\_mes.no is '岗位编号';  comment on column y\_1\_1\_1\_3.v\_post\_mes.name is '岗位名称';  comment on column y\_1\_1\_1\_3.v\_post\_mes.duty is '职责';  comment on column y\_1\_1\_1\_3.v\_post\_mes.dept\_no is '部门号';  comment on column y\_1\_1\_1\_3.v\_post\_mes.dept\_name is '部门名称'; |

##### 员工信息

表7.1.4.1‑4视图 v\_employee\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | no | emp | no |  |  |
| 2 | 员工姓名 | name | emp | name |  |  |
| 3 | 性别 | sex | emp | sex |  |  |
| 4 | 手机号码 | phone | emp | phone |  |  |
| 5 | 密码 | password | emp | password |  |  |
| 6 | 性别名称 | sex\_name | user\_dict | ctext | user\_dict.categary='103' and user\_dict.ccode=emp.sex |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：员工信息  create view v\_employee\_mes(no, name, sex, phone, password, sex\_name)  as  select a.no, a.name, a.sex, a.phone, a.password, b.ctext  from emp a, user\_dict b  where b.categary='103' and b.ccode=a.sex  ;  comment on view y\_1\_1\_1\_3.v\_employee\_mes is '员工信息';  comment on column y\_1\_1\_1\_3.v\_employee\_mes.no is '员工编号';  comment on column y\_1\_1\_1\_3.v\_employee\_mes.name is '员工姓名';  comment on column y\_1\_1\_1\_3.v\_employee\_mes.sex is '性别';  comment on column y\_1\_1\_1\_3.v\_employee\_mes.phone is '手机号码';  comment on column y\_1\_1\_1\_3.v\_employee\_mes.password is '密码';  comment on column y\_1\_1\_1\_3.v\_employee\_mes.sex\_name is '性别名称'; |

##### 列车信息

表7.1.4.1‑5视图 v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次编号 | no | train | no |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.categary='104' and user\_dict.ccode=train.train\_type |  |
| 4 | 速度 | speed | train | speed |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：列车信息  create view v\_train\_mes(no, train\_type, train\_type\_name, speed)  as  select a.no, a.train\_type, b.ctext, a.speed  from train a, user\_dict b  where b. categary='104' and b.ccode=a.train\_type  ;  comment on view y\_1\_1\_1\_3.v\_train\_mes is '列车信息';  comment on column y\_1\_1\_1\_3.v\_train\_mes.no is '车次编号';  comment on column y\_1\_1\_1\_3.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_1\_1\_3.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_1\_1\_3.v\_train\_mes.speed is '速度'; |

##### 车厢信息

表7.1.4.1‑6视图 v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | carriage | no |  |  |
| 2 | 车厢类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 车厢类别名称 | carriage\_type\_name | user\_dict d1 | ctext | d1.categary='105' and  d1.ccode=carriage.carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict d2 | ctext | d2.categary='105' and  d2.ccode=carriage.seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：车厢信息  create view v\_carriage\_mes(no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total)  as  select a.no, a.carriage\_type, d1.ctext, a.seat\_type, d2.ctext, a.seat\_total  from carriage a, user\_dict d1, user\_dict d2  where d1.categary='105' and d1.ccode=a.carriage\_type and d2.categary='105' and d2.ccode=a.seat\_type  ;  comment on view y\_1\_1\_1\_3.v\_carriage\_mes is '车厢信息';  comment on column y\_1\_1\_1\_3.v\_carriage\_mes.no is '编号';  comment on column y\_1\_1\_1\_3.v\_carriage\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_1\_1\_3.v\_carriage\_mes.carriage\_type\_name is '车厢类别名称';  comment on column y\_1\_1\_1\_3.v\_carriage\_mes.seat\_type is '实际类别';  comment on column y\_1\_1\_1\_3.v\_carriage\_mes.seat\_type\_name is '实际类别名称';  comment on column y\_1\_1\_1\_3.v\_carriage\_mes.seat\_total is '座位总数'; |

##### 从事信息

表7.1.4.1‑7视图 v\_deal\_with\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | emp\_no | deal\_with | emp\_no |  |  |
| 2 | 员工姓名 | emp\_name | employee | name | employee.no=deal\_with.emp\_no |  |
| 3 | 岗位编号 | post\_no | deal\_with | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | name | post.no= deal\_with.post\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：从事信息  create view v\_deal\_with\_mes(emp\_no, emp\_name, post\_no, post\_name)  as  select a.emp\_no, b.name, a.post\_no, c.name  from deal\_with a, employee b, post c  where b.no=a.emp\_no and c.no= a.post\_no  ;  comment on view y\_1\_1\_1\_3.v\_deal\_with\_mes is '从事信息';  comment on column y\_1\_1\_1\_3.v\_deal\_with\_mes.emp\_no is '员工编号';  comment on column y\_1\_1\_1\_3.v\_deal\_with\_mes.emp\_name is '员工姓名';  comment on column y\_1\_1\_1\_3.v\_deal\_with\_mes.post\_no is '岗位编号';  comment on column y\_1\_1\_1\_3.v\_deal\_with\_mes.post\_name is '岗位名称'; |

##### 车票业务信息

表7.1.4.1‑8视图 v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | busi | no |  |  |
| 2 | 乘客号 | passenger\_no | busi | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | busi.passenger\_no=passenger.no |  |
| 4 | 员工号 | emp\_no | busi | emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | employee | name | busi.emp\_no=employee.no |  |
| 6 | 车次编号 | train\_no | busi | train\_no |  |  |
| 7 | 车厢编号 | carriage\_no | busi | carriage\_no |  |  |
| 8 | 乘客出发站 | origin\_station | busi | origin\_station |  |  |
| 9 | 乘客到达站 | destination\_station | busi | destination\_station |  |  |
| 10 | 业务类别 | busi\_type | busi | busi\_type |  |  |
| 11 | 业务类别名称 | busi\_type\_name | user\_dict d1 | ctext | d1.categary='107' and  d1.ccode=busi.busi\_type |  |
| 12 | 办理时间 | do\_time | busi | do\_time |  |  |
| 13 | 订单状态 | busi\_status | busi | busi\_status |  |  |
| 14 | 订单状态名称 | busi\_status\_name | user\_dict d2 | ctext | d2.categary='108' and  d2.ccode=busi.busi\_status |  |
| 15 | 业务金额 | busi\_\_amount | busi | busi\_\_amount |  |  |
| 16 | 车厢号 | carriage\_number | busi | carriage\_number |  |  |
| 17 | 座位号 | seat\_number | busi | seat\_number |  |  |
| 18 | 发车时间 | start\_time | busi | start\_time |  |  |
| 19 | 到达时间 | arrive\_time | busi | arrive\_time |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：车票业务信息  create view v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, carriage\_no, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_\_amount, carriage\_number, seat\_number, start\_time, arrive\_time)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, a.carriage\_no, a.origin\_station, a.destination\_station, a.busi\_type, d1.ctext, a.do\_time, a.busi\_status, d2.ctext, a.busi\_\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time  from busi a, passenger b, employee c, user\_dict d1, user\_dict d2  where a.passenger\_no=b.no and a.emp\_no=c.no and d1.categary='107' and d1.ccode=a.busi\_type and d2.categary='108' and d2.ccode=a.busi\_status  ;  comment on view y\_1\_1\_1\_3.v\_ticket\_business\_mes is '车票业务信息';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.no is '编号';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.passenger\_no is '乘客号';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.emp\_no is '员工号';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.emp\_name is '员工姓名';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.train\_no is '车次编号';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.busi\_type is '业务类别';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.do\_time is '办理时间';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.busi\_status is '订单状态';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.carriage\_number is '车厢号';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.seat\_number is '座位号';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_1\_3.v\_ticket\_business\_mes.arrive\_time is '到达时间'; |

##### 包含信息

表7.1.4.1‑9视图 v\_inc\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 列车编号 | train\_no | inc | train\_no |  |  |
| 2 | 列车类型 | train\_type | train | train\_type | train.no=inc.train\_no |  |
| 3 | 车厢编号 | carriage\_no | inc | carriage\_no |  |  |
| 4 | 车厢类别 | carriage\_type | carriage | carriage\_type | carriage.no=inc.carriage\_no |  |
| 5 | 车厢号分布范围 | carriage\_range | inc | carriage\_range |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：包含信息  create view v\_inc\_mes(train\_no, train\_type, carriage\_no, carriage\_type, carriage\_range)  as  select a.train\_no, b.train\_type, a.carriage\_no, c.carriage\_type, a.carriage\_range  from inc a, train b, carriage c  where b.no=a.train\_no and c.no=a.carriage\_no  ;  comment on view y\_1\_1\_1\_3.v\_inc\_mes is '包含信息';  comment on column y\_1\_1\_1\_3.v\_inc\_mes.train\_no is '列车编号';  comment on column y\_1\_1\_1\_3.v\_inc\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_1\_3.v\_inc\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_1\_3.v\_inc\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_1\_1\_3.v\_inc\_mes.carriage\_range is '车厢号分布范围'; |

##### 经过信息

表7.1.4.1‑10视图 v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | pass\_by | no |  |  |
| 2 | 车次编号 | train\_no | pass\_by | train\_no |  |  |
| 9 | 列车类型 | train\_type | train | train\_type | train.no=pass\_by.train\_no |  |
| 3 | 站点名 | station\_name | pass\_by | station\_name |  |  |
| 4 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 5 | 到达时间 | arrive\_time | pass\_by | arrive\_time |  |  |
| 6 | 站点序 | station\_order | pass\_by | station\_order |  |  |
| 7 | 区间基础票价 | base\_price | pass\_by | base\_price |  |  |
| 8 | 票价上浮比率 | up\_rate | pass\_by | up\_rate |  |  |

执行脚本（PostgreSQL，y\_1\_1\_1\_3）

|  |
| --- |
| -- 创建视图：经过信息  create view v\_pass\_by\_mes(no, train\_no, train\_type, station\_name, start\_time, arrive\_time, station\_order, base\_price, up\_rate)  as  select a.no, a.train\_no, b.train\_type, a.station\_name, a.start\_time, a.arrive\_time, a.station\_order, a.base\_price, a.up\_rate  from pass\_by a, train b  where b.no=a.train\_no  ;  comment on view y\_1\_1\_1\_3.v\_pass\_by\_mes is '经过信息';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.no is '编号';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.train\_no is '车次编号';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.station\_name is '站点名';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.arrive\_time is '到达时间';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.station\_order is '站点序';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.base\_price is '区间基础票价';  comment on column y\_1\_1\_1\_3.v\_pass\_by\_mes.up\_rate is '票价上浮比率'; |

#### 单据

表7.1.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表7.1.4.2‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（postgresql，用户名）

|  |
| --- |
|  |

#### 报表

表7.1.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表7.1.4.3‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（postgresql，用户名）

|  |
| --- |
|  |

### 普通函数

表7.1‑5函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 触发器函数

表7.1‑6触发器函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 触发器

表7.1‑7触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

## 乘客业务

### 序列

表7.2‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 4 | 1 | 1 | 1 | 9999 | 区域编号 |  |
| 2 | seq\_rail\_company\_no | 8 | 1 | 1 | 1 | 99999999 | 分公司编号 |  |
| 3 | seq\_train\_no | 2 | 1 | 1 | 1 | 99 | 列车号 |  |
| 4 | seq\_depart\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 5 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 6 | seq\_terminal\_no | 8 | 1 | 1 | 1 | 99999999 | 网络售票终端编号 |  |
| 7 | seq\_contain\_no | 2 | 1 | 1 | 1 | 99 | 包含编号 |  |
| 8 | seq\_self\_service\_no | 12 | 1 | 1 | 1 | 999999999999 | 自助操作编号 |  |
| 9 | seq\_pass\_by\_no | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_no | 12 | 1 | 1 | 1 | 999999999999 | 票务服务编号 |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_2\_3.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 9999 ;  --创建序列，用于：分公司编号  create sequence y\_1\_1\_2\_3.seq\_rail\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：列车号  create sequence y\_1\_1\_2\_3.seq\_train\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：部门编号  create sequence y\_1\_1\_2\_3.seq\_depart\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_2\_3.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：网络售票终端编号  create sequence y\_1\_1\_2\_3.seq\_terminal\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：包含编号  create sequence y\_1\_1\_2\_3.seq\_contain\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：自助操作编号  create sequence y\_1\_1\_2\_3.seq\_self\_service\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：经过编号  create sequence y\_1\_1\_2\_3.seq\_pass\_by\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：票务服务编号  create sequence y\_1\_1\_2\_3.seq\_ticket\_business\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  comment on sequence y\_1\_1\_2\_3.seq\_area\_no is '区域编号'  comment on sequence y\_1\_1\_2\_3.seq\_rail\_company\_no is '分公司编号'  comment on sequence y\_1\_1\_2\_3.seq\_train\_no is '列车号'  comment on sequence y\_1\_1\_2\_3.seq\_depart\_no is '部门编号'  comment on sequence y\_1\_1\_2\_3.seq\_carriage\_no is '车厢编号'  comment on sequence y\_1\_1\_2\_3.seq\_terminal\_no is '网络售票终端编号'  comment on sequence y\_1\_1\_2\_3.seq\_contain\_no is '包含编号'  comment on sequence y\_1\_1\_2\_3.seq\_self\_service\_no is '自助操作编号'  comment on sequence y\_1\_1\_2\_3.seq\_pass\_by\_no is '经过编号'  comment on sequence y\_1\_1\_2\_3.seq\_ticket\_business\_no is '票务服务编号' |

### 表

表7.2.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | rail\_company |  |
| 3 | 列车 | train |  |
| 4 | 火车站 | rail\_station |  |
| 5 | 部门 | depart |  |
| 6 | 车厢 | carriage |  |
| 7 | 网络售票终端 | terminal |  |
| 8 | 乘客 | passenger |  |
| 9 | 包含 | contain |  |
| 10 | 自助操作 | self­\_service |  |
| 11 | 经过 | pass\_by |  |
| 12 | 票务服务 | ticket\_business |  |
| 13 | 字典 | user\_dict |  |

#### 创建表

##### 区域

表7.2.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | no | char(4) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | name | varchar(100) | n |  | y |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_2\_3.area  (  no char(4) default nextval('seq\_area\_no') not null ,  name varchar(100) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.area is '区域';  comment on column y\_1\_1\_2\_3.area.no is '区域编号';  comment on column y\_1\_1\_2\_3.area.name is '区域名称'; |

##### 分公司

表7.2.2.1‑2 rail\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 分公司编号 | no | char(8) | n |  |  | 来自序列seq\_rail\_company\_no |
| 2 | 分公司名称 | name | varchar(100) | n |  | y |  |
| 3 | 地址 | address | varchar(100) | n |  | y |  |
| 4 | 联系电话 | phone | varchar(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_1\_2\_3.rail\_company  (  no char(8) default nextval('seq\_rail\_company\_no') not null ,  name varchar(100) unique not null ,  address varchar(100) unique not null ,  phone varchar(20) not null ,  area\_no char(4) references y\_1\_1\_2\_3.area(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.rail\_company is '分公司';  comment on column y\_1\_1\_2\_3.rail\_company.no is '分公司编号';  comment on column y\_1\_1\_2\_3.rail\_company.name is '分公司名称';  comment on column y\_1\_1\_2\_3.rail\_company.address is '地址';  comment on column y\_1\_1\_2\_3.rail\_company.phone is '联系电话';  comment on column y\_1\_1\_2\_3.rail\_company.area\_no is '区域编号'; |

##### 列车

表7.2.2.1‑3 train（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车号 | no | char(2) | n |  |  | 来自序列seq\_train\_no |
| 2 | 类型 | train\_type | char(1) | n |  |  | 201 |
| 3 | 速度 | speed | dec(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_2\_3.train  (  no char(2) default nextval('seq\_train\_no') not null ,  train\_type char(1) not null ,  speed dec(3) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.train is '列车';  comment on column y\_1\_1\_2\_3.train.no is '列车号';  comment on column y\_1\_1\_2\_3.train.train\_type is '类型';  comment on column y\_1\_1\_2\_3.train.speed is '速度'; |

##### 火车站

表7.2.2.1‑4 rail\_station（name）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 站点名 | name | varchar(10) | n |  |  |  |
| 2 | 车站等级 | station\_level | char(1) | n |  |  | 202 |
| 3 | 供给站标志 | supply\_sign | char(1) | n |  |  | 203 |
| 4 | 分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_2\_3.rail\_station  (  name varchar(10) not null ,  station\_level char(1) not null ,  supply\_sign char(1) not null ,  comp\_no char(8) references y\_1\_1\_2\_3.rail\_company(no) not null ,  primary key(name)  )  ;  comment on table y\_1\_1\_2\_3.rail\_station is '火车站';  comment on column y\_1\_1\_2\_3.rail\_station.name is '站点名';  comment on column y\_1\_1\_2\_3.rail\_station.station\_level is '车站等级';  comment on column y\_1\_1\_2\_3.rail\_station.supply\_sign is '供给站标志';  comment on column y\_1\_1\_2\_3.rail\_station.comp\_no is '分公司编号'; |

##### 部门

表7.2.2.1‑5 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | no | char(2) | n |  |  | 来自序列seq\_depart\_no |
| 2 | 部门名称 | name | varchar(20) | n |  | y |  |
| 3 | 简介 | introduce | varchar(500) |  |  |  |  |
| 4 | 分公司编号 | comp\_no | rail\_company(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_2\_3.depart  (  no char(2) default nextval('seq\_depart\_no') not null ,  name varchar(20) unique not null ,  introduce varchar(500) ,  comp\_no char(8) references y\_1\_1\_2\_3.rail\_company(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.depart is '部门';  comment on column y\_1\_1\_2\_3.depart.no is '部门编号';  comment on column y\_1\_1\_2\_3.depart.name is '部门名称';  comment on column y\_1\_1\_2\_3.depart.introduce is '简介';  comment on column y\_1\_1\_2\_3.depart.comp\_no is '分公司编号'; |

##### 车厢

表7.2.2.1‑6 carriage（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类别 | carriage\_type | varchar(2) | n |  |  | 204 |
| 3 | 实际类别 | seat\_type | varchar(2) | n |  |  | 204 |
| 4 | 座位总数 | seat\_total | dec(3) | n |  |  |  |
| 5 | 列车号 | train\_no | train(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_2\_3.carriage  (  no char(2) default nextval('seq\_carriage\_no') not null ,  carriage\_type varchar(2) not null ,  seat\_type varchar(2) not null ,  seat\_total dec(3) not null ,  train\_no char(2) references y\_1\_1\_2\_3.train(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.carriage is '车厢';  comment on column y\_1\_1\_2\_3.carriage.no is '编号';  comment on column y\_1\_1\_2\_3.carriage.carriage\_type is '车厢类别';  comment on column y\_1\_1\_2\_3.carriage.seat\_type is '实际类别';  comment on column y\_1\_1\_2\_3.carriage.seat\_total is '座位总数';  comment on column y\_1\_1\_2\_3.carriage.train\_no is '列车号'; |

##### 网络售票终端

表7.2.2.1‑7 terminal（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 终端编号 | no | char(8) | n |  |  | 来自序列seq\_terminal\_no |
| 2 | 终端语言类型 | terminal\_type | char(1) | n |  |  | 206 |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：网络售票终端  create table y\_1\_1\_2\_3.terminal  (  no char(8) default nextval('seq\_terminal\_no') not null ,  terminal\_type char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.terminal is '网络售票终端';  comment on column y\_1\_1\_2\_3.terminal.no is '终端编号';  comment on column y\_1\_1\_2\_3.terminal.terminal\_type is '终端语言类型'; |

##### 乘客

表7.2.2.1‑8 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 乘客号 | no | char(18) | n |  |  | 身份证号 |
| 2 | 姓名 | name | varchar(15) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |
| 4 | 性别 | gender | char(1) | n |  |  | 207 |
| 5 | 登录密码 | password | varchar(50) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_1\_2\_3.passenger  (  no char(18) not null ,  name varchar(15) not null ,  phone char(11) not null ,  gender char(1) not null ,  password varchar(50) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.passenger is '乘客';  comment on column y\_1\_1\_2\_3.passenger.no is '乘客号';  comment on column y\_1\_1\_2\_3.passenger.name is '姓名';  comment on column y\_1\_1\_2\_3.passenger.phone is '手机号码';  comment on column y\_1\_1\_2\_3.passenger.gender is '性别';  comment on column y\_1\_1\_2\_3.passenger.password is '登录密码'; |

##### 包含

表7.2.2.1‑9 contain（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_contain\_no |
| 2 | 列车号 | train\_no | train(no) | n |  |  |  |
| 3 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_1\_2\_3.contain  (  no char(2) default nextval('seq\_contain\_no') not null ,  train\_no char(2) references y\_1\_1\_2\_3.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_2\_3.carriage(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.contain is '包含';  comment on column y\_1\_1\_2\_3.contain.no is '编号';  comment on column y\_1\_1\_2\_3.contain.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.contain.carriage\_no is '车厢编号'; |

##### 自助操作

表7.2.2.1‑10 self\_service（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_self\_service\_no |
| 2 | 终端编号 | terminal\_no | terminal(no) | n |  |  |  |
| 3 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 4 | 列车号 | train\_no | train(no) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 208 |
| 9 | 办理时间 | do\_time | timestamp | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 209 |
| 11 | 业务金额 | busi\_\_amount | dec(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(3) | n |  |  |  |
| 14 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 15 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 210 |
| 17 | 变更到站状态 | change\_station | char(1) | n |  |  | 211 |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：自助操作  create table y\_1\_1\_2\_3.self\_service  (  no dec(12) default nextval('seq\_self\_service\_no') not null ,  terminal\_no char(8) references y\_1\_1\_2\_3.terminal(no) not null ,  passenger\_no char(18) references y\_1\_1\_2\_3.passenger(no) not null ,  train\_no char(2) references y\_1\_1\_2\_3.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_2\_3.carriage(no) not null ,  origin\_station varchar(10) references y\_1\_1\_2\_3.rail\_station(name) not null ,  destination\_station varchar(10) references y\_1\_1\_2\_3.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time timestamp not null ,  busi\_status char(1) not null ,  busi\_\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(3) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.self\_service is '自助操作';  comment on column y\_1\_1\_2\_3.self\_service.no is '编号';  comment on column y\_1\_1\_2\_3.self\_service.terminal\_no is '终端编号';  comment on column y\_1\_1\_2\_3.self\_service.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_3.self\_service.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.self\_service.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_3.self\_service.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_3.self\_service.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_3.self\_service.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_3.self\_service.do\_time is '办理时间';  comment on column y\_1\_1\_2\_3.self\_service.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_3.self\_service.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_2\_3.self\_service.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_3.self\_service.seat\_number is '座位号';  comment on column y\_1\_1\_2\_3.self\_service.start\_time is '发车时间';  comment on column y\_1\_1\_2\_3.self\_service.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_3.self\_service.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_3.self\_service.change\_station is '变更到站状态'; |

##### 经过

表7.2.2.1‑11 pass\_by（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(12) | n |  |  | 来自序列seq\_pass\_by\_no |
| 2 | 列车号 | train\_no | train(no) | n |  |  |  |
| 3 | 站点名 | station\_name | rail\_station(name) | n |  |  |  |
| 4 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 5 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 6 | 站点序 | station\_order | dec(2) | n |  |  |  |
| 7 | 区间基础票价 | base\_price | dec(6,2) | n |  |  |  |
| 8 | 票价上浮比率 | up\_rate | dec(6,4) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_2\_3.pass\_by  (  no char(12) default nextval('seq\_pass\_by\_no') not null ,  train\_no char(2) references y\_1\_1\_2\_3.train(no) not null ,  station\_name varchar(10) references y\_1\_1\_2\_3.rail\_station(name) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  station\_order dec(2) not null ,  base\_price dec(6,2) not null ,  up\_rate dec(6,4) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.pass\_by is '经过';  comment on column y\_1\_1\_2\_3.pass\_by.no is '编号';  comment on column y\_1\_1\_2\_3.pass\_by.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.pass\_by.station\_name is '站点名';  comment on column y\_1\_1\_2\_3.pass\_by.start\_time is '发车时间';  comment on column y\_1\_1\_2\_3.pass\_by.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_3.pass\_by.station\_order is '站点序';  comment on column y\_1\_1\_2\_3.pass\_by.base\_price is '区间基础票价';  comment on column y\_1\_1\_2\_3.pass\_by.up\_rate is '票价上浮比率'; |

##### 票务服务

表7.2.2.1‑12 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_ticket\_business\_no |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 列车号 | train\_no | train(no) | n |  |  |  |
| 4 | 车厢编号 | carriage\_no | carriage(no) | n |  |  |  |
| 5 | 乘客出发站 | origin\_station | rail\_station(name) | n |  |  |  |
| 6 | 乘客到达站 | destination\_station | rail\_station(name) | n |  |  |  |
| 7 | 业务类别 | busi\_type | char(1) | n |  |  | 208 |
| 8 | 办理时间 | do\_time | timestamp | n |  |  |  |
| 9 | 订单状态 | busi\_status | char(1) | n |  |  | 209 |
| 10 | 业务金额 | busi\_\_amount | dec(7,2) | n |  |  |  |
| 11 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 12 | 座位号 | seat\_number | varchar(3) | n |  |  |  |
| 13 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 14 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 15 | 出票状态 | ticket\_status | char(1) | n |  |  | 210 |
| 16 | 变更到站状态 | change\_station | char(1) | n |  |  | 211 |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：票务服务  create table y\_1\_1\_2\_3.ticket\_business  (  no dec(12) default nextval('seq\_ticket\_business\_no') not null ,  passenger\_no char(18) references y\_1\_1\_2\_3.passenger(no) not null ,  train\_no char(2) references y\_1\_1\_2\_3.train(no) not null ,  carriage\_no char(2) references y\_1\_1\_2\_3.carriage(no) not null ,  origin\_station varchar(10) references y\_1\_1\_2\_3.rail\_station(name) not null ,  destination\_station varchar(10) references y\_1\_1\_2\_3.rail\_station(name) not null ,  busi\_type char(1) not null ,  do\_time timestamp not null ,  busi\_status char(1) not null ,  busi\_\_amount dec(7,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(3) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_1\_2\_3.ticket\_business is '票务服务';  comment on column y\_1\_1\_2\_3.ticket\_business.no is '编号';  comment on column y\_1\_1\_2\_3.ticket\_business.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_3.ticket\_business.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.ticket\_business.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_3.ticket\_business.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_3.ticket\_business.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_3.ticket\_business.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_3.ticket\_business.do\_time is '办理时间';  comment on column y\_1\_1\_2\_3.ticket\_business.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_3.ticket\_business.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_2\_3.ticket\_business.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_3.ticket\_business.seat\_number is '座位号';  comment on column y\_1\_1\_2\_3.ticket\_business.start\_time is '发车时间';  comment on column y\_1\_1\_2\_3.ticket\_business.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_3.ticket\_business.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_3.ticket\_business.change\_station is '变更到站状态'; |

##### 字典

表7.2.2.1‑13 user\_dict（categary, ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | categary | char(3) | n |  |  | 第1位是2 |
| 2 | 编号 | ccode | varchar(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar(100) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_2\_3.user\_dict  (  categary char(3) not null ,  ccode varchar(6) not null ,  ctext varchar(100) not null ,  primary key(categary, ccode)  )  ;  comment on table y\_1\_1\_2\_3.user\_dict is '字典';  comment on column y\_1\_1\_2\_3.user\_dict.categary is '大类编号';  comment on column y\_1\_1\_2\_3.user\_dict.ccode is '编号';  comment on column y\_1\_1\_2\_3.user\_dict.ctext is '内容'; |

#### 添加检查约束

表7.2.2‑2语句

|  |
| --- |
| alter table self\_service add check (start\_time < arrive\_time);  alter table pass\_by add check (start\_time > arrive\_time);  alter table ticket\_business add check (start\_time < arrive\_time); |

### 同义词

表7.1‑3同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | r\_com | rail\_company | 铁路分公司别称 |  |
| 2 | r\_station | rail\_station | 火车站别称 |  |
| 3 | t\_bus | ticket\_business | 车票业务别称 |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| --创建同义词：铁路分公司别称  create view y\_1\_1\_2\_3.r\_com as select \* from y\_1\_1\_2\_3.rail\_company;  --创建同义词：火车站别称  create view y\_1\_1\_2\_3.r\_station as select \* from y\_1\_1\_2\_3.rail\_station;  --创建同义词：车票业务别称  create view y\_1\_1\_2\_3.t\_bus as select \* from y\_1\_1\_2\_3.ticket\_business;  comment on view y\_1\_1\_2\_3.r\_com is '铁路分公司别称';  comment on view y\_1\_1\_2\_3.r\_station is '火车站别称';  comment on view y\_1\_1\_2\_3.t\_bus is '车票业务别称'; |

### 视图

#### 参照信息

表7.2.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_rail\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 3 | 火车站信息 | v\_rail\_station\_mes | 显示带分公司名称、车站等级名称、供给站标志名称的火车站 | 将分公司名称、车站等级名称、供给站名称加进来 |
| 4 | 部门信息 | v\_depart\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 5 | 车厢信息 | v\_carriage\_mes | 显示带车厢类别名称、实际类别名称的车厢 | 将车厢类别名称、实际类别名称加进来 |
| 6 | 网络售票终端信息 | v\_terminal\_mes | 显示带终端语言类型名称的网络售票终端信息 | 将终端语言类型加进来 |
| 7 | 乘客信息 | v\_passenger\_mes | 显示带性别名称的乘客 | 将性别名称加进来 |
| 8 | 自助操作信息 | v\_self\_service\_mes | 显示带乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的自主操作 | 将乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |
| 9 | 票务服务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的票务服务 | 将乘客姓名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |
| 10 | 包含信息 | v\_ contain\_mes | 显示带车厢类别名称的包含信息 | 将车厢类别名称加进来 |
| 11 | 经过信息 | v\_pass\_by\_mes | 显示带列车类型名称的经过信息 | 将列车类型名称加进来 |

##### 分公司信息

表7.2.4.1‑1 视图v\_rail\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 分公司编号 | no | r\_com | no |  |  |
| 2 | 分公司名称 | name | r\_com | name |  |  |
| 3 | 地址 | address | r\_com | address |  |  |
| 4 | 联系电话 | phone | r\_com | phone |  |  |
| 5 | 区域编号 | area\_no | r\_com | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | r\_com.area\_no=area.no |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：分公司信息  create view v\_rail\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from r\_com a, area b  where a.area\_no=b.no  ;  comment on view y\_1\_1\_2\_3.v\_rail\_company\_mes is '分公司信息';  comment on column y\_1\_1\_2\_3.v\_rail\_company\_mes.no is '分公司编号';  comment on column y\_1\_1\_2\_3.v\_rail\_company\_mes.name is '分公司名称';  comment on column y\_1\_1\_2\_3.v\_rail\_company\_mes.address is '地址';  comment on column y\_1\_1\_2\_3.v\_rail\_company\_mes.phone is '联系电话';  comment on column y\_1\_1\_2\_3.v\_rail\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_1\_2\_3.v\_rail\_company\_mes.area\_name is '区域名称'; |

##### 列车信息

表7.2.4.1‑2 视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 列车号 | no | train | no |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.categary= '201' and  user\_dict.ccode=train.train\_type |  |
| 4 | 速度 | speed | train | speed |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：列车信息  create view v\_train\_mes(no, train\_type, train\_type\_name, speed)  as  select a.no, a.train\_type, b.ctext, a.speed  from train a, user\_dict b  where b.categary= '201' and b.ccode=a.train\_type  ;  comment on view y\_1\_1\_2\_3.v\_train\_mes is '列车信息';  comment on column y\_1\_1\_2\_3.v\_train\_mes.no is '列车号';  comment on column y\_1\_1\_2\_3.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_1\_2\_3.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_1\_2\_3.v\_train\_mes.speed is '速度'; |

##### 火车站信息

表7.2.4.1‑3 视图v\_rail\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 站点名 | name | r\_station | name |  |  |
| 2 | 车站等级 | station\_level | r\_station | station\_level |  |  |
| 3 | 车站等级名称 | station\_level\_name | user\_dict d1 | ctext | d1.categary='202' and  d1.ccode=r\_station.station\_level |  |
| 4 | 供给站标志 | supply\_sign | r\_station | supply\_sign |  |  |
| 5 | 供给站标志名称 | supply\_sign\_name | user\_dict d2 | ctext | d2.categary='203' and  d2.ccode=r\_station.supply\_sign |  |
| 6 | 分公司编号 | comp\_no | r\_station | comp\_no |  |  |
| 7 | 分公司名称 | comp\_name | r\_com | name | r\_station.comp\_no=r\_com.no |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：火车站信息  create view v\_rail\_station\_mes(name, station\_level, station\_level\_name, supply\_sign, supply\_sign\_name, comp\_no, comp\_name)  as  select a.name, a.station\_level, d1.ctext, a.supply\_sign, d2.ctext, a.comp\_no, d.name  from r\_station a, user\_dict d1, user\_dict d2, r\_com d  where d1.categary='202' and d1.ccode=a.station\_level and d2.categary='203' and d2.ccode=a.supply\_sign and a.comp\_no=d.no  ;  comment on view y\_1\_1\_2\_3.v\_rail\_station\_mes is '火车站信息';  comment on column y\_1\_1\_2\_3.v\_rail\_station\_mes.name is '站点名';  comment on column y\_1\_1\_2\_3.v\_rail\_station\_mes.station\_level is '车站等级';  comment on column y\_1\_1\_2\_3.v\_rail\_station\_mes.station\_level\_name is '车站等级名称';  comment on column y\_1\_1\_2\_3.v\_rail\_station\_mes.supply\_sign is '供给站标志';  comment on column y\_1\_1\_2\_3.v\_rail\_station\_mes.supply\_sign\_name is '供给站标志名称';  comment on column y\_1\_1\_2\_3.v\_rail\_station\_mes.comp\_no is '分公司编号';  comment on column y\_1\_1\_2\_3.v\_rail\_station\_mes.comp\_name is '分公司名称'; |

##### 部门信息

表7.2.4.1‑4 视图v\_depart\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | no | depart | no |  |  |
| 2 | 部门名称 | name | depart | name |  |  |
| 3 | 简介 | introduce | depart | introduce |  |  |
| 4 | 分公司编号 | comp\_no | depart | comp\_no |  |  |
| 5 | 分公司名称 | comp\_name | r\_com | name | depart.comp\_no=r\_com.no |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：部门信息  create view v\_depart\_mes(no, name, introduce, comp\_no, comp\_name)  as  select a.no, a.name, a.introduce, a.comp\_no, b.name  from depart a, r\_com b  where a.comp\_no=b.no  ;  comment on view y\_1\_1\_2\_3.v\_depart\_mes is '部门信息';  comment on column y\_1\_1\_2\_3.v\_depart\_mes.no is '部门编号';  comment on column y\_1\_1\_2\_3.v\_depart\_mes.name is '部门名称';  comment on column y\_1\_1\_2\_3.v\_depart\_mes.introduce is '简介';  comment on column y\_1\_1\_2\_3.v\_depart\_mes.comp\_no is '分公司编号';  comment on column y\_1\_1\_2\_3.v\_depart\_mes.comp\_name is '分公司名称'; |

##### 车厢信息

表7.2.4.1‑5 视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | carriage | no |  |  |
| 2 | 车厢类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 4 | 座位总数 | seat\_total | carriage | seat\_total |  |  |
| 5 | 车厢类别名称 | carriage\_type\_name | user\_dict d1 | ctext | d1.categary='204' and  d1.ccode=carriage.carriage\_type |  |
| 6 | 实际类别名称 | seat\_type\_name | user\_dict d2 | ctext | d2.categary='204' and  d2.ccode=carriage.seat\_type |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：车厢信息  create view v\_carriage\_mes(no, carriage\_type, seat\_type, seat\_total, carriage\_type\_name, seat\_type\_name)  as  select a.no, a.carriage\_type, a.seat\_type, a.seat\_total, d1.ctext, d2.ctext  from carriage a, user\_dict d1, user\_dict d2  where d1.categary='204' and d1.ccode=a.carriage\_type and d2.categary='204' and d2.ccode=a.seat\_type  ;  comment on view y\_1\_1\_2\_3.v\_carriage\_mes is '车厢信息';  comment on column y\_1\_1\_2\_3.v\_carriage\_mes.no is '编号';  comment on column y\_1\_1\_2\_3.v\_carriage\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_1\_2\_3.v\_carriage\_mes.seat\_type is '实际类别';  comment on column y\_1\_1\_2\_3.v\_carriage\_mes.seat\_total is '座位总数';  comment on column y\_1\_1\_2\_3.v\_carriage\_mes.carriage\_type\_name is '车厢类别名称';  comment on column y\_1\_1\_2\_3.v\_carriage\_mes.seat\_type\_name is '实际类别名称'; |

##### 网络售票终端信息

表7.2.4.1‑6 视图v\_terminal\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 终端编号 | no | terminal | no |  |  |
| 2 | 终端语言类型 | terminal\_type | terminal | terminal\_type |  |  |
| 3 | 终端语言类型名称 | terminal\_type\_name | user\_dict | ctext | user\_dict.categary='206' and  user\_dict.ccode=terminal.terminal\_type |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：网络售票终端信息  create view v\_terminal\_mes(no, terminal\_type, terminal\_type\_name)  as  select a.no, a.terminal\_type, b.ctext  from terminal a, user\_dict b  where b.categary='206' and b.ccode=a.terminal\_type  ;  comment on view y\_1\_1\_2\_3.v\_terminal\_mes is '网络售票终端信息';  comment on column y\_1\_1\_2\_3.v\_terminal\_mes.no is '终端编号';  comment on column y\_1\_1\_2\_3.v\_terminal\_mes.terminal\_type is '终端语言类型';  comment on column y\_1\_1\_2\_3.v\_terminal\_mes.terminal\_type\_name is '终端语言类型名称'; |

##### 乘客信息

表7.2.4.1‑7 视图v\_passenger\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 乘客号 | no | passenger | no |  |  |
| 2 | 姓名 | name | passenger | name |  |  |
| 3 | 手机号码 | phone | passenger | phone |  |  |
| 4 | 性别 | gender | passenger | gender |  |  |
| 5 | 性别名称 | gender\_name | user\_dict | ctext | user\_dict.categary='207' and  user\_dict.ccode=passenger.gender |  |
| 6 | 登录密码 | password | passenger | password |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：乘客信息  create view v\_passenger\_mes(no, name, phone, gender, gender\_name, password)  as  select a.no, a.name, a.phone, a.gender, b.ctext, a.password  from passenger a, user\_dict b  where b.categary='207' and b.ccode=a.gender  ;  comment on view y\_1\_1\_2\_3.v\_passenger\_mes is '乘客信息';  comment on column y\_1\_1\_2\_3.v\_passenger\_mes.no is '乘客号';  comment on column y\_1\_1\_2\_3.v\_passenger\_mes.name is '姓名';  comment on column y\_1\_1\_2\_3.v\_passenger\_mes.phone is '手机号码';  comment on column y\_1\_1\_2\_3.v\_passenger\_mes.gender is ' 性别';  comment on column y\_1\_1\_2\_3.v\_passenger\_mes.gender\_name is '性别名称';  comment on column y\_1\_1\_2\_3.v\_passenger\_mes.password is '登录密码'; |

##### 自助操作信息

表7.2.4.1‑8 视图v\_self\_service\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | self\_service | no |  |  |
| 2 | 终端编号 | terminal\_no | self\_service | terminal\_no |  |  |
| 3 | 乘客号 | passenger\_no | self\_service | passenger\_no |  |  |
| 4 | 乘客姓名 | passenger\_name | passenger | name | self\_service.passenger\_no=passenger.no |  |
| 5 | 列车号 | train\_no | self\_service | train\_no |  |  |
| 6 | 车厢编号 | carriage\_no | self\_service | carriage\_no |  |  |
| 7 | 乘客出发站 | origin\_station | self\_service | origin\_station |  |  |
| 8 | 乘客到达站 | destination\_station | self\_service | destination\_station |  |  |
| 9 | 业务类别 | busi\_type | self\_service | busi\_type |  |  |
| 10 | 业务类别名称 | busi\_type\_name | user\_dict d1 | ctext | d1.categary='208' and  d1.ccode=self\_service.busi\_type |  |
| 11 | 办理时间 | do\_time | self\_service | do\_time |  |  |
| 12 | 订单状态 | busi\_status | self\_service | busi\_status |  |  |
| 13 | 订单状态名称 | busi\_status\_name | user\_dict d2 | ctext | d2.categary='209' and  d2.ccode=self\_service.busi\_status |  |
| 14 | 车厢号 | carriage\_number | self\_service | carriage\_number |  |  |
| 15 | 座位号 | seat\_number | self\_service | seat\_number |  |  |
| 16 | 发车时间 | start\_time | self\_service | start\_time |  |  |
| 17 | 到达时间 | arrive\_time | self\_service | arrive\_time |  |  |
| 18 | 出票状态 | ticket\_status | self\_service | ticket\_status |  |  |
| 19 | 出票状态名称 | ticket\_status\_name | user\_dict d3 | ctext | d3.categary='210' and  d3.ccode=self\_service.ticket\_status |  |
| 20 | 变更到站状态 | change\_station | self\_service | change\_station |  |  |
| 21 | 变更到站状态名称 | change\_station\_name | user\_dict d4 | ctext | d4.categary='211' and  d4.ccode=self\_service.change\_station |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：自助操作信息  create view v\_self\_service\_mes(no, terminal\_no, passenger\_no, passenger\_name, train\_no, carriage\_no, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.terminal\_no, a.passenger\_no, b.name, a.train\_no, a.carriage\_no, a.origin\_station, a.destination\_station, a.busi\_type, d1.ctext, a.do\_time, a.busi\_status, d2.ctext, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, d3.ctext, a.change\_station, d4.ctext  from self\_service a, passenger b, user\_dict d1, user\_dict d2, user\_dict d3, user\_dict d4  where a.passenger\_no=b.no and d1.categary='208' and d1.ccode=a.busi\_type and d2.categary='209' and d2.ccode=a.busi\_status and d3.categary='210' and d3.ccode=a.ticket\_status and d4.categary='211' and d4.ccode=a.change\_station  ;  comment on view y\_1\_1\_2\_3.v\_self\_service\_mes is '自助操作信息';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.no is '编号';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.terminal\_no is '终端编号';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.do\_time is '办理时间';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.seat\_number is '座位号';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.change\_station is '变更到站状态';  comment on column y\_1\_1\_2\_3.v\_self\_service\_mes.change\_station\_name is '变更到站状态名称'; |

##### 票务服务信息

表7.2.4.1‑9 视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | t\_bus | no |  |  |
| 2 | 乘客号 | passenger\_no | t\_bus | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | t\_bus.passenger\_no=passenger.no |  |
| 4 | 列车号 | train\_no | t\_bus | train\_no |  |  |
| 5 | 车厢编号 | carriage\_no | t\_bus | carriage\_no |  |  |
| 6 | 乘客出发站 | origin\_station | t\_bus | origin\_station |  |  |
| 7 | 乘客到达站 | destination\_station | t\_bus | destination\_station |  |  |
| 8 | 业务类别 | busi\_type | t\_bus | busi\_type |  |  |
| 9 | 业务类别名称 | busi\_type\_name | user\_dict d1 | ctext | d1.categary='208' and  d1.ccode=t\_bus.busi\_type |  |
| 10 | 办理时间 | do\_time | t\_bus | do\_time |  |  |
| 11 | 订单状态 | busi\_status | t\_bus | busi\_status |  |  |
| 12 | 订单状态名称 | busi\_status\_name | user\_dict d2 | ctext | d2.categary='209' and d2.ccode=t\_bus.busi\_status |  |
| 13 | 业务金额 | busi\_\_amount | t\_bus | busi\_\_amount |  |  |
| 14 | 车厢号 | carriage\_number | t\_bus | carriage\_number |  |  |
| 15 | 座位号 | seat\_number | t\_bus | seat\_number |  |  |
| 16 | 发车时间 | start\_time | t\_bus | start\_time |  |  |
| 17 | 到达时间 | arrive\_time | t\_bus | arrive\_time |  |  |
| 18 | 出票状态 | ticket\_status | t\_bus | ticket\_status |  |  |
| 19 | 出票状态名称 | ticket\_status\_name | user\_dict d3 | ctext | d3.categary='210' and  d3.ccode=t\_bus.ticket\_status |  |
| 20 | 变更到站状态 | change\_station | t\_bus | change\_station |  |  |
| 21 | 变更到站状态名称 | change\_station\_name | user\_dict d4 | ctext | d4.categary='211' and  d4.ccode=t\_bus.change\_station |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：票务服务信息  create view v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, train\_no, carriage\_no, origin\_station, destination\_station, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.train\_no, a.carriage\_no, a.origin\_station, a.destination\_station, a.busi\_type, d1.ctext, a.do\_time, a.busi\_status, d2.ctext, a.busi\_\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, d3.ctext, a.change\_station, d4.ctext  from t\_bus a, passenger b, user\_dict d1, user\_dict d2, user\_dict d3, user\_dict d4  where a.passenger\_no=b.no and d1.categary='208' and d1.ccode=a.busi\_type and d2.categary='209' and d2.ccode=a.busi\_status and d3.categary='210' and d3.ccode=a.ticket\_status and d4.categary='211' and d4.ccode=a.change\_station  ;  comment on view y\_1\_1\_2\_3.v\_ticket\_business\_mes is '票务服务信息';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.no is '编号';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.passenger\_no is '乘客号';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.busi\_type is '业务类别';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.do\_time is '办理时间';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.busi\_status is '订单状态';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.busi\_\_amount is '业务金额';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.carriage\_number is '车厢号';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.seat\_number is '座位号';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.ticket\_status is '出票状态';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.change\_station is '变更到站状态';  comment on column y\_1\_1\_2\_3.v\_ticket\_business\_mes.change\_station\_name is '变更到站状态名称'; |

##### 包含信息

表7.2.4.1‑10 视图v\_contain\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | contain | no |  |  |
| 2 | 列车号 | train\_no | contain | train\_no |  |  |
| 3 | 列车类型 | train\_type | train | train\_type | contain.train\_no=train.no |  |
| 4 | 车厢编号 | carriage\_no | contain | carriage\_no |  |  |
| 5 | 车厢类型 | carriage\_type | carriage | carriage\_type | contain.carriage\_no=carriage.no |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：包含信息  create view v\_contain\_mes(no, train\_no, train\_type, carriage\_no, carriage\_type)  as  select a.no, a.train\_no, b.train\_type, a.carriage\_no, c.carriage\_type  from contain a, train b, carriage c  where a.train\_no=b.no and a.carriage\_no=c.no  ;  comment on view y\_1\_1\_2\_3.v\_contain\_mes is '包含信息';  comment on column y\_1\_1\_2\_3.v\_contain\_mes.no is '编号';  comment on column y\_1\_1\_2\_3.v\_contain\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.v\_contain\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_2\_3.v\_contain\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_2\_3.v\_contain\_mes.carriage\_type is '车厢类型'; |

##### 经过信息

表7.2.4.1‑11视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | pass\_by | no |  |  |
| 2 | 列车号 | train\_no | pass\_by | train\_no |  |  |
| 3 | 列车类型 | train\_type | train | train\_type | train.no=pass\_by.train\_no |  |
| 4 | 站点名 | station\_name | pass\_by | station\_name |  |  |
| 5 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 6 | 到达时间 | arrive\_time | pass\_by | arrive\_time |  |  |
| 7 | 站点序 | station\_order | pass\_by | station\_order |  |  |
| 8 | 区间基础票价 | base\_price | pass\_by | base\_price |  |  |
| 9 | 票价上浮比率 | up\_rate | pass\_by | up\_rate |  |  |

执行脚本（PostgreSQL，y\_1\_1\_2\_3）

|  |
| --- |
| -- 创建视图：经过信息  create view v\_pass\_by\_mes(no, train\_no, train\_type, station\_name, start\_time, arrive\_time, station\_order, base\_price, up\_rate)  as  select a.no, a.train\_no, b.train\_type, a.station\_name, a.start\_time, a.arrive\_time, a.station\_order, a.base\_price, a.up\_rate  from pass\_by a, train b  where b.no=a.train\_no  ;  comment on view y\_1\_1\_2\_3.v\_pass\_by\_mes is '经过信息';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.no is '编号';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.train\_no is '列车号';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.train\_type is '列车类型';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.station\_name is '站点名';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.start\_time is '发车时间';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.arrive\_time is '到达时间';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.station\_order is '站点序';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.base\_price is '区间基础票价';  comment on column y\_1\_1\_2\_3.v\_pass\_by\_mes.up\_rate is '票价上浮比率'; |

#### 单据

表7.1.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表7.1.4.2‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（postgresql，用户名）

|  |
| --- |
|  |

#### 报表

表7.1.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表7.1.4.3‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（postgresql，用户名）

|  |
| --- |
|  |

### 普通函数

表7.1‑5函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 触发器函数

表7.1‑6触发器函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 触发器

表7.1‑7触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

## 管理员业务

### 序列

表7.3‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 2 | 1 | 1 | 1 | 99 | 区域编号 |  |
| 2 | seq\_company\_no | 2 | 1 | 1 | 1 | 99 | 分公司编号 |  |
| 3 | seq\_department\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 4 | seq\_station\_no | 2 | 1 | 1 | 1 | 99 | 火车站编号 |  |
| 5 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 6 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 7 | seq\_pass\_num | 12 | 1 | 1 | 1 | 999999999999 | 经过序号 |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_1\_3\_3.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：分公司编号  create sequence y\_1\_1\_3\_3.seq\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：部门编号  create sequence y\_1\_1\_3\_3.seq\_department\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：火车站编号  create sequence y\_1\_1\_3\_3.seq\_station\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：车厢编号  create sequence y\_1\_1\_3\_3.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：岗位编号  create sequence y\_1\_1\_3\_3.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：经过序号  create sequence y\_1\_1\_3\_3.seq\_pass\_num start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  comment on sequence y\_1\_1\_3\_3.seq\_area\_no is '区域编号'  comment on sequence y\_1\_1\_3\_3.seq\_company\_no is '分公司编号'  comment on sequence y\_1\_1\_3\_3.seq\_department\_no is '部门编号'  comment on sequence y\_1\_1\_3\_3.seq\_station\_no is '火车站编号'  comment on sequence y\_1\_1\_3\_3.seq\_carriage\_no is '车厢编号'  comment on sequence y\_1\_1\_3\_3.seq\_post\_no is '岗位编号'  comment on sequence y\_1\_1\_3\_3.seq\_pass\_num is '经过序号' |

### 表

表7.3.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | company |  |
| 3 | 部门 | department |  |
| 4 | 火车站 | station |  |
| 5 | 列车 | train |  |
| 6 | 车厢 | carriage |  |
| 7 | 员工 | administe |  |
| 8 | 岗位 | post |  |
| 9 | 拥有 | possess |  |
| 10 | 从事 | work\_on |  |
| 11 | 经过 | pass\_by |  |
| 12 | 上级 | superior |  |
| 13 | 字典 | user\_dict |  |

#### 创建表

##### 区域

表7.3.2.1‑1 area（area\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 区域编号 | area\_no | char(2) | n |  |  | 来自序列seq\_area\_no |
| 2 | 区域名称 | area\_name | varchar(100) | n |  | y |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_1\_3\_3.area  (  area\_no char(2) default nextval('seq\_area\_no') not null ,  area\_name varchar(100) unique not null ,  primary key(area\_no)  )  ;  comment on table y\_1\_1\_3\_3.area is '区域';  comment on column y\_1\_1\_3\_3.area.area\_no is '区域编号';  comment on column y\_1\_1\_3\_3.area.area\_name is '区域名称'; |

##### 分公司

表7.3.2.1‑2 company（company\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 分公司编号 | company\_no | char(2) | n |  |  | 来自序列seq\_company\_no |
| 2 | 分公司名称 | company\_name | varchar(100) | n |  | y |  |
| 3 | 区域编号 | area\_no | area(area\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_1\_3\_3.company  (  company\_no char(2) default nextval('seq\_company\_no') not null ,  company\_name varchar(100) unique not null ,  area\_no char(2) references y\_1\_1\_3\_3.area(area\_no) not null ,  primary key(company\_no)  )  ;  comment on table y\_1\_1\_3\_3.company is '分公司';  comment on column y\_1\_1\_3\_3.company.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_3.company.company\_name is '分公司名称';  comment on column y\_1\_1\_3\_3.company.area\_no is '区域编号'; |

##### 部门

表7.3.2.1‑3 department（department\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | department\_no | char(2) | n |  |  | 来自序列seq\_department\_no |
| 2 | 部门名称 | department\_name | varchar(20) | n |  | y |  |
| 3 | 分公司编号 | company\_no | company(company\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_1\_3\_3.department  (  department\_no char(2) default nextval('seq\_department\_no') not null ,  department\_name varchar(20) unique not null ,  company\_no char(2) references y\_1\_1\_3\_3.company(company\_no) not null ,  primary key(department\_no)  )  ;  comment on table y\_1\_1\_3\_3.department is '部门';  comment on column y\_1\_1\_3\_3.department.department\_no is '部门编号';  comment on column y\_1\_1\_3\_3.department.department\_name is '部门名称';  comment on column y\_1\_1\_3\_3.department.company\_no is '分公司编号'; |

##### 火车站

表7.3.2.1‑4 station（station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | station\_no | char(4) | n |  |  | 来自序列seq\_station\_no |
| 2 | 车站中文名 | chinese\_name | varchar(10) | n |  |  |  |
| 3 | 车站英文名 | english\_name | varchar(60) | n |  |  |  |
| 4 | 车站等级 | station\_level | char(1) | n |  |  | 301 |
| 5 | 车站次序 | station\_order | dec(4) | n |  |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | char(1) | n |  |  | 302 |
| 7 | 分公司编号 | company\_no | company(company\_no) | n |  |  |  |
| 8 | 部门编号 | department\_no | department(department\_no) |  |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_1\_3\_3.station  (  station\_no char(4) default nextval('seq\_station\_no') not null ,  chinese\_name varchar(10) not null ,  english\_name varchar(60) not null ,  station\_level char(1) not null ,  station\_order dec(4) not null ,  statin\_provide\_flag char(1) not null ,  company\_no char(2) references y\_1\_1\_3\_3.company(company\_no) not null ,  department\_no char(2) references y\_1\_1\_3\_3.department(department\_no) ,  primary key(station\_no)  )  ;  comment on table y\_1\_1\_3\_3.station is '火车站';  comment on column y\_1\_1\_3\_3.station.station\_no is '编号';  comment on column y\_1\_1\_3\_3.station.chinese\_name is '车站中文名';  comment on column y\_1\_1\_3\_3.station.english\_name is '车站英文名';  comment on column y\_1\_1\_3\_3.station.station\_level is '车站等级';  comment on column y\_1\_1\_3\_3.station.station\_order is '车站次序';  comment on column y\_1\_1\_3\_3.station.statin\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_3\_3.station.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_3.station.department\_no is '部门编号'; |

##### 列车

表7.3.2.1‑5 train（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar(5) | n |  |  |  |
| 2 | 类型 | train\_type | char(1) | n |  |  | 303 |
| 3 | 运行时间 | train\_runtime | interval | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_1\_3\_3.train  (  train\_id varchar(5) not null ,  train\_type char(1) not null ,  train\_runtime interval not null ,  primary key(train\_id)  )  ;  comment on table y\_1\_1\_3\_3.train is '列车';  comment on column y\_1\_1\_3\_3.train.train\_id is '车次号';  comment on column y\_1\_1\_3\_3.train.train\_type is '类型';  comment on column y\_1\_1\_3\_3.train.train\_runtime is '运行时间'; |

##### 车厢

表7.3.2.1‑6 carriage（carriage \_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | carriage\_no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 车厢类型 | carriage\_type | char(1) | n |  |  | 304 |
| 3 | 座位总数 | carriage\_sit\_num | dec(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_1\_3\_3.carriage  (  carriage\_no char(2) default nextval('seq\_carriage\_no') not null ,  carriage\_type char(1) not null ,  carriage\_sit\_num dec(3) not null ,  primary key(carriage \_no)  )  ;  comment on table y\_1\_1\_3\_3.carriage is '车厢';  comment on column y\_1\_1\_3\_3.carriage.carriage\_no is '编号';  comment on column y\_1\_1\_3\_3.carriage.carriage\_type is '车厢类型';  comment on column y\_1\_1\_3\_3.carriage.carriage\_sit\_num is '座位总数'; |

##### 员工

表7.3.2.1‑7 administe（administer\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工账号 | administer\_id | char(11) | n |  |  | 手机号 |
| 2 | 密码 | administer\_pw | varchar(20) | n |  |  |  |
| 3 | 员工姓名 | administer\_name | varchar(8) | n |  |  |  |
| 4 | 身份证号 | id\_card\_num | char(18) | n |  |  |  |
| 5 | 员工类型 | employee\_type | char(1) | n |  |  | 305 |
| 6 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_1\_3\_3.administe  (  administer\_id char(11) not null ,  administer\_pw varchar(20) not null ,  administer\_name varchar(8) not null ,  id\_card\_num char(18) not null ,  employee\_type char(1) not null ,  station\_no char(4) references y\_1\_1\_3\_3.station(station\_no) not null ,  primary key(administer\_id)  )  ;  comment on table y\_1\_1\_3\_3.administe is '员工';  comment on column y\_1\_1\_3\_3.administe.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_3.administe.administer\_pw is '密码';  comment on column y\_1\_1\_3\_3.administe.administer\_name is '员工姓名';  comment on column y\_1\_1\_3\_3.administe.id\_card\_num is '身份证号';  comment on column y\_1\_1\_3\_3.administe.employee\_type is '员工类型';  comment on column y\_1\_1\_3\_3.administe.station\_no is '火车站编号'; |

##### 岗位

表7.3.2.1‑8 post（post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 岗位编号 | post\_no | char(2) | n |  |  | 来自序列seq\_post\_no |
| 2 | 岗位名称 | post\_name | varchar(20) | n |  | y |  |
| 3 | 职责 | duty | varchar(200) | n |  |  |  |
| 4 | 部门编号 | department\_no | department(department\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_1\_3\_3.post  (  post\_no char(2) default nextval('seq\_post\_no') not null ,  post\_name varchar(20) unique not null ,  duty varchar(200) not null ,  department\_no char(2) references y\_1\_1\_3\_3.department(department\_no) not null ,  primary key(post\_no)  )  ;  comment on table y\_1\_1\_3\_3.post is '岗位';  comment on column y\_1\_1\_3\_3.post.post\_no is '岗位编号';  comment on column y\_1\_1\_3\_3.post.post\_name is '岗位名称';  comment on column y\_1\_1\_3\_3.post.duty is '职责';  comment on column y\_1\_1\_3\_3.post.department\_no is '部门编号'; |

##### 拥有

表7.3.2.1‑9 possess（train\_id, carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | post\_no | train(train\_id) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 3 | 此类车厢分布号 | carriage\_range | varchar(44) | n |  |  |  |
| 4 | 发车时间 | starttime | timestamp |  |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：拥有  create table y\_1\_1\_3\_3.possess  (  post\_no varchar(5) references y\_1\_1\_3\_3.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_1\_3\_3.carriage(carriage\_no) not null ,  carriage\_range varchar(44) not null ,  starttime timestamp ,  primary key(train\_id, carriage\_no)  )  ;  comment on table y\_1\_1\_3\_3.possess is '拥有';  comment on column y\_1\_1\_3\_3.possess.post\_no is '车次号';  comment on column y\_1\_1\_3\_3.possess.carriage\_no is '车厢编号';  comment on column y\_1\_1\_3\_3.possess.carriage\_range is '此类车厢分布号';  comment on column y\_1\_1\_3\_3.possess.starttime is '发车时间'; |

##### 从事

表7.3.2.1‑10 work\_on（administer\_id, post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工账号 | administer\_id | administe(administer\_id) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(post\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_1\_3\_3.work\_on  (  administer\_id char(11) references y\_1\_1\_3\_3.administe(administer\_id) not null ,  post\_no char(2) references y\_1\_1\_3\_3.post(post\_no) not null ,  primary key(administer\_id, post\_no)  )  ;  comment on table y\_1\_1\_3\_3.work\_on is '从事';  comment on column y\_1\_1\_3\_3.work\_on.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_3.work\_on.post\_no is '岗位编号'; |

##### 经过

表7.3.2.1‑11 pass\_by（num）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 序号 | num | char(12) | n |  |  | 来自序列seq\_pass\_num |
| 2 | 车次号 | train\_id | train(train\_id) | n |  |  |  |
| 3 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |
| 4 | 停车时间 | stoptime | timestamp |  |  |  |  |
| 5 | 发车时间 | starttime | timestamp |  |  |  |  |
| 6 | 里程数 | mileage | dec(7,2) | n |  |  |  |
| 7 | 区间基础票价 | base\_fare | dec(5,1) | n |  |  |  |
| 8 | 票价上浮比率 | fare\_rate | char(60) | n |  |  |  |
| 9 | 站点次序 | station\_order | dec(2) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_1\_3\_3.pass\_by  (  num char(12) default nextval('seq\_pass\_num') not null ,  train\_id varchar(5) references y\_1\_1\_3\_3.train(train\_id) not null ,  station\_no char(4) references y\_1\_1\_3\_3.station(station\_no) not null ,  stoptime timestamp ,  starttime timestamp ,  mileage dec(7,2) not null ,  base\_fare dec(5,1) not null ,  fare\_rate char(60) not null ,  station\_order dec(2) not null ,  primary key(num)  )  ;  comment on table y\_1\_1\_3\_3.pass\_by is '经过';  comment on column y\_1\_1\_3\_3.pass\_by.num is '序号';  comment on column y\_1\_1\_3\_3.pass\_by.train\_id is '车次号';  comment on column y\_1\_1\_3\_3.pass\_by.station\_no is '火车站编号';  comment on column y\_1\_1\_3\_3.pass\_by.stoptime is '停车时间';  comment on column y\_1\_1\_3\_3.pass\_by.starttime is '发车时间';  comment on column y\_1\_1\_3\_3.pass\_by.mileage is '里程数';  comment on column y\_1\_1\_3\_3.pass\_by.base\_fare is '区间基础票价';  comment on column y\_1\_1\_3\_3.pass\_by.fare\_rate is '票价上浮比率';  comment on column y\_1\_1\_3\_3.pass\_by.station\_order is '站点次序'; |

##### 上级

表7.3.2.1‑12 superior（department\_no, supper\_department\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | department\_no | department(department\_no) | n |  |  |  |
| 2 | 上级部门编号 | supper\_department\_no | department(department\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：上级  create table y\_1\_1\_3\_3.superior  (  department\_no char(2) references y\_1\_1\_3\_3.department(department\_no) not null ,  supper\_department\_no char(2) references y\_1\_1\_3\_3.department(department\_no) not null ,  primary key(department\_no, supper\_department\_no)  )  ;  comment on table y\_1\_1\_3\_3.superior is '上级';  comment on column y\_1\_1\_3\_3.superior.department\_no is '部门编号';  comment on column y\_1\_1\_3\_3.superior.supper\_department\_no is '上级部门编号'; |

##### 字典

表7.3.2.1‑13 user\_dict（category, ccode）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | category | char(3) | n |  |  | 第一位为3 |
| 2 | 编号 | ccode | varchar(6) | n |  |  |  |
| 3 | 内容 | ctext | varchar(100) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_1\_3\_3.user\_dict  (  category char(3) not null ,  ccode varchar(6) not null ,  ctext varchar(100) not null ,  primary key(category, ccode)  )  ;  comment on table y\_1\_1\_3\_3.user\_dict is '字典';  comment on column y\_1\_1\_3\_3.user\_dict.category is '大类编号';  comment on column y\_1\_1\_3\_3.user\_dict.ccode is '编号';  comment on column y\_1\_1\_3\_3.user\_dict.ctext is '内容'; |

#### 添加检查约束

表7.3.2‑2语句

|  |
| --- |
| alter table pass\_by add check (stoptime < starttime); |

### 同义词

表7.1‑3同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | dep | department | 部门别称 |  |
| 2 | com | company | 分公司别称 |  |
| 3 | adm | administe | 员工别称 |  |
| 4 | sup | superior | 上级别称 |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| --创建同义词：部门别称  create view y\_1\_1\_3\_3.dep as select \* from y\_1\_1\_3\_3.department;  --创建同义词：分公司别称  create view y\_1\_1\_3\_3.com as select \* from y\_1\_1\_3\_3.company;  --创建同义词：员工别称  create view y\_1\_1\_3\_3.adm as select \* from y\_1\_1\_3\_3.administe;  --创建同义词：上级别称  create view y\_1\_1\_3\_3.sup as select \* from y\_1\_1\_3\_3.superior;  comment on view y\_1\_1\_3\_3.dep is '部门别称';  comment on view y\_1\_1\_3\_3.com is '分公司别称';  comment on view y\_1\_1\_3\_3.adm is '员工别称';  comment on view y\_1\_1\_3\_3.sup is '上级别称'; |

### 视图

#### 参照信息

表7.3.4‑1视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 部门信息 | v\_department\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 3 | 火车站信息 | v\_station\_mes | 显示带分公司名称、部门名称、车站等级名称、供给站标志名称的火车站 | 将分公司名称、部门名称、车站等级名称、供给站标志名称加进来 |
| 4 | 列车信息 | v\_train\_mes | 显示带列车类型名称的列车 | 将列车类型名称加进来 |
| 5 | 车厢信息 | v\_carriage\_mes | 显示带车厢类型名称的车厢 | 将车厢类型名称加进来 |
| 6 | 员工信息 | v\_administer\_mes | 显示带员工类型名称以及火车站名称的员工 | 将员工类型名称、火车站名称加进来 |
| 7 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 8 | 拥有信息 | v\_ possess\_mes | 显示带车厢编号名称的拥有 | 将车厢编号名称加进来 |
| 9 | 从事信息 | v\_work\_on | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 10 | 经过信息 | v\_pass\_by\_mes | 显示带站点名的经过 | 将站点名加进来 |
| 11 | 上级信息 | v\_superior\_mes | 显示带部门名称的上级 | 将部门名称加进来 |

##### 分公司信息

表7.3.4.1‑1视图v\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 分公司编号 | company\_no | com | company\_no |  |  |
| 2 | 分公司名称 | company\_name | com | company\_name |  |  |
| 3 | 区域编号 | area\_no | com | area\_no |  |  |
| 4 | 区域名称 | area\_name | area | area\_name | com.area\_no=area.area\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：分公司信息  create view v\_company\_mes(company\_no, company\_name, area\_no, area\_name)  as  select a.company\_no, a.company\_name, a.area\_no, b.area\_name  from com a, area b  where a.area\_no=b.area\_no  ;  comment on view y\_1\_1\_3\_3.v\_company\_mes is '分公司信息';  comment on column y\_1\_1\_3\_3.v\_company\_mes.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_3.v\_company\_mes.company\_name is '分公司名称';  comment on column y\_1\_1\_3\_3.v\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_1\_3\_3.v\_company\_mes.area\_name is '区域名称'; |

##### 部门信息

表7.3.4.1‑2视图v\_department\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | department\_no | dep | department\_no |  |  |
| 2 | 部门名称 | department\_name | dep | department\_name |  |  |
| 3 | 分公司编号 | company\_no | dep | company\_no |  |  |
| 4 | 分公司名称 | company\_name | com | company\_name | com.company\_no=dep.company\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：部门信息  create view v\_department\_mes(department\_no, department\_name, company\_no, company\_name)  as  select a.department\_no, a.department\_name, a.company\_no, b.company\_name  from dep a, com b  where b.company\_no=a.company\_no  ;  comment on view y\_1\_1\_3\_3.v\_department\_mes is '部门信息';  comment on column y\_1\_1\_3\_3.v\_department\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_3.v\_department\_mes.department\_name is '部门名称';  comment on column y\_1\_1\_3\_3.v\_department\_mes.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_3.v\_department\_mes.company\_name is '分公司名称'; |

##### 火车站信息

表7.3.4.1‑3视图v\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | station | station\_no |  |  |
| 2 | 车站中文名 | chinese\_name | station | chinese\_name |  |  |
| 3 | 车站英文名 | english\_name | station | english\_name |  |  |
| 4 | 车站等级 | station\_level | station | station\_level |  |  |
| 5 | 车站等级名称 | station\_level\_name | user\_dict d1 | ctext | d1.category='301'  and d1.ccode=station.station\_level |  |
| 6 | 车站次序 | station\_order | station | station\_order |  |  |
| 7 | 供给站标志 | statin\_provide\_flag | station | statin\_provide\_flag |  |  |
| 8 | 供给站标志名称 | statin\_provide\_flag\_name | user\_dict d2 | ctext | d2.category='302'  and d2.ccode=station.statin\_provide\_flag |  |
| 9 | 分公司编号 | company\_no | station | company\_no |  |  |
| 10 | 分公司名称 | company\_name | com | company\_name | com.company\_no=station.company\_no |  |
| 11 | 部门编号 | department\_no | station | department\_no |  |  |
| 12 | 部门名称 | department\_name | dep | department\_name | dep.department\_no=station.department\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：火车站信息  create view v\_station\_mes(station\_no, chinese\_name, english\_name, station\_level, station\_level\_name, station\_order, statin\_provide\_flag, statin\_provide\_flag\_name, company\_no, company\_name, department\_no, department\_name)  as  select a.station\_no, a.chinese\_name, a.english\_name, a.station\_level, d1.ctext, a.station\_order, a.statin\_provide\_flag, d2.ctext, a.company\_no, d.company\_name, a.department\_no, e.department\_name  from station a, user\_dict d1, user\_dict d2, com d, dep e  where d1.category='301' and d1.ccode=a.station\_level and d2.category='302' and d2.ccode=a.statin\_provide\_flag and d.company\_no=a.company\_no and e.department\_no=a.department\_no  ;  comment on view y\_1\_1\_3\_3.v\_station\_mes is '火车站信息';  comment on column y\_1\_1\_3\_3.v\_station\_mes.station\_no is '编号';  comment on column y\_1\_1\_3\_3.v\_station\_mes.chinese\_name is '车站中文名';  comment on column y\_1\_1\_3\_3.v\_station\_mes.english\_name is '车站英文名';  comment on column y\_1\_1\_3\_3.v\_station\_mes.station\_level is '车站等级';  comment on column y\_1\_1\_3\_3.v\_station\_mes.station\_level\_name is '车站等级名称';  comment on column y\_1\_1\_3\_3.v\_station\_mes.station\_order is '车站次序';  comment on column y\_1\_1\_3\_3.v\_station\_mes.statin\_provide\_flag is '供给站标志';  comment on column y\_1\_1\_3\_3.v\_station\_mes.statin\_provide\_flag\_name is '供给站标志名称';  comment on column y\_1\_1\_3\_3.v\_station\_mes.company\_no is '分公司编号';  comment on column y\_1\_1\_3\_3.v\_station\_mes.company\_name is '分公司名称';  comment on column y\_1\_1\_3\_3.v\_station\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_3.v\_station\_mes.department\_name is '部门名称'; |

##### 列车信息

表7.3.4.1‑4视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train | train\_id |  |  |
| 2 | 类型 | train\_type | train | train\_type |  |  |
| 3 | 类型名称 | train\_type\_name | user\_dict | ctext | user\_dict.category='303' and  user\_dict.ccode=train.train\_type |  |
| 4 | 运行时间 | train\_runtime | train | train\_runtime |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：列车信息  create view v\_train\_mes(train\_id, train\_type, train\_type\_name, train\_runtime)  as  select a.train\_id, a.train\_type, b.ctext, a.train\_runtime  from train a, user\_dict b  where b.category='303' and b.ccode=a.train\_type  ;  comment on view y\_1\_1\_3\_3.v\_train\_mes is '列车信息';  comment on column y\_1\_1\_3\_3.v\_train\_mes.train\_id is '车次号';  comment on column y\_1\_1\_3\_3.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_1\_3\_3.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_1\_3\_3.v\_train\_mes.train\_runtime is '运行时间'; |

##### 车厢信息

表7.3.4.1‑5视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | carriage | carriage\_no |  |  |
| 2 | 车厢类型 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 车厢类型名称 | carriage\_type\_name | user\_dict | ctext | user\_dict.category='304' and  user\_dict.ccode=carriage.carriage\_type |  |
| 4 | 座位总数 | carriage\_sit\_num | carriage | carriage\_sit\_num |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：车厢信息  create view v\_carriage\_mes(carriage\_no, carriage\_type, carriage\_type\_name, carriage\_sit\_num)  as  select a.carriage\_no, a.carriage\_type, b.ctext, a.carriage\_sit\_num  from carriage a, user\_dict b  where b.category='304' and b.ccode=a.carriage\_type  ;  comment on view y\_1\_1\_3\_3.v\_carriage\_mes is '车厢信息';  comment on column y\_1\_1\_3\_3.v\_carriage\_mes.carriage\_no is '编号';  comment on column y\_1\_1\_3\_3.v\_carriage\_mes.carriage\_type is '车厢类型';  comment on column y\_1\_1\_3\_3.v\_carriage\_mes.carriage\_type\_name is '车厢类型名称';  comment on column y\_1\_1\_3\_3.v\_carriage\_mes.carriage\_sit\_num is '座位总数'; |

##### 员工信息

表7.3.4.1‑6视图v\_administer\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工账号 | administer\_id | adm | administer\_id |  |  |
| 2 | 密码 | administer\_pw | adm | administer\_pw |  |  |
| 3 | 员工姓名 | administer\_name | adm | administer\_name |  |  |
| 4 | 身份证号 | id\_card\_num | adm | id\_card\_num |  |  |
| 5 | 员工类型 | employee\_type | adm | employee\_type |  |  |
| 6 | 员工类型名称 | employee\_type\_name | user\_dict | ctext | user\_dict.category='305' and  user\_dict.ccode=adm.employee\_type |  |
| 7 | 火车站编号 | station\_no | adm | station\_no |  |  |
| 8 | 火车站中文名称 | chinese\_name | station | chinese\_name | adm.station\_no=station.station\_no |  |
| 9 | 火车站英文名称 | english\_name | station | english\_name |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：员工信息  create view v\_administer\_mes(administer\_id, administer\_pw, administer\_name, id\_card\_num, employee\_type, employee\_type\_name, station\_no, chinese\_name, english\_name)  as  select a.administer\_id, a.administer\_pw, a.administer\_name, a.id\_card\_num, a.employee\_type, b.ctext, a.station\_no, c.chinese\_name, c.english\_name  from adm a, user\_dict b, station c  where b.category='305' and b.ccode=a.employee\_type and a.station\_no=c.station\_no  ;  comment on view y\_1\_1\_3\_3.v\_administer\_mes is '员工信息';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.administer\_pw is '密码';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.administer\_name is '员工姓名';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.id\_card\_num is '身份证号';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.employee\_type is '员工类型';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.employee\_type\_name is '员工类型名称';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.station\_no is '火车站编号';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.chinese\_name is '火车站中文名称';  comment on column y\_1\_1\_3\_3.v\_administer\_mes.english\_name is '火车站英文名称'; |

##### 岗位信息

表7.3.4.1‑7视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 岗位编号 | post\_no | post | post\_no |  |  |
| 2 | 岗位名称 | post\_name | post | post\_name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门编号 | department\_no | post | department\_no |  |  |
| 5 | 部门名称 | department\_name | dep | department\_name | post.department\_no=dep.departmnt\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：岗位信息  create view v\_post\_mes(post\_no, post\_name, duty, department\_no, department\_name)  as  select a.post\_no, a.post\_name, a.duty, a.department\_no, b.department\_name  from post a, dep b  where a.department\_no=b.departmnt\_no  ;  comment on view y\_1\_1\_3\_3.v\_post\_mes is '岗位信息';  comment on column y\_1\_1\_3\_3.v\_post\_mes.post\_no is '岗位编号';  comment on column y\_1\_1\_3\_3.v\_post\_mes.post\_name is '岗位名称';  comment on column y\_1\_1\_3\_3.v\_post\_mes.duty is '职责';  comment on column y\_1\_1\_3\_3.v\_post\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_3.v\_post\_mes.department\_name is '部门名称'; |

##### 拥有信息

表7.3.4.1‑8视图v\_ possess\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | post\_no | possess | post\_no |  |  |
| 2 | 车厢编号 | carriage\_no | possess | carriage\_no |  |  |
| 3 | 车厢编号名称 | carriage\_no\_name | user\_dict | ctext | carriage.carriage\_no=possess.carriage\_no |  |
| 4 | 此类车厢分布号 | carriage\_range | possess | carriage\_range |  |  |
| 5 | 发车时间 | starttime | possess | starttime |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：拥有信息  create view v\_ possess\_mes(post\_no, carriage\_no, carriage\_no\_name, carriage\_range, starttime)  as  select a.post\_no, a.carriage\_no, b.ctext, a.carriage\_range, a.starttime  from possess a, user\_dict b  where carriage.carriage\_no=a.carriage\_no  ;  comment on view y\_1\_1\_3\_3.v\_ possess\_mes is '拥有信息';  comment on column y\_1\_1\_3\_3.v\_ possess\_mes.post\_no is '车次号';  comment on column y\_1\_1\_3\_3.v\_ possess\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_1\_3\_3.v\_ possess\_mes.carriage\_no\_name is '车厢编号名称';  comment on column y\_1\_1\_3\_3.v\_ possess\_mes.carriage\_range is '此类车厢分布号';  comment on column y\_1\_1\_3\_3.v\_ possess\_mes.starttime is '发车时间'; |

##### 从事信息

表7.3.4.1‑9视图v\_work\_on的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工账号 | administer\_id | work\_on | administer\_id |  |  |
| 2 | 员工姓名 | administer\_name | adm | administer\_name | work\_on.administer\_id=adm.administer\_id |  |
| 3 | 岗位编号 | post\_no | work\_on | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | post\_name | work\_on.post\_no=post. post\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：从事信息  create view v\_work\_on(administer\_id, post\_no, administer\_name, post\_name)  as  select a.administer\_id, a.post\_no, b.administer\_name, c.post\_name  from work\_on a, adm b, post c  where a.administer\_id=b.administer\_id and a.post\_no=c. post\_no  ;  comment on view y\_1\_1\_3\_3.v\_work\_on is '从事信息';  comment on column y\_1\_1\_3\_3.v\_work\_on.administer\_id is '员工账号';  comment on column y\_1\_1\_3\_3.v\_work\_on.post\_no is '岗位编号';  comment on column y\_1\_1\_3\_3.v\_work\_on.administer\_name is '员工姓名';  comment on column y\_1\_1\_3\_3.v\_work\_on.post\_name is '岗位名称'; |

##### 经过信息

表7.3.4.1‑10视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 序号 | num | pass\_by | num |  |  |
| 2 | 车次号 | train\_id | pass\_by | train\_id |  |  |
| 3 | 停车时间 | stoptime | pass\_by | stoptime |  |  |
| 4 | 发车时间 | starttime | pass\_by | starttime |  |  |
| 5 | 里程数 | mileage | pass\_by | mileage |  |  |
| 6 | 区间基础票价 | base\_fare | pass\_by | base\_fare |  |  |
| 7 | 票价上浮比率 | fare\_rate | pass\_by | fare\_rate |  |  |
| 8 | 站点次序 | station\_order | pass\_by | station\_order |  |  |
| 9 | 火车站编号 | station\_no | pass\_by | station\_no |  |  |
| 10 | 火车站中文名 | chinese\_name | station | chinese\_name | pass\_by.station\_no=station. station\_no |  |
| 11 | 火车站英文名 | english\_name | station | english\_name | pass\_by.station\_no=station. station\_no |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：经过信息  create view v\_pass\_by\_mes(num, train\_id, stoptime, starttime, mileage, base\_fare, fare\_rate, station\_order, station\_no, chinese\_name, english\_name)  as  select a.num, a.train\_id, a.stoptime, a.starttime, a.mileage, a.base\_fare, a.fare\_rate, a.station\_order, a.station\_no, b.chinese\_name, b.english\_name  from pass\_by a, station b  where a.station\_no=b. station\_no and a.station\_no=b. station\_no  ;  comment on view y\_1\_1\_3\_3.v\_pass\_by\_mes is '经过信息';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.num is '序号';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.train\_id is '车次号';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.stoptime is '停车时间';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.starttime is '发车时间';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.mileage is '里程数';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.base\_fare is '区间基础票价';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.fare\_rate is '票价上浮比率';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.station\_order is '站点次序';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.station\_no is '火车站编号';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.chinese\_name is '火车站中文名';  comment on column y\_1\_1\_3\_3.v\_pass\_by\_mes.english\_name is '火车站英文名'; |

##### 上级信息

表7.3.4.1‑11视图v\_superior\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | department\_no | sup | department\_no |  |  |
| 2 | 部门名称 | department\_name | dep | department\_name | sup.department\_no=dep.department\_no |  |
| 3 | 上级部门编号 | supper\_department\_no | sup | supper\_department\_no |  |  |

执行脚本（PostgreSQL，y\_1\_1\_3\_3）

|  |
| --- |
| -- 创建视图：上级信息  create view v\_superior\_mes(department\_no, department\_name, supper\_department\_no)  as  select a.department\_no, b.department\_name, a.supper\_department\_no  from sup a, dep b  where a.department\_no=b. department\_no  ;  comment on view y\_1\_1\_3\_3.v\_superior\_mes is '上级信息';  comment on column y\_1\_1\_3\_3.v\_superior\_mes.department\_no is '部门编号';  comment on column y\_1\_1\_3\_3.v\_superior\_mes.department\_name is '部门名称';  comment on column y\_1\_1\_3\_3.v\_superior\_mes.supper\_department\_no is '上级部门编号'; |

#### 单据

表7.1.4‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表7.1.4.2‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（postgresql，用户名）

|  |
| --- |
|  |

#### 报表

表7.1.4‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 视图1 |  |  |  |

##### 视图1

表7.1.4.3‑1视图1英文名的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（postgresql，用户名）

|  |
| --- |
|  |

### 普通函数

表7.1‑5函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |
| 2 |  |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 触发器函数

表7.1‑6触发器函数列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |

#### 函数1

函数代码

|  |
| --- |
|  |

### 触发器

表7.1‑7触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

#### 触发器1

触发器代码

|  |
| --- |
|  |

# 全局数据分析

## 实体集

表8.1‑1实体集及其属性列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 实体集名 | 属性列表 | 备注 |
| 1 | 区域 | 编号，名称 |  |
| 2 | 分公司 | 编号，名称，地址，联系电话 | (1)售票员业务.铁路分公司=乘客业务.分公司=管理员业务.分公司=分公司  (2)售票员业务.铁路分公司.铁路分公司编号=乘客业务.分公司.分公司编号=管理员业务.分公司.分公司编号=编号  (3)售票员业务.铁路分公司.铁路分公司名称=乘客业务.分公司.分公司名称=管理员业务.分公司.分公司名称=名称 |
| 3 | 火车站 | 编号，站点名，英文名，等级，次序，供给站标志 | (1)编号用于管理员业务；站点名用于售票、乘客业务  (2)去除“管理员业务.火车站.车站中文名”，与“站点名”代表同一特征 |
| 4 | 部门 | 编号，名称，简介 |  |
| 5 | 岗位 | 编号，名称，职责 |  |
| 6 | 员工 | 账号，密码，姓名，身份证号，类型，手机号码 | 售票员业务.员工.员工编号=管理员业务.员工.员工账号=账号 |
| 7 | 列车 | 车次号，运行时间，类型，速度 | 售票员业务.列车.车次编号=乘客业务.列车.列车号=管理员业务.列车.车次号=车次号 |
| 8 | 车厢 | 编号，类别，实际类别，座位总数 | 售票员业务.车厢.车厢类别=乘客业务.车厢.车厢类别=管理员业务.车厢.车厢类型=类别 |
| 9 | 乘客 | 身份证号，姓名，手机号码，登录密码 | (1)售票员业务.乘客.乘客号=乘客业务.乘客.身份证号=身份证号  (2)售票员业务.乘客.姓名=乘客业务.乘客.乘客姓名=姓名  (3)去除“乘客业务.乘客.性别”，身份证号可表示其特征 |
| 10 | 网络售票终端 | 编号，语言类型 |  |

## 实体联系图

联系有两种：实体集之间，同一实体集内不同实体之间。

将所有实体集及其联系画一个图，每个实体集不标属性。每个联系如果有属性，要标上。联系要标明联系类别。

1

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属于

n

列车

经过

火车站

自助操作

网络售票终端

车厢

包含

乘客

车票业务

工作

员工

隶属

部门

管理

分公司

成立

区域

上级

从事

岗位

设立

图8.2‑1 ER图

## 联系

表8.3‑1联系及其属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 联系名 | 类别 | 涉及实体集 | 属性列表 | 备注 |
| 1 | 属于 | 一对多 | 区域（一），分公司（多） | 无 | 售票员业务.位于=乘客业务.属于=管理员业务.建立=属于 |
| 2 | 管理 | 一对多 | 分公司（一），火车站（多） | 无 | 售票员业务.管理=乘客业务.建造=管理员业务.修筑=管理 |
| 3 | 工作 | 一对多 | 火车站（一），员工（多） | 无 |  |
| 4 | 成立 | 一对多 | 分公司（一），部门（多） | 无 | 乘客业务.隶属=管理员业务.成立=成立 |
| 5 | 设立 | 一对多 | 部门（一），岗位（多） | 无 |  |
| 6 | 包含 | 多对多 | 列车，车厢 | 车厢号分布范围，车厢数量，发车时间 | 售票员业务.包含=乘客业务.包含=管理员业务.拥有=包含 |
| 7 | 从事 | 多对多 | 员工，岗位 | 无 |  |
| 8 | 经过 | 多对多 | 列车，火车站 | 编号，停车时间，发车时间，里程数，站点序，区间基础票价，票价上浮比率 |  |
| 9 | 车票业务 | 多对多 | 乘客，员工，列车，车厢，火车站，火车站 | 编号，业务类别，办理时间，订单状态，业务金额，车厢号，座位号，发车时间，到达时间，出票状态，变更到站状态 | 售票员业务.车票业务=乘客业务.票务服务=车票业务 |
| 10 | 隶属 | 多对多 | 火车站，部门 | 无 | 在售票员业务中，一对多；在管理员业务中，多对一。这里用多对多描述联系 |
| 11 | 自助操作 | 多对多 | 网络售票终端，乘客，列车，车厢，火车站，火车站 | 编号，业务类别，办理时间，订单状态，业务金额，车厢号，座位号，出票状态，变更到站状态 |  |
| 12 | 上级 | 多对多 | 部门，部门 | 无 |  |

# 全局数据设计

表9‑1关系列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 关系名 | 关系英文名 | 备注 |
| 1 | 区域 | area | 区域实体集 |
| 2 | 分公司 | branch\_company | 分公司实体集 |
| 3 | 火车站 | station | 火车站实体集 |
| 4 | 部门 | depart | 部门实体集 |
| 5 | 岗位 | post | 岗位实体集 |
| 6 | 员工 | employee | 员工实体集 |
| 7 | 列车 | train | 列车实体集 |
| 8 | 车厢 | carriage | 车厢实体集 |
| 9 | 乘客 | passenger | 乘客实体集 |
| 10 | 网络售票终端 | terminal | 网络售票终端实体集 |
| 11 | 包含 | include | 包含联系，涉及列车、车厢两个实体集 |
| 12 | 从事 | work\_on | 从事联系，涉及岗位、员工两个实体集 |
| 13 | 经过 | pass\_by | 经过联系，涉及列车、火车站两个试题集 |
| 14 | 车票业务 | ticket\_business | 车票业务联系，涉及乘客、员工、列车、车厢、两个火车站六个实体集 |
| 15 | 隶属 | belong\_to | 隶属联系，涉及火车站、部门两个实体集 |
| 16 | 自助操作 | self\_service | 自助操作联系，涉及乘客、网络售票终端、列车、车厢、两个火车站六个实体集 |
| 17 | 上级 | superior | 上级联系，涉及两个部门实体集 |
| 18 | 字典 | user\_dict | 存储编码和内容的对应信息 |

## 区域

表9.1‑1关系area的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | no | 主键 | 字符型，固定长度，6位数字 | 流水号 |
| 2 | 名称 | name |  | 字符型，可变长度，100个汉字，不为空，唯一 |  |

## 分公司

表9.2‑1 关系branch\_company的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | no | 主键 | 字符型，固定长度，8位数字 | 流水号 |
| 2 | 名称 | name |  | 字符型，可变长度，100个汉字，不为空，唯一 |  |
| 3 | 地址 | address |  | 字符型，可变长度，100个汉字，不为空，唯一 |  |
| 4 | 联系电话 | phone |  | 字符型，可变长度，20位字母数字字符，不为空 |  |
| 5 | 区域编号 | area\_no | 外键 | 参照9.1区域（编号） |  |

## 火车站

表9.3‑1 关系station的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | station\_no | 主键 | 字符类型，固定长度，4位数字 | 流水号 |
| 2 | 站点名 | name |  | 字符型，可变长度，10个汉字、61个英文字符 | 中文站点名，拼音  如：呼和浩特，huhhot  汉字和英文字符用半角逗号隔开 |
| 3 | 英文名 | english\_name |  | 字符型，可变长度， 60个英文，不为空 |  |
| 4 | 等级 | station\_level |  | 字符型，固定长度，1位数字，不为空 | 401 |
| 5 | 次序 | station\_order |  | 数值型，4位有效数字，无小数，不为空 |  |
| 6 | 供给站标志 | station\_provide\_flag |  | 字符型，固定长度，1位数字，不为空 | 402 |
| 7 | 分公司编号 | comp\_no | 外键 | 参照9.2分公司（编号） |  |

## 部门

表9.4‑1 关系depart的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | no | 主键 | 字符型，固定长度，2位数字 | 流水号 |
| 2 | 名称 | name |  | 字符型，可变长度，20个汉字，不为空，唯一 |  |
| 3 | 简介 | introduce |  | 字符型，可变长度，500个汉字，可以为空 |  |
| 4 | 分公司编号 | comp\_no | 外键 | 参照9.2分公司（编号） |  |

## 岗位

表9.5‑1 关系post的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | no | 主键 | 字符型，固定长度，2位数字 | 流水号 |
| 2 | 名称 | name |  | 字符型，可变长度，20个汉字，不为空，唯一 |  |
| 3 | 职责 | duty |  | 字符型，可变长度，200个汉字，不为空 |  |
| 4 | 部门编号 | dept\_no | 外键 | 参照9.4部门（编号），不为空 |  |

## 员工

表9.6‑1 关系employee的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 账号 | administer\_id | 主键 | 字符型，固定长度，12位数字 | 流水号 |
| 2 | 密码 | administer\_pw |  | 字符型，可变长度，20个英文数字字符，不为空 |  |
| 3 | 姓名 | name |  | 字符型，可变长度，15个汉字，不为空 |  |
| 4 | 身份证号 | id\_card\_num |  | 字符型，固定长度，18个英文数字字符，不为空 |  |
| 5 | 类型 | employee\_type |  | 字符型，固定长度，1位数字，不为空 | 403 |
| 6 | 手机号码 | phone |  | 字符型，固定长度，11个数字，不为空 |  |
| 7 | 火车站编号 | station\_no | 外键 | 参照9.3火车站（编号） |  |

## 列车

表9.7‑1 关系train的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 车次号 | train\_id | 主键 | 字符型，可变长度，5个英文数字字符，不为空 |  |
| 2 | 运行时间 | train\_runtime |  | 日期时间间隔，不为空 |  |
| 3 | 类型 | train\_type |  | 字符型，固定长度，1个英文数字字符，不为空 | 404 |
| 4 | 速度 | train\_speed |  | 数值型，3位有效数字，无小数，不为空 |  |

## 车厢

表9.8‑1 关系carriage的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | carriage\_no | 主键 | 字符型，固定长度，2个英文数字字符 | 流水号 |
| 2 | 类别 | carriage\_type |  | 字符型，可变长度，2个英文数字字符，不为空 | 405 |
| 3 | 实际类别 | seat\_type |  | 字符型，可变长度，2个英文数字字符，不为空 | 405 |
| 4 | 座位总数 | seat\_total |  | 数值型，3位有效数字，不为空 |  |

## 乘客

表9.9‑1 关系passenger的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 身份证号 | no | 主键 | 字符型，固定长度，18个英文数字字符 |  |
| 2 | 姓名 | name |  | 字符型，可变长度，15个汉字，不为空 |  |
| 3 | 手机号码 | phone |  | 字符型，固定长度，11个数字，不为空 |  |
| 4 | 登录密码 | password |  | 字符型，可变长度，50个英文数字字符，不为空 |  |

## 网络售票终端

表9.10‑1 关系terminal的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | no | 主键 | 字符型，固定长度，8位数字 | 流水号 |
| 2 | 语言类型 | terminal\_type |  | 字符型，固定长度，1个英文数字字符，不为空 | 406 |

## 包含

表9.11‑1 关系include的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 列车编号 | train\_no | 主键，外键 | 参照9.7列车（车次号） |  |
| 2 | 车厢编号 | carriage \_no | 主键，外键 | 参照9.8车厢（编号） |  |
| 3 | 车厢号分布范围 | carriage\_range |  | 字符型，可变长度，44个英文数字字符，不为空 | 2个数字，用半角逗号分隔 |
| 4 | 车厢数量 | carriage \_amount |  | 数值型，2位有效数字，无小数，不为空 |  |
| 5 | 发车时间 | start\_time |  | 日期时间型 |  |

## 从事

表9.12‑1 关系work\_on的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 员工编号 | emp\_no | 主键，外键 | 参照9.6员工（账号） |  |
| 2 | 岗位编号 | post\_no | 主键，外键 | 参照9.5岗位（编号） |  |

## 经过

表9.13‑1 关系pass\_by的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | pass\_id | 主键 | 字符型，固定长度，12位数字，不为空 | 流水号 |
| 2 | 列车编号 | train\_no | 外键 | 参照9.7列车（车次号） |  |
| 3 | 火车站编号 | station\_no | 外键 | 参照9.3火车站（编号） |  |
| 4 | 停车时间 | stoptime |  | 日期时间型，精确到分 |  |
| 5 | 发车时间 | start\_time |  | 日期时间型，精确到分 |  |
| 6 | 里程数 | mileage |  | 数值型，7位有效数字，2位小数，不为空 | 量纲：公里 |
| 7 | 站点序 | station\_order |  | 数值型，2位有效数字，无小数，不为空 |  |
| 8 | 区间基础票价 | base\_price |  | 数值型，6位有效数字，2位小数，不为空 |  |
| 9 | 票价上浮比率 | up\_rate |  | 数值型，6位有效数字，4位小数，不为空 |  |

## 车票业务

表9.14‑1 关系ticket\_business的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | no | 主键 | 数值型，12位有效数字 | 流水号 |
| 2 | 乘客号 | passenger\_no | 外键 | 参照9.9乘客（身份证号） |  |
| 3 | 员工号 | emp\_no | 外键 | 参照9.6员工（账号） |  |
| 4 | 车次编号 | train\_no | 外键 | 参照9.7列车（车次号） |  |
| 5 | 车厢编号 | carriage\_no | 外键 | 参照9.8车厢（编号） |  |
| 6 | 乘客出发站 | origin\_station | 外键 | 参照9.3火车站（站点名） |  |
| 7 | 乘客到达站 | destination\_station | 外键 | 参照9.3火车站（站点名） |  |
| 8 | 业务类别 | busi\_type |  | 字符型，固定长度，1个英文数字字符，不为空 | 407 |
| 9 | 办理时间 | do\_time |  | 日期时间型，精确到秒，办理业务时取系统时间，不为空 |  |
| 10 | 订单状态 | busi\_status |  | 字符型，固定长度， 1个英文数字字符，不为空 | 408 |
| 11 | 业务金额 | busi\_amount |  | 数值型，5位有效数字，2位小数，不为空 |  |
| 12 | 车厢号 | carriage\_number |  | 数值型，2位有效数字，无小数，不为空 |  |
| 13 | 座位号 | seat\_number |  | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符，不为空 |  |
| 14 | 发车时间 | start\_time |  | 日期时间型，精确到分，不为空 |  |
| 15 | 到达时间 | arrive\_time |  | 日期时间型，精确到分，不为空 |  |
| 16 | 出票状态 | ticket\_status |  | 字符型，固定长度，1个英文数字字符，不为空 | 409 |
| 17 | 变更到站状态 | change\_station |  | 字符型，固定长度，1个英文数字字符，不为空 | 410 |

## 隶属

表9.15‑1 关系belong\_to的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 部门编号 | depart\_no | 主键，外键 | 参照9.4部门（编号） |  |
| 2 | 火车站编号 | station\_no | 主键，外键 | 参照9.3火车站（编号） |  |

## 自助操作

表9.16‑1 关系self\_service的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 编号 | no | 主键 | 数值型，12位有效数字 | 流水号 |
| 2 | 终端编号 | terminal\_no | 外键 | 参照9.10网络售票终端（编号） |  |
| 3 | 乘客号 | passenger\_no | 外键 | 参照9.9乘客（身份证号） |  |
| 4 | 列车号 | train\_no | 外键 | 参照9.7列车（车次号） |  |
| 5 | 车厢编号 | carriage\_no | 外键 | 参照9.8车厢（编号） |  |
| 6 | 乘客出发站 | origin\_station | 外键 | 参照9.3火车站（站点名） |  |
| 7 | 乘客到达站 | destination\_station | 外键 | 参照9.3火车站（站点名） |  |
| 8 | 业务类别 | busi\_type |  | 字符型，固定长度，1个英文数字字符，不为空 | 407 |
| 9 | 办理时间 | do\_time |  | 日期时间型，精确到秒，不为空 |  |
| 10 | 订单状态 | busi\_status |  | 字符型，固定长度，1个英文数字字符，不为空 | 408 |
| 11 | 业务金额 | busi\_amount |  | 数值型，5位有效数字，2位小数，不为空 |  |
| 12 | 车厢号 | carriage\_number |  | 数值型，2位有效数字，无小数，不为空 |  |
| 13 | 座位号 | seat\_number |  | 字符型，可变长度，2个英文数字字符，1个汉字或者1个英文字符，不为空 |  |
| 14 | 发车时间 | start\_time |  | 日期时间型，精确到分，不为空 |  |
| 15 | 到达时间 | arrive\_time |  | 日期时间型，精确到分，不为空 |  |
| 16 | 出票状态 | ticket\_status |  | 字符型，固定长度，1个英文数字字符，不为空 | 409 |
| 17 | 变更到站状态 | change\_station |  | 字符型，固定长度，1个英文数字字符，不为空 | 410 |

## 上级

表9.17‑1 关系superior的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 部门编号 | depart\_no | 主键，外键 | 参照9.4部门（编号） |  |
| 2 | 上级部门编号 | superior\_depart\_no | 主键，外键 | 参照9.4部门（编号） |  |

## 字典

表9.18‑1 关系user\_dict的属性列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 属性名 | 英文名 | 主键/外键 | 要求 | 备注 |
| 1 | 大类编号 | category | 主键 | 字符型，固定长度，3位数字 | 第1位为4 |
| 2 | 编号 | code | 主键 | 字符型，可变长度，6位数字 |  |
| 3 | 内容 | content |  | 字符型，可变长度，100个汉字 |  |

# 全局数据实现

## 站点1

### 序列

表10.1‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 6 | 1 | 1 | 1 | 999999 | 区域编号 |  |
| 2 | seq\_branch\_company\_no | 8 | 1 | 1 | 1 | 99999999 | 分公司编号 |  |
| 3 | seq\_station\_no | 4 | 1 | 1 | 1 | 9999 | 火车站编号 |  |
| 4 | seq\_depart\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 5 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 6 | seq\_administer\_id | 12 | 1 | 1 | 1 | 999999999999 | 员工账号 |  |
| 7 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 8 | seq\_terminal\_no | 8 | 1 | 1 | 1 | 99999999 | 网售终端编号 |  |
| 9 | seq\_pass\_id | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_id | 12 | 1 | 1 | 1 | 999999999999 | 车票业务编号 |  |
| 11 | seq\_self\_service\_id | 12 | 1 | 1 | 1 | 999999999999 | 自助操作编号 |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_6\_0\_1.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 999999 nocache;  --创建序列，用于：分公司编号  create sequence y\_1\_6\_0\_1.seq\_branch\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 nocache;  --创建序列，用于：火车站编号  create sequence y\_1\_6\_0\_1.seq\_station\_no start with 1 increment by 1 minvalue 1 maxvalue 9999 nocache;  --创建序列，用于：部门编号  create sequence y\_1\_6\_0\_1.seq\_depart\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：岗位编号  create sequence y\_1\_6\_0\_1.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：员工账号  create sequence y\_1\_6\_0\_1.seq\_administer\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache;  --创建序列，用于：车厢编号  create sequence y\_1\_6\_0\_1.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 nocache;  --创建序列，用于：网售终端编号  create sequence y\_1\_6\_0\_1.seq\_terminal\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 nocache;  --创建序列，用于：经过编号  create sequence y\_1\_6\_0\_1.seq\_pass\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache;  --创建序列，用于：车票业务编号  create sequence y\_1\_6\_0\_1.seq\_ticket\_business\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache;  --创建序列，用于：自助操作编号  create sequence y\_1\_6\_0\_1.seq\_self\_service\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 nocache; |

### 表

表10.1.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | branch\_company |  |
| 3 | 火车站 | station |  |
| 4 | 部门 | depart |  |
| 5 | 岗位 | post |  |
| 6 | 员工 | employee |  |
| 7 | 列车 | train |  |
| 8 | 车厢 | carriage |  |
| 9 | 乘客 | passenger |  |
| 10 | 网络售票终端 | terminal |  |
| 11 | 包含 | include |  |
| 12 | 从事 | work\_on |  |
| 13 | 经过 | pass\_by |  |
| 14 | 车票业务 | ticket\_business |  |
| 15 | 隶属 | belong\_to |  |
| 16 | 自助操作 | self\_service |  |
| 17 | 上级 | superior |  |
| 18 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表10.1.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(7) | n |  |  | 来自序列seq\_area\_no |
| 2 | 名称 | name | varchar2(300) | n |  | y |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_6\_0\_1.area  (  no char(7) default (to\_char(seq\_area\_no.nextval,'099999')) not null ,  name varchar2(300) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.area is '区域';  comment on column y\_1\_6\_0\_1.area.no is '编号';  comment on column y\_1\_6\_0\_1.area.name is '名称'; |

##### 分公司

表10.1.2.1‑2 branch\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(9) | n |  |  | 来自序列seq\_branch\_company\_no |
| 2 | 名称 | name | varchar2(300) | n |  | y |  |
| 3 | 地址 | address | varchar2(300) | n |  | y |  |
| 4 | 联系电话 | phone | varchar2(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_6\_0\_1.branch\_company  (  no char(9) default (to\_char(seq\_branch\_company\_no.nextval,'09999999')) not null ,  name varchar2(300) unique not null ,  address varchar2(300) unique not null ,  phone varchar2(20) not null ,  area\_no references y\_1\_6\_0\_1.area(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.branch\_company is '分公司';  comment on column y\_1\_6\_0\_1.branch\_company.no is '编号';  comment on column y\_1\_6\_0\_1.branch\_company.name is '名称';  comment on column y\_1\_6\_0\_1.branch\_company.address is '地址';  comment on column y\_1\_6\_0\_1.branch\_company.phone is '联系电话';  comment on column y\_1\_6\_0\_1.branch\_company.area\_no is '区域编号'; |

##### 火车站

表10.1.2.1‑3 station（station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | station\_no | char(5) | n |  |  | 来自序列seq\_station\_no |
| 2 | 站点名 | name | varchar2(91) | n |  |  |  |
| 3 | 英文名 | english\_name | varchar2(60) | n |  |  |  |
| 4 | 等级 | station\_level | char(1) | n |  |  | 401 |
| 5 | 次序 | station\_order | number(4,0) | n |  |  |  |
| 6 | 供给站标志 | station\_provide\_flag | char(1) | n |  |  | 402 |
| 7 | 分公司编号 | comp\_no | branch\_company(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_6\_0\_1.station  (  station\_no char(5) default (to\_char(seq\_station\_no.nextval,'0999')) not null ,  name varchar2(91) not null ,  english\_name varchar2(60) not null ,  station\_level char(1) not null ,  station\_order number(4,0) not null ,  station\_provide\_flag char(1) not null ,  comp\_no references y\_1\_6\_0\_1.branch\_company(no) not null ,  primary key(station\_no)  )  ;  comment on table y\_1\_6\_0\_1.station is '火车站';  comment on column y\_1\_6\_0\_1.station.station\_no is '编号';  comment on column y\_1\_6\_0\_1.station.name is '站点名';  comment on column y\_1\_6\_0\_1.station.english\_name is '英文名';  comment on column y\_1\_6\_0\_1.station.station\_level is '等级';  comment on column y\_1\_6\_0\_1.station.station\_order is '次序';  comment on column y\_1\_6\_0\_1.station.station\_provide\_flag is '供给站标志';  comment on column y\_1\_6\_0\_1.station.comp\_no is '分公司编号'; |

##### 部门

表10.1.2.1‑4 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(3) | n |  |  | 来自序列seq\_depart\_no |
| 2 | 名称 | name | varchar2(60) | n |  | y |  |
| 3 | 简介 | introduce | varchar2(1500) |  |  |  |  |
| 4 | 分公司编号 | comp\_no | branch\_company(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_6\_0\_1.depart  (  no char(3) default (to\_char(seq\_depart\_no.nextval,'09')) not null ,  name varchar2(60) unique not null ,  introduce varchar2(1500) ,  comp\_no references y\_1\_6\_0\_1.branch\_company(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.depart is '部门';  comment on column y\_1\_6\_0\_1.depart.no is '编号';  comment on column y\_1\_6\_0\_1.depart.name is '名称';  comment on column y\_1\_6\_0\_1.depart.introduce is '简介';  comment on column y\_1\_6\_0\_1.depart.comp\_no is '分公司编号'; |

##### 岗位

表10.1.2.1‑5 post（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(3) | n |  |  | 来自序列seq\_post\_no |
| 2 | 名称 | name | varchar2(60) | n |  | y |  |
| 3 | 职责 | duty | varchar2(600) | n |  |  |  |
| 4 | 部门编号 | dept\_no | depart (no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_6\_0\_1.post  (  no char(3) default (to\_char(seq\_post\_no.nextval,'09')) not null ,  name varchar2(60) unique not null ,  duty varchar2(600) not null ,  dept\_no references y\_1\_6\_0\_1.depart (no) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.post is '岗位';  comment on column y\_1\_6\_0\_1.post.no is '编号';  comment on column y\_1\_6\_0\_1.post.name is '名称';  comment on column y\_1\_6\_0\_1.post.duty is '职责';  comment on column y\_1\_6\_0\_1.post.dept\_no is '部门编号'; |

##### 员工

表10.1.2.1‑6 employee（administer\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 账号 | administer\_id | char(13) | n |  |  | 来自序列seq\_administer\_id |
| 2 | 密码 | administer\_pw | varchar2(20) | n |  |  |  |
| 3 | 姓名 | name | varchar2(45) | n |  |  |  |
| 4 | 身份证号 | id\_card\_num | char(18) | n |  |  |  |
| 5 | 类型 | employee\_type | char(1) | n |  |  | 403 |
| 6 | 手机号码 | phone | char(11) | n |  |  |  |
| 7 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_6\_0\_1.employee  (  administer\_id char(13) default (to\_char(seq\_administer\_id.nextval,'099999999999')) not null ,  administer\_pw varchar2(20) not null ,  name varchar2(45) not null ,  id\_card\_num char(18) not null ,  employee\_type char(1) not null ,  phone char(11) not null ,  station\_no references y\_1\_6\_0\_1.station(station\_no) not null ,  primary key(administer\_id)  )  ;  comment on table y\_1\_6\_0\_1.employee is '员工';  comment on column y\_1\_6\_0\_1.employee.administer\_id is '账号';  comment on column y\_1\_6\_0\_1.employee.administer\_pw is '密码';  comment on column y\_1\_6\_0\_1.employee.name is '姓名';  comment on column y\_1\_6\_0\_1.employee.id\_card\_num is '身份证号';  comment on column y\_1\_6\_0\_1.employee.employee\_type is '类型';  comment on column y\_1\_6\_0\_1.employee.phone is '手机号码';  comment on column y\_1\_6\_0\_1.employee.station\_no is '火车站编号'; |

##### 列车

表10.1.2.1‑7 train（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar2(5) | n |  |  |  |
| 2 | 运行时间 | train\_runtime | interval day(1) to second(2) | n |  |  |  |
| 3 | 类型 | train\_type | char(1) | n |  |  | 404 |
| 4 | 速度 | train\_speed | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_6\_0\_1.train  (  train\_id varchar2(5) not null ,  train\_runtime interval day(1) to second(2) not null ,  train\_type char(1) not null ,  train\_speed number(3,0) not null ,  primary key(train\_id)  )  ;  comment on table y\_1\_6\_0\_1.train is '列车';  comment on column y\_1\_6\_0\_1.train.train\_id is '车次号';  comment on column y\_1\_6\_0\_1.train.train\_runtime is '运行时间';  comment on column y\_1\_6\_0\_1.train.train\_type is '类型';  comment on column y\_1\_6\_0\_1.train.train\_speed is '速度'; |

##### 车厢

表10.1.2.1‑8 carriage（carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | carriage\_no | char(3) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 类别 | carriage\_type | varchar2(2) | n |  |  | 405 |
| 3 | 实际类别 | seat\_type | varchar2(2) | n |  |  | 405 |
| 4 | 座位总数 | seat\_total | number(3,0) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_6\_0\_1.carriage  (  carriage\_no char(3) default (to\_char(seq\_carriage\_no.nextval,'09')) not null ,  carriage\_type varchar2(2) not null ,  seat\_type varchar2(2) not null ,  seat\_total number(3,0) not null ,  primary key(carriage\_no)  )  ;  comment on table y\_1\_6\_0\_1.carriage is '车厢';  comment on column y\_1\_6\_0\_1.carriage.carriage\_no is '编号';  comment on column y\_1\_6\_0\_1.carriage.carriage\_type is '类别';  comment on column y\_1\_6\_0\_1.carriage.seat\_type is '实际类别';  comment on column y\_1\_6\_0\_1.carriage.seat\_total is '座位总数'; |

##### 乘客

表10.1.2.1‑9 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 身份证号 | no | char(18) | n |  |  |  |
| 2 | 姓名 | name | varchar2(45) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |
| 4 | 登录密码 | password | varchar2(50) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_6\_0\_1.passenger  (  no char(18) not null ,  name varchar2(45) not null ,  phone char(11) not null ,  password varchar2(50) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.passenger is '乘客';  comment on column y\_1\_6\_0\_1.passenger.no is '身份证号';  comment on column y\_1\_6\_0\_1.passenger.name is '姓名';  comment on column y\_1\_6\_0\_1.passenger.phone is '手机号码';  comment on column y\_1\_6\_0\_1.passenger.password is '登录密码'; |

##### 网络售票终端

表10.1.2.1‑10 terminal（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(9) | n |  |  | 来自序列seq\_terminal\_no |
| 2 | 语言类型 | terminal\_type | char(1) | n |  |  | 406 |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：网络售票终端  create table y\_1\_6\_0\_1.terminal  (  no char(9) default (to\_char(seq\_terminal\_no.nextval,'09999999')) not null ,  terminal\_type char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.terminal is '网络售票终端';  comment on column y\_1\_6\_0\_1.terminal.no is '编号';  comment on column y\_1\_6\_0\_1.terminal.terminal\_type is '语言类型'; |

##### 包含

表10.1.2.1‑11 include（train\_no, carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车编号 | train\_no | train(train\_id) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 3 | 车厢号分布范围 | carriage\_range | varchar2(44) | n |  |  |  |
| 4 | 车厢数量 | carriage\_amount | number(2,0) | n |  |  |  |
| 5 | 发车时间 | start\_time | date |  |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_6\_0\_1.include  (  train\_no references y\_1\_6\_0\_1.train(train\_id) not null ,  carriage\_no references y\_1\_6\_0\_1.carriage(carriage\_no) not null ,  carriage\_range varchar2(44) not null ,  carriage\_amount number(2,0) not null ,  start\_time date ,  primary key(train\_no, carriage\_no)  )  ;  comment on table y\_1\_6\_0\_1.include is '包含';  comment on column y\_1\_6\_0\_1.include.train\_no is '列车编号';  comment on column y\_1\_6\_0\_1.include.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_1.include.carriage\_range is '车厢号分布范围';  comment on column y\_1\_6\_0\_1.include.carriage\_amount is '车厢数量';  comment on column y\_1\_6\_0\_1.include.start\_time is '发车时间'; |

##### 从事

表10.1.2.1‑12 work\_on（emp\_no, post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | emp\_no | employee(administer\_id) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_6\_0\_1.work\_on  (  emp\_no references y\_1\_6\_0\_1.employee(administer\_id) not null ,  post\_no references y\_1\_6\_0\_1.post(no) not null ,  primary key(emp\_no, post\_no)  )  ;  comment on table y\_1\_6\_0\_1.work\_on is '从事';  comment on column y\_1\_6\_0\_1.work\_on.emp\_no is '员工编号';  comment on column y\_1\_6\_0\_1.work\_on.post\_no is '岗位编号'; |

##### 经过

表10.1.2.1‑13 pass\_by（pass\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | pass\_id | char(13) | n |  |  | 来自序列seq\_pass\_id |
| 2 | 列车编号 | train\_no | train(train\_id) | n |  |  |  |
| 3 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |
| 4 | 停车时间 | stoptime | date |  |  |  | 小于发车时间 |
| 5 | 发车时间 | start\_time | date |  |  |  |  |
| 6 | 里程数 | mileage | number(7,2) | n |  |  |  |
| 7 | 站点序 | station\_order | number(2,0) | n |  |  |  |
| 8 | 区间基础票价 | base\_price | number(6,2) | n |  |  |  |
| 9 | 票价上浮比率 | up\_rate | number(6,4) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_6\_0\_1.pass\_by  (  pass\_id char(13) default (to\_char(seq\_pass\_id.nextval,'099999999999')) not null ,  train\_no references y\_1\_6\_0\_1.train(train\_id) not null ,  station\_no references y\_1\_6\_0\_1.station(station\_no) not null ,  stoptime date ,  start\_time date ,  mileage number(7,2) not null ,  station\_order number(2,0) not null ,  base\_price number(6,2) not null ,  up\_rate number(6,4) not null ,  primary key(pass\_id)  )  ;  comment on table y\_1\_6\_0\_1.pass\_by is '经过';  comment on column y\_1\_6\_0\_1.pass\_by.pass\_id is '编号';  comment on column y\_1\_6\_0\_1.pass\_by.train\_no is '列车编号';  comment on column y\_1\_6\_0\_1.pass\_by.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_1.pass\_by.stoptime is '停车时间';  comment on column y\_1\_6\_0\_1.pass\_by.start\_time is '发车时间';  comment on column y\_1\_6\_0\_1.pass\_by.mileage is '里程数';  comment on column y\_1\_6\_0\_1.pass\_by.station\_order is '站点序';  comment on column y\_1\_6\_0\_1.pass\_by.base\_price is '区间基础票价';  comment on column y\_1\_6\_0\_1.pass\_by.up\_rate is '票价上浮比率'; |

##### 车票业务

表10.1.2.1‑14 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | number(12,0) | n |  |  | 来自序列seq\_ticket\_business\_id |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 员工号 | emp\_no | employee(administer\_id) | n |  |  |  |
| 4 | 车次编号 | train\_no | train(train\_id) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | station(station\_no) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | station(station\_no) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 407 |
| 9 | 办理时间 | do\_time | date | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 408 |
| 11 | 业务金额 | busi\_amount | number(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar2(5) | n |  |  |  |
| 14 | 发车时间 | start\_time | date | n |  |  |  |
| 15 | 到达时间 | arrive\_time | date | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 409 |
| 17 | 变更到站状态 | change\_station | char(1) | n |  |  | 410 |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：车票业务  create table y\_1\_6\_0\_1.ticket\_business  (  no number(12,0) default (seq\_ticket\_business\_id.nextval) not null ,  passenger\_no references y\_1\_6\_0\_1.passenger(no) not null ,  emp\_no references y\_1\_6\_0\_1.employee(administer\_id) not null ,  train\_no references y\_1\_6\_0\_1.train(train\_id) not null ,  carriage\_no references y\_1\_6\_0\_1.carriage(carriage\_no) not null ,  origin\_station references y\_1\_6\_0\_1.station(station\_no) not null ,  destination\_station references y\_1\_6\_0\_1.station(station\_no) not null ,  busi\_type char(1) not null ,  do\_time date not null ,  busi\_status char(1) not null ,  busi\_amount number(5,2) not null ,  carriage\_number number(2,0) not null ,  seat\_number varchar2(5) not null ,  start\_time date not null ,  arrive\_time date not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.ticket\_business is '车票业务';  comment on column y\_1\_6\_0\_1.ticket\_business.no is '编号';  comment on column y\_1\_6\_0\_1.ticket\_business.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_1.ticket\_business.emp\_no is '员工号';  comment on column y\_1\_6\_0\_1.ticket\_business.train\_no is '车次编号';  comment on column y\_1\_6\_0\_1.ticket\_business.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_1.ticket\_business.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_1.ticket\_business.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_1.ticket\_business.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_1.ticket\_business.do\_time is '办理时间';  comment on column y\_1\_6\_0\_1.ticket\_business.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_1.ticket\_business.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_1.ticket\_business.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_1.ticket\_business.seat\_number is '座位号';  comment on column y\_1\_6\_0\_1.ticket\_business.start\_time is '发车时间';  comment on column y\_1\_6\_0\_1.ticket\_business.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_1.ticket\_business.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_1.ticket\_business.change\_station is '变更到站状态'; |

##### 隶属

表10.1.2.1‑15 belong\_to（depart\_no, station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | depart\_no | depart(no) | n |  |  |  |
| 2 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：隶属  create table y\_1\_6\_0\_1.belong\_to  (  depart\_no references y\_1\_6\_0\_1.depart(no) not null ,  station\_no references y\_1\_6\_0\_1.station(station\_no,name) not null ,  primary key(depart\_no, station\_no)  )  ;  comment on table y\_1\_6\_0\_1.belong\_to is '隶属';  comment on column y\_1\_6\_0\_1.belong\_to.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_1.belong\_to.station\_no is '火车站编号'; |

##### 自助操作

表10.1.2.1‑16 self\_service（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | number(12,0) | n |  |  | 来自序列seq\_self\_service\_id |
| 2 | 终端编号 | terminal\_no | terminal (no) | n |  |  |  |
| 3 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 4 | 列车号 | train\_no | train(train\_id) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | station(station\_no) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | station(station\_no) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 407 |
| 9 | 办理时间 | do\_time | date | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 408 |
| 11 | 业务金额 | busi\_amount | number(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | number(2,0) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar2(5) | n |  |  |  |
| 14 | 发车时间 | start\_time | date | n |  |  |  |
| 15 | 到达时间 | arrive\_time | date | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 409 |
| 17 | 变更到站状态 | change\_station | char(1) | n |  |  | 410 |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：自助操作  create table y\_1\_6\_0\_1.self\_service  (  no number(12,0) default (seq\_self\_service\_id.nextval) not null ,  terminal\_no references y\_1\_6\_0\_1.terminal (no) not null ,  passenger\_no references y\_1\_6\_0\_1.passenger(no) not null ,  train\_no references y\_1\_6\_0\_1.train(train\_id) not null ,  carriage\_no references y\_1\_6\_0\_1.carriage(carriage\_no) not null ,  origin\_station references y\_1\_6\_0\_1.station(station\_no) not null ,  destination\_station references y\_1\_6\_0\_1.station(station\_no) not null ,  busi\_type char(1) not null ,  do\_time date not null ,  busi\_status char(1) not null ,  busi\_amount number(5,2) not null ,  carriage\_number number(2,0) not null ,  seat\_number varchar2(5) not null ,  start\_time date not null ,  arrive\_time date not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_1.self\_service is '自助操作';  comment on column y\_1\_6\_0\_1.self\_service.no is '编号';  comment on column y\_1\_6\_0\_1.self\_service.terminal\_no is '终端编号';  comment on column y\_1\_6\_0\_1.self\_service.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_1.self\_service.train\_no is '列车号';  comment on column y\_1\_6\_0\_1.self\_service.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_1.self\_service.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_1.self\_service.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_1.self\_service.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_1.self\_service.do\_time is '办理时间';  comment on column y\_1\_6\_0\_1.self\_service.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_1.self\_service.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_1.self\_service.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_1.self\_service.seat\_number is '座位号';  comment on column y\_1\_6\_0\_1.self\_service.start\_time is '发车时间';  comment on column y\_1\_6\_0\_1.self\_service.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_1.self\_service.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_1.self\_service.change\_station is '变更到站状态'; |

##### 上级

表10.1.2.1‑17 superior（depart\_no, superior\_depart\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | depart\_no | depart(no) | n |  |  |  |
| 2 | 上级部门编号 | superior\_depart\_no | depart(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：上级  create table y\_1\_6\_0\_1.superior  (  depart\_no references y\_1\_6\_0\_1.depart(no) not null ,  superior\_depart\_no references y\_1\_6\_0\_1.depart(no) not null ,  primary key(depart\_no, superior\_depart\_no)  )  ;  comment on table y\_1\_6\_0\_1.superior is '上级';  comment on column y\_1\_6\_0\_1.superior.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_1.superior.superior\_depart\_no is '上级部门编号'; |

##### 字典

表10.1.2.1‑18 user\_dict（category, code）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | category | char(3) | n |  |  |  |
| 2 | 编号 | code | varchar2(6) | n |  |  |  |
| 3 | 内容 | content | varchar2(300) |  |  |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_6\_0\_1.user\_dict  (  category char(3) not null ,  code varchar2(6) not null ,  content varchar2(300) ,  primary key(category, code)  )  ;  comment on table y\_1\_6\_0\_1.user\_dict is '字典';  comment on column y\_1\_6\_0\_1.user\_dict.category is '大类编号';  comment on column y\_1\_6\_0\_1.user\_dict.code is '编号';  comment on column y\_1\_6\_0\_1.user\_dict.content is '内容'; |

#### 添加检查约束

表10.1.2‑2语句

|  |
| --- |
| alter table pass\_by add check (start\_time > stoptime); |

### 同义词

表10.1‑2同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | brc | branch\_company | 分公司别称 |  |
| 2 | dep | depart | 部门别称 |  |
| 3 | emp | employee | 员工别称 |  |
| 4 | pas | passenger | 乘客别称 |  |
| 5 | inc | include | 包含别称 |  |
| 6 | tib | ticket\_business | 车票业务别称 |  |
| 7 | sup | superior | 上级别称 |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| --创建同义词：分公司别称  create synonym y\_1\_6\_0\_1.brc for y\_1\_6\_0\_1.branch\_company;  --创建同义词：部门别称  create synonym y\_1\_6\_0\_1.dep for y\_1\_6\_0\_1.depart;  --创建同义词：员工别称  create synonym y\_1\_6\_0\_1.emp for y\_1\_6\_0\_1.employee;  --创建同义词：乘客别称  create synonym y\_1\_6\_0\_1.pas for y\_1\_6\_0\_1.passenger;  --创建同义词：包含别称  create synonym y\_1\_6\_0\_1.inc for y\_1\_6\_0\_1.include;  --创建同义词：车票业务别称  create synonym y\_1\_6\_0\_1.tib for y\_1\_6\_0\_1.ticket\_business;  --创建同义词：上级别称  create synonym y\_1\_6\_0\_1.sup for y\_1\_6\_0\_1.superior; |

### 视图

表10.1‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_branch\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 火车站信息 | v\_station\_mes | 显示带等级名称、供给站标志名称、分公司名称的火车站 | 将等级名称、供给站标志名称、分公司名称加进来 |
| 3 | 部门信息 | v\_depart\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 4 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 5 | 员工信息 | v\_employee\_mes | 显示带类型名称、站点名的员工 | 将类型名称、站点名加进来 |
| 6 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 7 | 车厢信息 | v\_carriage\_mes | 显示带类别名称、实际类别名称的车厢 | 将类别名称、实际类别名称加进来 |
| 8 | 网络售票终端 | v\_terminal\_mes | 显示带语言类型名称的网络售票终端 | 将语言类型名称加进来 |
| 9 | 包含信息 | v\_include\_mes | 显示带列车类型、车厢类别的包含 | 将列车类型、车厢类别加进来 |
| 10 | 从事信息 | v\_work\_on\_mes | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 11 | 经过信息 | v\_pass\_by\_mes | 显示带列车类型、站点名的经过 | 将列车类型、站点名加进来 |
| 12 | 车票业务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、员工姓名、列车类型、车厢类别、乘客出发站点名、乘客到达站点名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的车票业务 | 将乘客姓名、员工姓名、列车类型、车厢类别、乘客出发站点名、乘客到达站点名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |
| 13 | 隶属信息 | v\_belong\_to\_mes | 显示带部门名称、站点名的隶属 | 将部门名称、站点名加进来 |
| 14 | 自助操作信息 | v\_self\_service\_mes | 显示带乘客姓名、列车类型、车厢类别、乘客出发站点名、乘客到达站点名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称的自助操作 | 将乘客姓名、列车类型、车厢类别、乘客出发站点名、乘客到达站点名、业务类别名称、订单状态名称、出票状态名称、变更到站状态名称加进来 |
| 15 | 上级信息 | v\_superior\_mes | 显示带部门名称的上级 | 将部门名称加进来 |

#### 分公司信息的说明

表10.1.3‑1视图v\_branch\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | brc | no |  |  |
| 2 | 名称 | name | brc | name |  |  |
| 3 | 地址 | address | brc | address |  |  |
| 4 | 联系电话 | phone | brc | phone |  |  |
| 5 | 区域编号 | area\_no | brc | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | brc.area\_no= area.no |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：分公司信息的说明  create view y\_1\_6\_0\_1.v\_branch\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from brc a, area b  where a.area\_no= b.no  ;  comment on table y\_1\_6\_0\_1.v\_branch\_company\_mes is '分公司信息的说明';  comment on column y\_1\_6\_0\_1.v\_branch\_company\_mes.no is '编号';  comment on column y\_1\_6\_0\_1.v\_branch\_company\_mes.name is '名称';  comment on column y\_1\_6\_0\_1.v\_branch\_company\_mes.address is '地址';  comment on column y\_1\_6\_0\_1.v\_branch\_company\_mes.phone is '联系电话';  comment on column y\_1\_6\_0\_1.v\_branch\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_6\_0\_1.v\_branch\_company\_mes.area\_name is '区域名称'; |

#### 火车站信息的说明

表10.1.3‑2 视图v\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | station | station\_no |  |  |
| 2 | 站点名 | name | station | name |  |  |
| 3 | 英文名 | english\_name | station | english\_name |  |  |
| 4 | 等级 | station\_level | station | station\_level |  |  |
| 5 | 等级名称 | station\_level\_name | user\_dict c1 | content | c1.category= '401' and  c1.code= station.station.station\_level |  |
| 6 | 次序 | station\_order | station | station\_order |  |  |
| 7 | 供给站标志 | station\_provide\_flag | station | station\_provide\_flag |  |  |
| 8 | 供给站标志名称 | station\_provide\_flag\_name | user\_dict c2 | content | c2.category= '402' and  c2.code= station.station\_provide\_flag |  |
| 9 | 分公司编号 | comp\_no | station | comp\_no |  |  |
| 10 | 分公司名称 | comp\_no\_name | brc | name | station.comp\_no= brc.no |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：火车站信息的说明  create view y\_1\_6\_0\_1.v\_station\_mes(station\_no, name, english\_name, station\_level, station\_level\_name, station\_order, station\_provide\_flag, station\_provide\_flag\_name, comp\_no, comp\_no\_name)  as  select a.station\_no, a.name, a.english\_name, a.station\_level, c1.content, a.station\_order, a.station\_provide\_flag, c2.content, a.comp\_no, d.name  from station a, user\_dict c1, user\_dict c2, brc d  where c1.category= '401' and c1.code= a.a.station\_level and c2.category= '402' and c2.code= a.station\_provide\_flag and a.comp\_no= d.no  ;  comment on table y\_1\_6\_0\_1.v\_station\_mes is '火车站信息的说明';  comment on column y\_1\_6\_0\_1.v\_station\_mes.station\_no is '编号';  comment on column y\_1\_6\_0\_1.v\_station\_mes.name is '站点名';  comment on column y\_1\_6\_0\_1.v\_station\_mes.english\_name is '英文名';  comment on column y\_1\_6\_0\_1.v\_station\_mes.station\_level is '等级';  comment on column y\_1\_6\_0\_1.v\_station\_mes.station\_level\_name is '等级名称';  comment on column y\_1\_6\_0\_1.v\_station\_mes.station\_order is '次序';  comment on column y\_1\_6\_0\_1.v\_station\_mes.station\_provide\_flag is '供给站标志';  comment on column y\_1\_6\_0\_1.v\_station\_mes.station\_provide\_flag\_name is '供给站标志名称';  comment on column y\_1\_6\_0\_1.v\_station\_mes.comp\_no is '分公司编号';  comment on column y\_1\_6\_0\_1.v\_station\_mes.comp\_no\_name is '分公司名称'; |

#### 部门信息的说明

表10.1.3‑3 视图v\_depart\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | dep | no |  |  |
| 2 | 名称 | name | dep | name |  |  |
| 3 | 简介 | introduce | dep | introduce |  |  |
| 4 | 分公司编号 | comp\_no | dep | comp\_no |  |  |
| 5 | 分公司名称 | comp\_name | brc | name | dep.comp\_no= brc.no |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：部门信息的说明  create view y\_1\_6\_0\_1.v\_depart\_mes(no, name, introduce, comp\_no, comp\_name)  as  select a.no, a.name, a.introduce, a.comp\_no, b.name  from dep a, brc b  where a.comp\_no= b.no  ;  comment on table y\_1\_6\_0\_1.v\_depart\_mes is '部门信息的说明';  comment on column y\_1\_6\_0\_1.v\_depart\_mes.no is '编号';  comment on column y\_1\_6\_0\_1.v\_depart\_mes.name is '名称';  comment on column y\_1\_6\_0\_1.v\_depart\_mes.introduce is '简介';  comment on column y\_1\_6\_0\_1.v\_depart\_mes.comp\_no is '分公司编号';  comment on column y\_1\_6\_0\_1.v\_depart\_mes.comp\_name is '分公司名称'; |

#### 岗位信息的说明

表10.1.3‑4 视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | post | no |  |  |
| 2 | 名称 | name | post | name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门编号 | dept\_no | post | dept\_no |  |  |
| 5 | 部门名称 | dept\_name | dep | name | post. dept\_no= dep.no |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：岗位信息的说明  create view y\_1\_6\_0\_1.v\_post\_mes(no, name, duty, dept\_no, dept\_name)  as  select a.no, a.name, a.duty, a.dept\_no, b.name  from post a, dep b  where a. dept\_no= b.no  ;  comment on table y\_1\_6\_0\_1.v\_post\_mes is '岗位信息的说明';  comment on column y\_1\_6\_0\_1.v\_post\_mes.no is '编号';  comment on column y\_1\_6\_0\_1.v\_post\_mes.name is '名称';  comment on column y\_1\_6\_0\_1.v\_post\_mes.duty is '职责';  comment on column y\_1\_6\_0\_1.v\_post\_mes.dept\_no is '部门编号';  comment on column y\_1\_6\_0\_1.v\_post\_mes.dept\_name is '部门名称'; |

#### 员工信息的说明

表10.1.3‑5视图v\_employee\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 账号 | administer\_id | emp | administer\_id |  |  |
| 2 | 密码 | administer\_pw | emp | administer\_pw |  |  |
| 3 | 姓名 | name | emp | name |  |  |
| 4 | 身份证号 | id\_card\_num | emp | id\_card\_num |  |  |
| 5 | 类型 | employee\_type | emp | employee\_type |  |  |
| 6 | 类型名称 | employee\_type\_name | user\_dict | content | user\_dict.category= '403' and  user\_dict.code= emp. employee\_type |  |
| 7 | 手机号码 | phone | emp | phone |  |  |
| 8 | 火车站编号 | station\_no | emp | station\_no |  |  |
| 9 | 站点名 | station\_name | station | name | emp.station\_no= station. station\_no |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：员工信息的说明  create view y\_1\_6\_0\_1.v\_employee\_mes(administer\_id, administer\_pw, name, id\_card\_num, employee\_type, employee\_type\_name, phone, station\_no, station\_name)  as  select a.administer\_id, a.administer\_pw, a.name, a.id\_card\_num, a.employee\_type, b.content, a.phone, a.station\_no, c.name  from emp a, user\_dict b, station c  where b.category= '403' and b.code= a.employee\_type and a.station\_no= c.station\_no  ;  comment on table y\_1\_6\_0\_1.v\_employee\_mes is '员工信息的说明';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.administer\_id is '账号';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.administer\_pw is '密码';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.name is '姓名';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.id\_card\_num is '身份证号';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.employee\_type is '类型';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.employee\_type\_name is '类型名称';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.phone is '手机号码';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_1.v\_employee\_mes.station\_name is '站点名'; |

#### 列车信息的说明

表10.1.3‑6视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train | train\_id |  |  |
| 2 | 运行时间 | train\_runtime | train | train\_runtime |  |  |
| 3 | 类型 | train\_type | train | train\_type |  |  |
| 4 | 类型名称 | train\_type\_name | user\_dict | content | user\_dict.category='404'  and user\_dict.code=train.train\_type |  |
| 5 | 速度 | train\_speed | train | train\_speed |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：列车信息的说明  create view y\_1\_6\_0\_1.v\_train\_mes(train\_id, train\_runtime, train\_type, train\_type\_name, train\_speed)  as  select a.train\_id, a.train\_runtime, a.train\_type, b.content, a.train\_speed  from train a, user\_dict b  where b.category='404'  and b.code=a.train\_type  ;  comment on table y\_1\_6\_0\_1.v\_train\_mes is '列车信息的说明';  comment on column y\_1\_6\_0\_1.v\_train\_mes.train\_id is '车次号';  comment on column y\_1\_6\_0\_1.v\_train\_mes.train\_runtime is '运行时间';  comment on column y\_1\_6\_0\_1.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_6\_0\_1.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_6\_0\_1.v\_train\_mes.train\_speed is '速度'; |

#### 车厢信息的说明

表10.1.3‑7 视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | carriage | carriage\_no |  |  |
| 2 | 类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 类别名称 | carriage\_type\_name | user\_dict c1 | content | c1.category='405'  and c1.code= carriage.carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict c2 | content | c2.category='405'  and c2.code= carriage.seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：车厢信息的说明  create view y\_1\_6\_0\_1.v\_carriage\_mes(carriage\_no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total)  as  select a.carriage\_no, a.carriage\_type, c1.content, a.seat\_type, c2.content, a.seat\_total  from carriage a, user\_dict c1, user\_dict c2  where c1.category='405'  and c1.code= a.carriage\_type and c2.category='405'  and c2.code= a.seat\_type  ;  comment on table y\_1\_6\_0\_1.v\_carriage\_mes is '车厢信息的说明';  comment on column y\_1\_6\_0\_1.v\_carriage\_mes.carriage\_no is '编号';  comment on column y\_1\_6\_0\_1.v\_carriage\_mes.carriage\_type is '类别';  comment on column y\_1\_6\_0\_1.v\_carriage\_mes.carriage\_type\_name is '类别名称';  comment on column y\_1\_6\_0\_1.v\_carriage\_mes.seat\_type is '实际类别';  comment on column y\_1\_6\_0\_1.v\_carriage\_mes.seat\_type\_name is '实际类别名称';  comment on column y\_1\_6\_0\_1.v\_carriage\_mes.seat\_total is '座位总数'; |

#### 网络售票终端信息的说明

表10.1.3‑8视图v\_terminal\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | terminal | no |  |  |
| 2 | 语言类型 | terminal\_type | terminal | terminal\_type |  |  |
| 3 | 语言类型名称 | terminal\_type\_name | user\_dict | content | user\_dict.category='406'  and user\_dict.code= terminal.terminal\_type |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：网络售票终端信息的说明  create view y\_1\_6\_0\_1.v\_terminal\_mes(no, terminal\_type, terminal\_type\_name)  as  select a.no, a.terminal\_type, b.content  from terminal a, user\_dict b  where b.category='406'  and b.code= a.terminal\_type  ;  comment on table y\_1\_6\_0\_1.v\_terminal\_mes is '网络售票终端信息的说明';  comment on column y\_1\_6\_0\_1.v\_terminal\_mes.no is '编号';  comment on column y\_1\_6\_0\_1.v\_terminal\_mes.terminal\_type is '语言类型';  comment on column y\_1\_6\_0\_1.v\_terminal\_mes.terminal\_type\_name is '语言类型名称'; |

#### 从事信息的说明

表10.1.3‑9视图v\_work\_on\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | emp\_no | work\_on | emp\_no |  |  |
| 2 | 员工姓名 | emp\_name | emp | name | emp.administer\_id= work\_on. emp\_no |  |
| 3 | 岗位编号 | post\_no | work\_on | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | name | post.no= work\_on.post\_no |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：从事信息的说明  create view y\_1\_6\_0\_1.v\_work\_on\_mes(emp\_no, emp\_name, post\_no, post\_name)  as  select a.emp\_no, b.name, a.post\_no, c.name  from work\_on a, emp b, post c  where b.administer\_id= a. emp\_no and c.no= a.post\_no  ;  comment on table y\_1\_6\_0\_1.v\_work\_on\_mes is '从事信息的说明';  comment on column y\_1\_6\_0\_1.v\_work\_on\_mes.emp\_no is '员工编号';  comment on column y\_1\_6\_0\_1.v\_work\_on\_mes.emp\_name is '员工姓名';  comment on column y\_1\_6\_0\_1.v\_work\_on\_mes.post\_no is '岗位编号';  comment on column y\_1\_6\_0\_1.v\_work\_on\_mes.post\_name is '岗位名称'; |

#### 经过信息的说明

表10.1.3‑10 视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | pass\_id | pass\_by | pass\_id |  |  |
| 2 | 列车编号 | train\_no | pass\_by | train\_no |  |  |
| 3 | 列车类型 | train\_type | train | train\_type | train.train\_id = pass\_by.train\_no |  |
| 4 | 火车站编号 | station\_no | pass\_by | station\_no |  |  |
| 5 | 站点名 | station\_name | station | name | station.station\_no = pass\_by.station\_no |  |
| 6 | 停车时间 | stoptime | pass\_by | stoptime |  |  |
| 7 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 8 | 里程数 | mileage | pass\_by | mileage |  |  |
| 9 | 站点序 | station\_order | pass\_by | station\_order |  |  |
| 10 | 区间基础票价 | base\_price | pass\_by | base\_price |  |  |
| 11 | 票价上浮比率 | up\_rate | pass\_by | up\_rate |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：经过信息的说明  create view y\_1\_6\_0\_1.v\_pass\_by\_mes(pass\_id, train\_no, train\_type, station\_no, station\_name, stoptime, start\_time, mileage, station\_order, base\_price, up\_rate)  as  select a.pass\_id, a.train\_no, b.train\_type, a.station\_no, c.name, a.stoptime, a.start\_time, a.mileage, a.station\_order, a.base\_price, a.up\_rate  from pass\_by a, train b, station c  where b.train\_id = a.train\_no and c.station\_no = a.station\_no  ;  comment on table y\_1\_6\_0\_1.v\_pass\_by\_mes is '经过信息的说明';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.pass\_id is '编号';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.train\_no is '列车编号';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.train\_type is '列车类型';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.station\_name is '站点名';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.stoptime is '停车时间';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.start\_time is '发车时间';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.mileage is '里程数';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.station\_order is '站点序';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.base\_price is '区间基础票价';  comment on column y\_1\_6\_0\_1.v\_pass\_by\_mes.up\_rate is '票价上浮比率'; |

#### 车票业务信息的说明

表10.1.4‑11 视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | tib | no |  |  |
| 2 | 乘客号 | passenger\_no | tib | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | pas | name | tib.passenger\_no=pas.no |  |
| 4 | 员工号 | emp\_no | tib | emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | emp | name | tib.emp\_no=emp.administer\_id |  |
| 6 | 车次编号 | train\_no | tib | train\_no |  |  |
| 7 | 列车类型 | train\_type | train | train\_type | tib.train\_no =train.train\_id |  |
| 8 | 车厢编号 | carriage\_no | tib | carriage\_no |  |  |
| 9 | 车厢类别 | carriage\_type | carriage | carriage\_type | tib.carriage\_no = carriage. carriage\_no |  |
| 10 | 乘客出发站 | origin\_station | tib | origin\_station |  |  |
| 11 | 出发站点名 | origin\_station\_name | station | name | tib.origin\_station=station.station\_no |  |
| 12 | 乘客到达站 | destination\_station | tib | destination\_station |  |  |
| 13 | 到达站点名 | destination\_station\_n | station | name | tib.destination\_station=station.station\_no |  |
| 14 | 业务类别 | busi\_type | tib | busi\_type |  |  |
| 15 | 业务类别名称 | busi\_type\_name | user\_dict c1 | content | c1.category='407'  and c1.code=tib.busi\_type |  |
| 16 | 办理时间 | do\_time | tib | do\_time |  |  |
| 17 | 订单状态 | busi\_status | tib | busi\_status |  |  |
| 18 | 订单状态名称 | busi\_status\_name | user\_dict c2 | content | c2.category='408'  and c2.code=tib.busi\_status |  |
| 19 | 业务金额 | busi\_amount | tib | busi\_amount |  |  |
| 20 | 车厢号 | carriage\_number | tib | carriage\_number |  |  |
| 21 | 座位号 | seat\_number | tib | seat\_number |  |  |
| 22 | 发车时间 | start\_time | tib | start\_time |  |  |
| 23 | 到达时间 | arrive\_time | tib | arrive\_time |  |  |
| 24 | 出票状态 | ticket\_status | tib | ticket\_status |  |  |
| 25 | 出票状态名称 | ticket\_status\_name | user\_dict c3 | content | c3.category='409'  and c3.code= tib.ticket\_status |  |
| 26 | 变更到站状态 | change\_station | tib | change\_station |  |  |
| 27 | 变更到站状态名称 | change\_station\_name | user\_dict c4 | content | c4.category='410'  and c4.code= tib.change\_station |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：车票业务信息的说明  create view y\_1\_6\_0\_1.v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, train\_type, carriage\_no, carriage\_type, origin\_station, origin\_station\_name, destination\_station, destination\_station\_n, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, d.train\_type, a.carriage\_no, e.carriage\_type, a.origin\_station, f.name, a.destination\_station, f.name, a.busi\_type, c1.content, a.do\_time, a.busi\_status, c2.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, c3.content, a.change\_station, c4.content  from tib a, pas b, emp c, train d, carriage e, station f, user\_dict c1, user\_dict c2, user\_dict c3, user\_dict c4  where a.passenger\_no=b.no and a.emp\_no=c.administer\_id and a.train\_no =d.train\_id and a.carriage\_no = e. carriage\_no and a.origin\_station=f.station\_no and a.destination\_station=f.station\_no and c1.category='407'  and c1.code=a.busi\_type and c2.category='408'  and c2.code=a.busi\_status and c3.category='409'  and c3.code= a.ticket\_status and c4.category='410'  and c4.code= a.change\_station  ;  comment on table y\_1\_6\_0\_1.v\_ticket\_business\_mes is '车票业务信息的说明';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.no is '编号';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.emp\_no is '员工号';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.emp\_name is '员工姓名';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.train\_no is '车次编号';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.train\_type is '列车类型';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.origin\_station\_name is '出发站点名';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.destination\_station\_n is '到达站点名';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.do\_time is '办理时间';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.seat\_number is '座位号';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.start\_time is '发车时间';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.change\_station is '变更到站状态';  comment on column y\_1\_6\_0\_1.v\_ticket\_business\_mes.change\_station\_name is '变更到站状态名称'; |

#### 隶属信息的说明

表10.1.3‑12 视图v\_belong\_to\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | depart\_no | belong\_to | depart\_no |  |  |
| 2 | 部门名称 | depart\_name | dep | name | dep.no= belong\_to.depart\_no |  |
| 3 | 火车站编号 | station\_no | belong\_to | station\_no |  |  |
| 4 | 站点名 | station\_name | station | name | station.station\_no=belong\_to. station\_no |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：隶属信息的说明  create view y\_1\_6\_0\_1.v\_belong\_to\_mes(depart\_no, depart\_name, station\_no, station\_name)  as  select a.depart\_no, b.name, a.station\_no, c.name  from belong\_to a, dep b, station c  where b.no= a.depart\_no and c.station\_no=a. station\_no  ;  comment on table y\_1\_6\_0\_1.v\_belong\_to\_mes is '隶属信息的说明';  comment on column y\_1\_6\_0\_1.v\_belong\_to\_mes.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_1.v\_belong\_to\_mes.depart\_name is '部门名称';  comment on column y\_1\_6\_0\_1.v\_belong\_to\_mes.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_1.v\_belong\_to\_mes.station\_name is '站点名'; |

#### 自助操作信息的说明

表10.1.3‑13 视图v\_self\_service\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | self\_service | no |  |  |
| 2 | 终端编号 | terminal\_no | self\_service | terminal\_no |  |  |
| 3 | 乘客号 | passenger\_no | self\_service | passenger\_no |  |  |
| 4 | 乘客姓名 | passenger\_name | pas | name | self\_service.passenger\_no=pas.no |  |
| 5 | 列车号 | train\_no | self\_service | train\_no |  |  |
| 6 | 列车类型 | train\_type | train | train\_type | self\_service.train\_no =train. train\_id |  |
| 7 | 车厢编号 | carriage\_no | self\_service | carriage\_no |  |  |
| 8 | 车厢类别 | carriage\_type | carriage | carriage\_type | self\_service.carriage\_no = carriage. carriage\_no |  |
| 9 | 乘客出发站 | origin\_station | self\_service | origin\_station |  |  |
| 10 | 出发站点名 | origin\_station\_name | station | name | self\_service.origin\_station=station.station\_no |  |
| 11 | 乘客到达站 | destination\_station | self\_service | destination\_station |  |  |
| 12 | 到达站点名 | destination\_station\_n | station | name | self\_service.destination\_station=station.station\_no |  |
| 13 | 业务类别 | busi\_type | self\_service | busi\_type |  |  |
| 14 | 业务类别名称 | busi\_type\_name | user\_dict c1 | content | c1.category='407'  and c1.code= self\_service.busi\_type |  |
| 15 | 办理时间 | do\_time | self\_service | do\_time |  |  |
| 16 | 订单状态 | busi\_status | self\_service | busi\_status |  |  |
| 17 | 订单状态名称 | busi\_status\_name | user\_dict c2 | content | c2.category= '408'  and c2.code= self\_service.busi\_status |  |
| 18 | 业务金额 | busi\_amount | self\_service | busi\_amount |  |  |
| 19 | 车厢号 | carriage\_number | self\_service | carriage\_number |  |  |
| 20 | 座位号 | seat\_number | self\_service | seat\_number |  |  |
| 21 | 发车时间 | start\_time | self\_service | start\_time |  |  |
| 22 | 到达时间 | arrive\_time | self\_service | arrive\_time |  |  |
| 23 | 出票状态 | ticket\_status | self\_service | ticket\_status |  |  |
| 24 | 出票状态名称 | ticket\_status\_name | user\_dict c3 | content | c3.category='409'   and c3.code= self\_service.ticket\_status |  |
| 25 | 变更到站状态 | change\_station | self\_service | change\_station |  |  |
| 26 | 变更到站状态名称 | change\_station\_name | user\_dict c4 | content | c4.category='410'   and c4.code= self\_service.change\_station |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：自助操作信息的说明  create view y\_1\_6\_0\_1.v\_self\_service\_mes(no, terminal\_no, passenger\_no, passenger\_name, train\_no, train\_type, carriage\_no, carriage\_type, origin\_station, origin\_station\_name, destination\_station, destination\_station\_n, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.terminal\_no, a.passenger\_no, b.name, a.train\_no, c.train\_type, a.carriage\_no, d.carriage\_type, a.origin\_station, e.name, a.destination\_station, e.name, a.busi\_type, c1.content, a.do\_time, a.busi\_status, c2.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, c3.content, a.change\_station, c4.content  from self\_service a, pas b, train c, carriage d, station e, user\_dict c1, user\_dict c2, user\_dict c3, user\_dict c4  where a.passenger\_no=b.no and a.train\_no =c. train\_id and a.carriage\_no = d. carriage\_no and a.origin\_station=e.station\_no and a.destination\_station=e.station\_no and c1.category='407'  and c1.code= a.busi\_type and c2.category= '408'  and c2.code= a.busi\_status and c3.category='409'   and c3.code= a.ticket\_status and c4.category='410'   and c4.code= a.change\_station  ;  comment on table y\_1\_6\_0\_1.v\_self\_service\_mes is '自助操作信息的说明';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.no is '编号';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.terminal\_no is '终端编号';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.train\_no is '列车号';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.train\_type is '列车类型';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.origin\_station\_name is '出发站点名';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.destination\_station\_n is '到达站点名';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.do\_time is '办理时间';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.seat\_number is '座位号';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.start\_time is '发车时间';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.change\_station is '变更到站状态';  comment on column y\_1\_6\_0\_1.v\_self\_service\_mes.change\_station\_name is '变更到站状态名称'; |

#### 上级的说明

表10.1.3‑14视图v\_superior\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | depart\_no | sup | depart\_no |  |  |
| 2 | 部门名称 | depart\_name | dep | name | sup.depart\_no= dep.no |  |
| 3 | 上级部门编号 | superior\_depart\_no | sup | superior\_depart\_no |  |  |

执行脚本（Oracle，y\_1\_6\_0\_1）

|  |
| --- |
| -- 创建视图：上级的说明  create view y\_1\_6\_0\_1.v\_superior\_mes(depart\_no, depart\_name, superior\_depart\_no)  as  select a.depart\_no, b.name, a.superior\_depart\_no  from sup a, dep b  where a.depart\_no= b.no  ;  comment on table y\_1\_6\_0\_1.v\_superior\_mes is '上级的说明';  comment on column y\_1\_6\_0\_1.v\_superior\_mes.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_1.v\_superior\_mes.depart\_name is '部门名称';  comment on column y\_1\_6\_0\_1.v\_superior\_mes.superior\_depart\_no is '上级部门编号'; |

### 函数

表10.1‑5函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 身份证号判断 | IsIdValid |  |  | 身份证号规则检查 |  |
| 2 | 手机号判断 | IsMobileValid |  |  | 是否11位数字，且首位为1 |  |

#### 身份证号判断

函数代码

|  |  |
| --- | --- |
| CREATE OR REPLACE FUNCTION FUNC\_AAC002\_15\_18 (prm\_aac002 varchar2)  return varchar2 is  ll\_i number(4) := 18;  ll\_row number(5) := 0;  var\_aac002 varchar2(18);  ll\_sfz18 number(3);  ll\_sfz varchar2(3);  var\_sfz18 varchar(18);  var\_date varchar(10);  dat\_date date;  ll\_num number(2);  s\_sfz varchar2(15);  s\_sss varchar2(20):='X';  v\_newaac002 varchar(20);  n\_length number(2);  V\_CHAR varchar2(15);  s\_date varchar2(15);  begin  if prm\_aac002 is null then  return '';  end if;  if length(prm\_aac002) <> 15 and length(prm\_aac002) <> 18 then  return '';  end if;  if length(prm\_aac002) = 18 then  n\_length := length(prm\_aac002);  FOR n\_i IN 1 .. n\_length LOOP  V\_CHAR := SUBSTR(prm\_aac002, n\_i, 1);  IF V\_CHAR IN ('0', '1', '2', '3', '4', '5', '6', '7', '8', '9') AND N\_I<18 THEN  v\_newaac002 :=prm\_aac002;  ELSIF N\_I=18 AND V\_CHAR IN('0', '1', '2', '3', '4', '5', '6', '7', '8', '9','X') THEN  v\_newaac002 :=prm\_aac002;  else  return '含义非法字符！';  END IF;  END LOOP;  /\*2. 取出生日期是否有效\*/  s\_date := substr(prm\_aac002, 7, 8);  begin  select to\_date(s\_date, 'yyyymmdd') into dat\_date from dual;  exception  when others then  return '出生日期不对！';  end;  if substr(prm\_aac002,7, 2)>20 or substr(prm\_aac002,7, 2) <19 then  return '年度不对！';  end if;  /\*3. 最后位效验\*/  while n\_length >= 2 loop  begin  select to\_number(substr(prm\_aac002, 19 - n\_length, 1))  into ll\_num  from dual;  exception  when others then  return '';  end;  ll\_row := ll\_row + mod(power(2, (n\_length - 1)), 11) \*  to\_number(substr(prm\_aac002, 19 - n\_length, 1));  n\_length := n\_length - 1;  end loop;  ll\_sfz18 := mod(ll\_row, 11);  select decode(to\_char(ll\_sfz18),'0','1','1','0','2','X','3','9','4','8','5','7','6','6','7','5','8','4','9','3','10','2')  into ll\_sfz  from dual;  if ll\_sfz <> substr(prm\_aac002,18, 1) then  return '尾数不对！应为'||ll\_sfz;  end if;  RETURN v\_newaac002;  end if;  if prm\_aac002 = '111111111111111111' then  return '';  end if;  if s\_sfz <>'X' then  s\_sss := s\_sfz;  else  s\_sss := prm\_aac002;  end if;  if length(prm\_aac002)=15 then  var\_date := '19' || substr(s\_sss, 7, 6);  begin  select to\_date(var\_date, 'yyyymmdd') into dat\_date from dual;  exception  when others then  return '';  end;  var\_aac002 := substr(s\_sss, 0, 6) || '19' ||  substr(s\_sss, 7, 9);  while ll\_i >= 2 loop  begin  select to\_number(substr(var\_aac002, 19 - ll\_i, 1))  into ll\_num  from dual;  exception  when others then  return '';  end;  ll\_row := ll\_row + mod(power(2, (ll\_i - 1)), 11) \*  to\_number(substr(var\_aac002, 19 - ll\_i, 1));  ll\_i := ll\_i - 1;  end loop;  ll\_sfz18 := mod(ll\_row, 11);  select decode(to\_char(ll\_sfz18),'0','1','1','0','2','X','3','9','4','8','5','7','6','6','7','5','8','4','9','3','10','2')  into ll\_sfz  from dual;  var\_sfz18 := var\_aac002 || ll\_sfz;  return var\_sfz18;  end if;  end FUNC\_AAC002\_15\_18; |  |

#### 手机号判断

函数代码

|  |  |
| --- | --- |
| create or replace function IsMobileValid  (tMobile varchar2) return varchar2  -- 参数描述  -- tMobile 手机号  -- 返回值描述  -- 正确：ok  -- 错误：错误号-提示信息  as  iCount number(3);  ch char(1);  begin  if length(tMobile)<>11 then  return '-20020-手机号码长度不是11位！';  end if;  if substr(tMobile,1,1)<>'1' then  return '-20021-手机号码首位应该为1！';  end if;  for iCount in 1..length(tMobile) loop  ch:=substr(tMobile,iCount,1);  if ch>'9' or ch<'0' then  return '-20022-手机号码中有非数字字符！';  end if;  end loop;  return 'ok';  end;  /  show error |  |

### 过程

表10.1‑6过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 | 清理所有对象 | Clear\_All |  | 清理所有创建的对象，并清空回收站 |  |

#### 清楚所有对象过程

过程代码

|  |  |
| --- | --- |
| create or replace procedure Clear\_All  is  strSQL varchar2(2000);  begin    for curMes in  (select 'drop trigger '||trigger\_name mes  from user\_triggers  )  loop  strSQL:=curMes.mes;  execute immediate strSQL;  end loop;  -- drop objects  for curMes in  (select object\_type,object\_name  from user\_objects  where object\_type<>'INDEX' and object\_name<>'CLEAR\_ALL'  )  loop  if curMes.object\_type='TABLE' then  strSQL:='drop '||curMes.object\_type||' '||curMes.object\_name||' cascade constraints';  else  strSQL:='drop '||curMes.object\_type||' '||curMes.object\_name;  end if;  execute immediate strSQL;  end loop;  strSQL:='purge recyclebin';  execute immediate strSQL;  exception  when others then  dbms\_output.put\_line('=========出错了！==========');  DBMS\_OUTPUT.PUT\_LINE(SQLERRM);  dbms\_output.put\_line('出错语句='||strSQL);  end;  /  show error |  |

### 触发器

表10.1‑7触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 中文名 | 功能 | 备注 |
| 1 | 校验员工身份证号和手机号 | tri\_employee\_no\_phone | 检查身份证号和手机号是否符合规范 |  |
| 2 | 校验乘客身份证号和手机号 | tri\_passenger\_no\_phone | 检查身份证号和手机号是否符合规范 |  |

#### 校验员工身份证号和手机号

触发器代码

|  |  |
| --- | --- |
| create or replace trigger tri\_employee\_no\_phone  declare  errno number(5);  errmsg varchar2(200);  msg varchar2(200);  begin  msg:=IsIdValid(trim(:new.no));  if msg<>'ok' then  errno:=to\_number(substr(msg,1,6),'99999');  errmsg:=substr(msg,18,200);  raise\_application\_error(errno,errmsg);  end if;  msg:=IsMobileValid(trim(:new.phone));  if msg<>'ok' then  errno:=to\_number(substr(msg,1,6),'99999');  errmsg:=substr(msg,11,200);  raise\_application\_error(errno,errmsg);  end if;  end; |  |

#### 校验乘客身份证号和手机号

触发器代码

|  |  |
| --- | --- |
| create or replace trigger tri\_passenger\_no\_phone  declare  errno number(5);  errmsg varchar2(200);  msg varchar2(200);  begin  msg:=IsIdValid(trim(:new.no));  if msg<>'ok' then  errno:=to\_number(substr(msg,18,6),'99999');  errmsg:=substr(msg,11,200);  raise\_application\_error(errno,errmsg);  end if;  msg:=IsMobileValid(trim(:new.phone));  if msg<>'ok' then  errno:=to\_number(substr(msg,1,6),'99999');  errmsg:=substr(msg,8,200);  raise\_application\_error(errno,errmsg);  end if;  end;  / |  |

### 赋对象权限

表10.1‑8语句

|  |
| --- |
| select 'grant all on '||owner||'.'||table\_name||' to y\_1\_3\_1\_1, y\_1\_3\_2\_1, y\_1\_3\_3\_1;' from dba\_tables  where owner = ' y\_1\_6\_0\_1';  select 'grant select on '||owner||'.'||view\_name||' to y\_1\_3\_1\_1, y\_1\_3\_2\_1, y\_1\_3\_3\_1;' from dba\_views  where owner = ' y\_1\_6\_0\_1'; |

## 站点2

### 序列

表10.2‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 6 | 1 | 1 | 1 | 999999 | 区域编号 |  |
| 2 | seq\_comp\_no | 8 | 1 | 1 | 1 | 99999999 | 分公司编号 |  |
| 3 | seq\_station\_no | 4 | 1 | 1 | 1 | 9999 | 火车站编号 |  |
| 4 | seq\_dept\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 5 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 6 | seq\_administer\_id | 12 | 1 | 1 | 1 | 999999999999 | 员工账号 |  |
| 7 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 8 | seq\_terminal\_no | 8 | 1 | 1 | 1 | 99999999 | 终端编号 |  |
| 9 | seq\_pass\_id | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_no | 12 | 1 | 1 | 1 | 999999999999 | 车票业务编号 |  |
| 11 | seq\_self\_service\_no | 12 | 1 | 1 | 1 | 999999999999 | 自助操作编号 |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_6\_0\_2.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 999999 ;  --创建序列，用于：分公司编号  create sequence y\_1\_6\_0\_2.seq\_comp\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：火车站编号  create sequence y\_1\_6\_0\_2.seq\_station\_no start with 1 increment by 1 minvalue 1 maxvalue 9999 ;  --创建序列，用于：部门编号  create sequence y\_1\_6\_0\_2.seq\_dept\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：岗位编号  create sequence y\_1\_6\_0\_2.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：员工账号  create sequence y\_1\_6\_0\_2.seq\_administer\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车厢编号  create sequence y\_1\_6\_0\_2.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：终端编号  create sequence y\_1\_6\_0\_2.seq\_terminal\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：经过编号  create sequence y\_1\_6\_0\_2.seq\_pass\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车票业务编号  create sequence y\_1\_6\_0\_2.seq\_ticket\_business\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：自助操作编号  create sequence y\_1\_6\_0\_2.seq\_self\_service\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_area\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_comp\_no'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_station\_no'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_dept\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_post\_no'  exec sp\_addextendedproperty 'MS\_Description','员工账号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_administer\_id'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_terminal\_no'  exec sp\_addextendedproperty 'MS\_Description','经过编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_pass\_id'  exec sp\_addextendedproperty 'MS\_Description','车票业务编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_ticket\_business\_no'  exec sp\_addextendedproperty 'MS\_Description','自助操作编号','SCHEMA','y\_1\_6\_0\_2','SEQUENCE','seq\_self\_service\_no' |

### 表

表10.2‑2表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | branch\_company |  |
| 3 | 火车站 | station |  |
| 4 | 部门 | depart |  |
| 5 | 岗位 | post |  |
| 6 | 员工 | employee |  |
| 7 | 列车 | train |  |
| 8 | 车厢 | carriage |  |
| 9 | 乘客 | passenger |  |
| 10 | 网络售票终端 | terminal |  |
| 11 | 包含 | include |  |
| 12 | 从事 | work\_on |  |
| 13 | 经过 | pass\_by |  |
| 14 | 车票业务 | ticket\_business |  |
| 15 | 隶属 | belong\_to |  |
| 16 | 自助操作 | self\_service |  |
| 17 | 上级 | superior |  |
| 18 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表10.2.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(6) | n |  |  | 来自序列seq\_area\_no |
| 2 | 名称 | name | varchar(200) | n |  | y |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_6\_0\_2.area  (  no char(6) default ( next value for y\_1\_6\_0\_2.seq\_area\_no) not null ,  name varchar(200) unique not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','区域','SCHEMA','y\_1\_6\_0\_2','TABLE','area'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','area','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','名称','SCHEMA','y\_1\_6\_0\_2','TABLE','area','COLUMN','name' |

##### 分公司

表10.2.2.1‑2 branch\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(8) | n |  |  | 来自序列seq\_comp\_no |
| 2 | 名称 | name | varchar(200) | n |  | y |  |
| 3 | 地址 | address | varchar(200) | n |  | y |  |
| 4 | 联系电话 | phone | varchar(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_6\_0\_2.branch\_company  (  no char(8) default ( next value for y\_1\_6\_0\_2.seq\_comp\_no) not null ,  name varchar(200) unique not null ,  address varchar(200) unique not null ,  phone varchar(20) not null ,  area\_no char(6) references y\_1\_6\_0\_2.area(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','分公司','SCHEMA','y\_1\_6\_0\_2','TABLE','branch\_company'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','branch\_company','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','名称','SCHEMA','y\_1\_6\_0\_2','TABLE','branch\_company','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','地址','SCHEMA','y\_1\_6\_0\_2','TABLE','branch\_company','COLUMN','address'  exec sp\_addextendedproperty 'MS\_Description','联系电话','SCHEMA','y\_1\_6\_0\_2','TABLE','branch\_company','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_6\_0\_2','TABLE','branch\_company','COLUMN','area\_no' |

##### 火车站

表10.2.2.1‑3 station（station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | station\_no | char(4) | n |  |  | 来自序列seq\_station\_no |
| 2 | 站点名 | name | varchar(81) |  |  |  | 中文站点名，拼音 |
| 3 | 英文名 | english\_name | varchar(60) | n |  |  |  |
| 4 | 等级 | station\_level | char(1) | n |  |  | 401 |
| 5 | 次序 | station\_order | dec(4) | n |  |  |  |
| 6 | 供给站标志 | station\_provide\_flag | char(1) | n |  |  | 402 |
| 7 | 分公司编号 | comp\_no | branch\_company(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_6\_0\_2.station  (  station\_no char(4) default ( next value for y\_1\_6\_0\_2.seq\_station\_no) not null ,  name varchar(81) ,  english\_name varchar(60) not null ,  station\_level char(1) not null ,  station\_order dec(4) not null ,  station\_provide\_flag char(1) not null ,  comp\_no char(8) references y\_1\_6\_0\_2.branch\_company(no) not null ,  primary key(station\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','火车站','SCHEMA','y\_1\_6\_0\_2','TABLE','station'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','station','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_6\_0\_2','TABLE','station','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','英文名','SCHEMA','y\_1\_6\_0\_2','TABLE','station','COLUMN','english\_name'  exec sp\_addextendedproperty 'MS\_Description','等级','SCHEMA','y\_1\_6\_0\_2','TABLE','station','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','次序','SCHEMA','y\_1\_6\_0\_2','TABLE','station','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_6\_0\_2','TABLE','station','COLUMN','station\_provide\_flag'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_6\_0\_2','TABLE','station','COLUMN','comp\_no' |

##### 部门

表10.2.2.1‑4 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_dept\_no |
| 2 | 名称 | name | varchar(40) | n |  | y |  |
| 3 | 简介 | introduce | varchar(1000) |  |  |  |  |
| 4 | 分公司编号 | comp\_no | branch\_company(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_6\_0\_2.depart  (  no char(2) default ( next value for y\_1\_6\_0\_2.seq\_dept\_no) not null ,  name varchar(40) unique not null ,  introduce varchar(1000) ,  comp\_no char(8) references y\_1\_6\_0\_2.branch\_company(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','部门','SCHEMA','y\_1\_6\_0\_2','TABLE','depart'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','depart','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','名称','SCHEMA','y\_1\_6\_0\_2','TABLE','depart','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','简介','SCHEMA','y\_1\_6\_0\_2','TABLE','depart','COLUMN','introduce'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_6\_0\_2','TABLE','depart','COLUMN','comp\_no' |

##### 岗位

表10.2.2.1‑5 post（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_post\_no |
| 2 | 名称 | name | varchar(40) | n |  | y |  |
| 3 | 职责 | duty | varchar(400) | n |  |  |  |
| 4 | 部门编号 | dept\_no | depart(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_6\_0\_2.post  (  no char(2) default ( next value for y\_1\_6\_0\_2.seq\_post\_no) not null ,  name varchar(40) unique not null ,  duty varchar(400) not null ,  dept\_no char(2) references y\_1\_6\_0\_2.depart(no) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','岗位','SCHEMA','y\_1\_6\_0\_2','TABLE','post'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','post','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','名称','SCHEMA','y\_1\_6\_0\_2','TABLE','post','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','职责','SCHEMA','y\_1\_6\_0\_2','TABLE','post','COLUMN','duty'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_6\_0\_2','TABLE','post','COLUMN','dept\_no' |

##### 员工

表10.2.2.1‑6 employee（administer\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 账号 | administer\_id | char(12) | n |  |  | 来自序列seq\_administer\_id |
| 2 | 密码 | administer\_pw | varchar(20) | n |  |  |  |
| 3 | 姓名 | name | varchar(30) | n |  |  |  |
| 4 | 身份证号 | id\_card\_num | char(18) | n |  |  |  |
| 5 | 类型 | employee\_type | char(1) | n |  |  | 403 |
| 6 | 手机号码 | phone | char(11) | n |  |  |  |
| 7 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_6\_0\_2.employee  (  administer\_id char(12) default ( next value for y\_1\_6\_0\_2.seq\_administer\_id) not null ,  administer\_pw varchar(20) not null ,  name varchar(30) not null ,  id\_card\_num char(18) not null ,  employee\_type char(1) not null ,  phone char(11) not null ,  station\_no char(4) references y\_1\_6\_0\_2.station(station\_no) not null ,  primary key(administer\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','员工','SCHEMA','y\_1\_6\_0\_2','TABLE','employee'  exec sp\_addextendedproperty 'MS\_Description','账号','SCHEMA','y\_1\_6\_0\_2','TABLE','employee','COLUMN','administer\_id'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_6\_0\_2','TABLE','employee','COLUMN','administer\_pw'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_6\_0\_2','TABLE','employee','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_6\_0\_2','TABLE','employee','COLUMN','id\_card\_num'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_6\_0\_2','TABLE','employee','COLUMN','employee\_type'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_6\_0\_2','TABLE','employee','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_6\_0\_2','TABLE','employee','COLUMN','station\_no' |

##### 列车

表10.2.2.1‑7 train（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar(5) | n |  |  |  |
| 2 | 运行时间 | train\_runtime | datetime | n |  |  |  |
| 3 | 类型 | train\_type | char(1) | n |  |  | 404 |
| 4 | 速度 | train\_speed | dec(3) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_6\_0\_2.train  (  train\_id varchar(5) not null ,  train\_runtime datetime not null ,  train\_type char(1) not null ,  train\_speed dec(3) not null ,  primary key(train\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','列车','SCHEMA','y\_1\_6\_0\_2','TABLE','train'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_6\_0\_2','TABLE','train','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','运行时间','SCHEMA','y\_1\_6\_0\_2','TABLE','train','COLUMN','train\_runtime'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_6\_0\_2','TABLE','train','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','速度','SCHEMA','y\_1\_6\_0\_2','TABLE','train','COLUMN','train\_speed' |

##### 车厢

表10.2.2.1‑8 carriage（carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | carriage\_no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 类别 | carriage\_type | varchar(2) | n |  |  | 405 |
| 3 | 实际类别 | seat\_type | varchar(2) | n |  |  | 405 |
| 4 | 座位总数 | seat\_total | dec(3) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_6\_0\_2.carriage  (  carriage\_no char(2) default ( next value for y\_1\_6\_0\_2.seq\_carriage\_no) not null ,  carriage\_type varchar(2) not null ,  seat\_type varchar(2) not null ,  seat\_total dec(3) not null ,  primary key(carriage\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车厢','SCHEMA','y\_1\_6\_0\_2','TABLE','carriage'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','carriage','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','类别','SCHEMA','y\_1\_6\_0\_2','TABLE','carriage','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','实际类别','SCHEMA','y\_1\_6\_0\_2','TABLE','carriage','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_6\_0\_2','TABLE','carriage','COLUMN','seat\_total' |

##### 乘客

表10.2.2.1‑9 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 身份证号 | no | char(18) | n |  |  |  |
| 2 | 姓名 | name | varchar(30) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |
| 4 | 登录密码 | password | varchar(50) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_6\_0\_2.passenger  (  no char(18) not null ,  name varchar(30) not null ,  phone char(11) not null ,  password varchar(50) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','乘客','SCHEMA','y\_1\_6\_0\_2','TABLE','passenger'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_6\_0\_2','TABLE','passenger','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_6\_0\_2','TABLE','passenger','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_6\_0\_2','TABLE','passenger','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','登录密码','SCHEMA','y\_1\_6\_0\_2','TABLE','passenger','COLUMN','password' |

##### 网络售票终端

表10.2.2.1‑10 terminal（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(8) | n |  |  | 来自序列seq\_terminal\_no |
| 2 | 语言类型 | terminal\_type | char(1) | n |  |  | 406 |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：网络售票终端  create table y\_1\_6\_0\_2.terminal  (  no char(8) default ( next value for y\_1\_6\_0\_2.seq\_terminal\_no) not null ,  terminal\_type char(1) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','网络售票终端','SCHEMA','y\_1\_6\_0\_2','TABLE','terminal'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','terminal','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','语言类型','SCHEMA','y\_1\_6\_0\_2','TABLE','terminal','COLUMN','terminal\_type' |

##### 包含

表10.2.2.1‑11 include（train\_no, carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车编号 | train\_no | train(train\_id) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 3 | 车厢号分布范围 | carriage\_range | varchar(44) | n |  |  | 2个数字，用半角逗号分隔 |
| 4 | 车厢数量 | carriage\_amount | dec(2) | n |  |  |  |
| 5 | 发车时间 | start\_time | datetime |  |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_6\_0\_2.include  (  train\_no varchar(5) references y\_1\_6\_0\_2.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_6\_0\_2.carriage(carriage\_no) not null ,  carriage\_range varchar(44) not null ,  carriage\_amount dec(2) not null ,  start\_time datetime ,  primary key(train\_no, carriage\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','包含','SCHEMA','y\_1\_6\_0\_2','TABLE','include'  exec sp\_addextendedproperty 'MS\_Description','列车编号','SCHEMA','y\_1\_6\_0\_2','TABLE','include','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_6\_0\_2','TABLE','include','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢号分布范围','SCHEMA','y\_1\_6\_0\_2','TABLE','include','COLUMN','carriage\_range'  exec sp\_addextendedproperty 'MS\_Description','车厢数量','SCHEMA','y\_1\_6\_0\_2','TABLE','include','COLUMN','carriage\_amount'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_6\_0\_2','TABLE','include','COLUMN','start\_time' |

##### 从事

表10.2.2.1‑12 work\_on（emp\_no, post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | emp\_no | employee(administer\_id) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_6\_0\_2.work\_on  (  emp\_no char(12) references y\_1\_6\_0\_2.employee(administer\_id) not null ,  post\_no char(2) references y\_1\_6\_0\_2.post(no) not null ,  primary key(emp\_no, post\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','从事','SCHEMA','y\_1\_6\_0\_2','TABLE','work\_on'  exec sp\_addextendedproperty 'MS\_Description','员工编号','SCHEMA','y\_1\_6\_0\_2','TABLE','work\_on','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_6\_0\_2','TABLE','work\_on','COLUMN','post\_no' |

##### 经过

表10.2.2.1‑13 pass\_by（pass\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | pass\_id | char(12) | n |  |  | 来自序列seq\_pass\_id |
| 2 | 列车编号 | train\_no | train(train\_id) | n |  |  |  |
| 3 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |
| 4 | 停车时间 | stoptime | datetime |  |  |  |  |
| 5 | 发车时间 | start\_time | datetime |  |  |  |  |
| 6 | 里程数 | mileage | dec(7,2) | n |  |  | 量纲：公里 |
| 7 | 站点序 | station\_order | dec(2) | n |  |  |  |
| 8 | 区间基础票价 | base\_price | dec(6,2) | n |  |  |  |
| 9 | 票价上浮比率 | up\_rate | dec(6,4) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_6\_0\_2.pass\_by  (  pass\_id char(12) default ( next value for y\_1\_6\_0\_2.seq\_pass\_id) not null ,  train\_no varchar(5) references y\_1\_6\_0\_2.train(train\_id) not null ,  station\_no char(4) references y\_1\_6\_0\_2.station(station\_no) not null ,  stoptime datetime ,  start\_time datetime ,  mileage dec(7,2) not null ,  station\_order dec(2) not null ,  base\_price dec(6,2) not null ,  up\_rate dec(6,4) not null ,  primary key(pass\_id)  )  ;  exec sp\_addextendedproperty 'MS\_Description','经过','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','pass\_id'  exec sp\_addextendedproperty 'MS\_Description','列车编号','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','停车时间','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','stoptime'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','里程数','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','mileage'  exec sp\_addextendedproperty 'MS\_Description','站点序','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','区间基础票价','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','base\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_6\_0\_2','TABLE','pass\_by','COLUMN','up\_rate' |

##### 车票业务

表10.2.2.1‑14 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_ticket\_business\_no |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 员工号 | emp\_no | employee(administer\_id) | n |  |  |  |
| 4 | 车次编号 | train\_no | train(train\_id) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | station(station\_no) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | station(station\_no) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 407 |
| 9 | 办理时间 | do\_time | datetime | n | getdate() |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 408 |
| 11 | 业务金额 | busi\_amount | dec(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(4) | n |  |  |  |
| 14 | 发车时间 | start\_time | datetime | n |  |  |  |
| 15 | 到达时间 | arrive\_time | datetime | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 409 |
| 17 | 变更到站状态 | change\_station | char(1) | n |  |  | 410 |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：车票业务  create table y\_1\_6\_0\_2.ticket\_business  (  no dec(12) default ( next value for y\_1\_6\_0\_2.seq\_ticket\_business\_no) not null ,  passenger\_no char(18) references y\_1\_6\_0\_2.passenger(no) not null ,  emp\_no char(12) references y\_1\_6\_0\_2.employee(administer\_id) not null ,  train\_no varchar(5) references y\_1\_6\_0\_2.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_6\_0\_2.carriage(carriage\_no) not null ,  origin\_station char(4) references y\_1\_6\_0\_2.station(station\_no) not null ,  destination\_station char(4) references y\_1\_6\_0\_2.station(station\_no) not null ,  busi\_type char(1) not null ,  do\_time datetime default (getdate()) not null ,  busi\_status char(1) not null ,  busi\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(4) not null ,  start\_time datetime not null ,  arrive\_time datetime not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','车票业务','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','员工号','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_6\_0\_2','TABLE','ticket\_business','COLUMN','change\_station' |

##### 隶属

表10.2.2.1‑15 belong\_to（depart\_no, station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | depart\_no | depart(no) | n |  |  |  |
| 2 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：隶属  create table y\_1\_6\_0\_2.belong\_to  (  depart\_no char(2) references y\_1\_6\_0\_2.depart(no) not null ,  station\_no char(4) references y\_1\_6\_0\_2.station(station\_no) not null ,  primary key(depart\_no, station\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','隶属','SCHEMA','y\_1\_6\_0\_2','TABLE','belong\_to'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_6\_0\_2','TABLE','belong\_to','COLUMN','depart\_no'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_6\_0\_2','TABLE','belong\_to','COLUMN','station\_no' |

##### 自助操作

表10.2.2.1‑16 self\_service（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_self\_service\_no |
| 2 | 终端编号 | terminal\_no | terminal(no) | n |  |  |  |
| 3 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 4 | 列车号 | train\_no | train(train\_id) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | station(station\_no) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | station(station\_no) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 407 |
| 9 | 办理时间 | do\_time | datetime | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 408 |
| 11 | 业务金额 | busi\_amount | dec(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(4) | n |  |  |  |
| 14 | 发车时间 | start\_time | datetime | n |  |  |  |
| 15 | 到达时间 | arrive\_time | datetime | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 409 |
| 17 | 变更到站状态 | change\_station | char(1) | n |  |  | 410 |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：自助操作  create table y\_1\_6\_0\_2.self\_service  (  no dec(12) default ( next value for y\_1\_6\_0\_2.seq\_self\_service\_no) not null ,  terminal\_no char(8) references y\_1\_6\_0\_2.terminal(no) not null ,  passenger\_no char(18) references y\_1\_6\_0\_2.passenger(no) not null ,  train\_no varchar(5) references y\_1\_6\_0\_2.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_6\_0\_2.carriage(carriage\_no) not null ,  origin\_station char(4) references y\_1\_6\_0\_2.station(station\_no) not null ,  destination\_station char(4) references y\_1\_6\_0\_2.station(station\_no) not null ,  busi\_type char(1) not null ,  do\_time datetime not null ,  busi\_status char(1) not null ,  busi\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(4) not null ,  start\_time datetime not null ,  arrive\_time datetime not null ,  ticket\_status char(1) not null ,  change\_station char(1) not null ,  primary key(no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','自助操作','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','terminal\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_6\_0\_2','TABLE','self\_service','COLUMN','change\_station' |

##### 上级

表10.2.2.1‑17 superior（depart\_no, superior\_depart\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | depart\_no | depart(no) | n |  |  |  |
| 2 | 上级部门编号 | superior\_depart\_no | depart(no) | n |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：上级  create table y\_1\_6\_0\_2.superior  (  depart\_no char(2) references y\_1\_6\_0\_2.depart(no) not null ,  superior\_depart\_no char(2) references y\_1\_6\_0\_2.depart(no) not null ,  primary key(depart\_no, superior\_depart\_no)  )  ;  exec sp\_addextendedproperty 'MS\_Description','上级','SCHEMA','y\_1\_6\_0\_2','TABLE','superior'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_6\_0\_2','TABLE','superior','COLUMN','depart\_no'  exec sp\_addextendedproperty 'MS\_Description','上级部门编号','SCHEMA','y\_1\_6\_0\_2','TABLE','superior','COLUMN','superior\_depart\_no' |

##### 字典

表10.2.2.1‑18 user\_dict（category,code）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | category | char(3) | n |  |  | 第1位为4 |
| 2 | 编号 | code | varchar(6) | n |  |  |  |
| 3 | 内容 | content | varchar(200) |  |  |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_6\_0\_2.user\_dict  (  category char(3) not null ,  code varchar(6) not null ,  content varchar(200) ,  primary key(category,code)  )  ;  exec sp\_addextendedproperty 'MS\_Description','字典','SCHEMA','y\_1\_6\_0\_2','TABLE','user\_dict'  exec sp\_addextendedproperty 'MS\_Description','大类编号','SCHEMA','y\_1\_6\_0\_2','TABLE','user\_dict','COLUMN','category'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','TABLE','user\_dict','COLUMN','code'  exec sp\_addextendedproperty 'MS\_Description','内容','SCHEMA','y\_1\_6\_0\_2','TABLE','user\_dict','COLUMN','content' |

#### 添加检查约束

表10.2.2‑2语句

|  |
| --- |
| alter table train add check (train\_speed >=0);  alter table carriage add check (seat\_total>=1);  alter table include add check (carriage\_amount>1);  alter table ticket\_business add check (busi\_amount>0);  alter table ticket\_business add check (arrive\_time> start\_time); |

### 同义词

表10.2‑3同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | brc | branch\_company | 分公司别称 |  |
| 2 | dep | depart | 部门别称 |  |
| 3 | emp | employee | 员工别称 |  |
| 4 | pas | passenger | 乘客别称 |  |
| 5 | inc | include | 包含别称 |  |
| 6 | tib | ticket\_business | 车票业务别称 |  |
| 7 | sup | superior | 上级别称 |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| --创建同义词：分公司别称  create synonym y\_1\_6\_0\_2.brc for y\_1\_6\_0\_2.branch\_company;  --创建同义词：部门别称  create synonym y\_1\_6\_0\_2.dep for y\_1\_6\_0\_2.depart;  --创建同义词：员工别称  create synonym y\_1\_6\_0\_2.emp for y\_1\_6\_0\_2.employee;  --创建同义词：乘客别称  create synonym y\_1\_6\_0\_2.pas for y\_1\_6\_0\_2.passenger;  --创建同义词：包含别称  create synonym y\_1\_6\_0\_2.inc for y\_1\_6\_0\_2.include;  --创建同义词：车票业务别称  create synonym y\_1\_6\_0\_2.tib for y\_1\_6\_0\_2.ticket\_business;  --创建同义词：上级别称  create synonym y\_1\_6\_0\_2.sup for y\_1\_6\_0\_2.superior;  exec sp\_addextendedproperty 'MS\_Description','分公司别称','SCHEMA','y\_1\_6\_0\_2','SYNONYM','brc'  exec sp\_addextendedproperty 'MS\_Description','部门别称','SCHEMA','y\_1\_6\_0\_2','SYNONYM','dep'  exec sp\_addextendedproperty 'MS\_Description','员工别称','SCHEMA','y\_1\_6\_0\_2','SYNONYM','emp'  exec sp\_addextendedproperty 'MS\_Description','乘客别称','SCHEMA','y\_1\_6\_0\_2','SYNONYM','pas'  exec sp\_addextendedproperty 'MS\_Description','包含别称','SCHEMA','y\_1\_6\_0\_2','SYNONYM','inc'  exec sp\_addextendedproperty 'MS\_Description','车票业务别称','SCHEMA','y\_1\_6\_0\_2','SYNONYM','tib'  exec sp\_addextendedproperty 'MS\_Description','上级别称','SCHEMA','y\_1\_6\_0\_2','SYNONYM','sup' |

### 视图

表10.2‑4视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_branch\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 火车站信息 | v\_station\_mes | 显示带等级名称、供给站标志名称、分公司名称的火车站 | 将等级名称、供给站标志名称、分公司名称加进来 |
| 3 | 部门信息 | v\_depart\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 4 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 5 | 员工信息 | v\_employee\_mes | 显示带类型名称、站点名的员工 | 将类型名称、站点名加进来 |
| 6 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 7 | 车厢信息 | v\_carriage\_mes | 显示带类别名称、实际类别名称的车厢 | 将类别名称、实际类别名称加进来 |
| 8 | 网络售票终端信息 | v\_terminal\_mes | 显示带语言类型名称的网络售票终端 | 将语言类型名称加进来 |
| 9 | 包含信息 | v\_include\_mes | 显示带列车类型、车厢类别、车厢实际类别的包含 | 将列车类型、车厢类别、车厢实际类别加进来 |
| 10 | 从事信息 | v\_work\_on\_mes | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 11 | 经过信息 | v\_pass\_by\_mes | 显示带站点名的经过 | 将站点名加进来 |
| 12 | 车票业务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、员工姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称的车票业务 | 将乘客姓名、员工姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称加进来 |
| 13 | 隶属信息 | v\_belong\_to\_mes | 显示带部门名称、站点名的隶属 | 将部门名称、站点名加进来 |
| 14 | 自助操作信息 | v\_self\_service\_mes | 显示带乘客姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称的自助操作 | 将乘客姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称加进来 |
| 15 | 上级信息 | v\_superior\_mes | 显示带部门名称的上级 | 将部门名称加进来 |

#### 分公司信息的说明

表10.2.3‑1视图v\_branch\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | branch\_company | no |  |  |
| 2 | 名称 | name | branch\_company | name |  |  |
| 3 | 地址 | address | branch\_company | address |  |  |
| 4 | 联系电话 | phone | branch\_company | phone |  |  |
| 5 | 区域编号 | area\_no | branch\_company | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | branch\_company.area\_no= area.no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：分公司信息的说明  create view y\_1\_6\_0\_2.v\_branch\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from branch\_company a, area b  where a.area\_no= b.no  ;  exec sp\_addextendedproperty 'MS\_Description','分公司信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_branch\_company\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_branch\_company\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_branch\_company\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','地址','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_branch\_company\_mes','COLUMN','address'  exec sp\_addextendedproperty 'MS\_Description','联系电话','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_branch\_company\_mes','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','区域编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_branch\_company\_mes','COLUMN','area\_no'  exec sp\_addextendedproperty 'MS\_Description','区域名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_branch\_company\_mes','COLUMN','area\_name' |

#### 火车站信息的说明

表10.2.3‑2 视图v\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | station | station\_no |  |  |
| 2 | 站点名 | name | station | name |  |  |
| 3 | 英文名 | english\_name | station | english\_name |  |  |
| 4 | 等级 | station\_level | station | station\_level |  |  |
| 5 | 等级名称 | station\_level\_name | user\_dict k1 | content | k1.category= '401' and  k1.code= station.station\_level |  |
| 6 | 次序 | station\_order | station | station\_order |  |  |
| 7 | 供给站标志 | station\_provide\_flag | station | station\_provide\_flag |  |  |
| 8 | 供给站标志名称 | station\_provide\_flag\_name | user\_dict k2 | content | k2.category= '402' and  k2.code= station\_provide\_flag |  |
| 9 | 分公司编号 | comp\_no | station | comp\_no |  |  |
| 10 | 分公司名称 | comp\_no\_name | branch\_company | name | station.comp\_no= branch\_company.no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：火车站信息的说明  create view y\_1\_6\_0\_2.v\_station\_mes(station\_no, name, english\_name, station\_level, station\_level\_name, station\_order, station\_provide\_flag, station\_provide\_flag\_name, comp\_no, comp\_no\_name)  as  select a.station\_no, a.name, a.english\_name, a.station\_level, k1.content, a.station\_order, a.station\_provide\_flag, k2.content, a.comp\_no, d.name  from station a, user\_dict k1, user\_dict k2, branch\_company d  where k1.category= '401' and k1.code= a.station\_level and k2.category= '402' and k2.code= station\_provide\_flag and a.comp\_no= d.no  ;  exec sp\_addextendedproperty 'MS\_Description','火车站信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','英文名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','english\_name'  exec sp\_addextendedproperty 'MS\_Description','等级','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','station\_level'  exec sp\_addextendedproperty 'MS\_Description','等级名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','station\_level\_name'  exec sp\_addextendedproperty 'MS\_Description','次序','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','供给站标志','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','station\_provide\_flag'  exec sp\_addextendedproperty 'MS\_Description','供给站标志名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','station\_provide\_flag\_name'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','comp\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_station\_mes','COLUMN','comp\_no\_name' |

#### 部门信息的说明

表10.2.3‑3 视图v\_depart\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | depart | no |  |  |
| 2 | 名称 | name | depart | name |  |  |
| 3 | 简介 | introduce | depart | introduce |  |  |
| 4 | 分公司编号 | comp\_no | depart | comp\_no |  |  |
| 5 | 分公司名称 | comp\_name | branch\_company | name | depart.comp\_no= branch\_company.no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：部门信息的说明  create view y\_1\_6\_0\_2.v\_depart\_mes(no, name, introduce, comp\_no, comp\_name)  as  select a.no, a.name, a.introduce, a.comp\_no, b.name  from depart a, branch\_company b  where a.comp\_no= b.no  ;  exec sp\_addextendedproperty 'MS\_Description','部门信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_depart\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_depart\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_depart\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','简介','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_depart\_mes','COLUMN','introduce'  exec sp\_addextendedproperty 'MS\_Description','分公司编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_depart\_mes','COLUMN','comp\_no'  exec sp\_addextendedproperty 'MS\_Description','分公司名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_depart\_mes','COLUMN','comp\_name' |

#### 岗位信息的说明

表10.2.3‑4 视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | post | no |  |  |
| 2 | 名称 | name | post | name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门编号 | dept\_no | post | dept\_no |  |  |
| 5 | 部门名称 | dept\_name | depart | name | post. dept\_no= depart.no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：岗位信息的说明  create view y\_1\_6\_0\_2.v\_post\_mes(no, name, duty, dept\_no, dept\_name)  as  select a.no, a.name, a.duty, a.dept\_no, b.name  from post a, depart b  where a. dept\_no= b.no  ;  exec sp\_addextendedproperty 'MS\_Description','岗位信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_post\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_post\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_post\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','职责','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_post\_mes','COLUMN','duty'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_post\_mes','COLUMN','dept\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_post\_mes','COLUMN','dept\_name' |

#### 员工信息的说明

表10.2.3‑5视图v\_employee\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 账号 | administer\_id | employee | administer\_id |  |  |
| 2 | 密码 | administer\_pw | employee | administer\_pw |  |  |
| 3 | 姓名 | name | employee | name |  |  |
| 4 | 身份证号 | id\_card\_num | employee | id\_card\_num |  |  |
| 5 | 类型 | employee\_type | employee | employee\_type |  |  |
| 6 | 类型名称 | employee\_type\_name | user\_dict | content | user\_dict.category= '403' and  user\_dict.code= employee\_type |  |
| 7 | 手机号码 | phone | employee | phone |  |  |
| 8 | 火车站编号 | station\_no | employee | station\_no |  |  |
| 9 | 站点名 | station\_name | station | name | employee.station\_no= station. station\_no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：员工信息的说明  create view y\_1\_6\_0\_2.v\_employee\_mes(administer\_id, administer\_pw, name, id\_card\_num, employee\_type, employee\_type\_name, phone, station\_no, station\_name)  as  select a.administer\_id, a.administer\_pw, a.name, a.id\_card\_num, a.employee\_type, b.content, a.phone, a.station\_no, c.name  from employee a, user\_dict b, station c  where b.category= '403' and b.code= employee\_type and a.station\_no= c. station\_no  ;  exec sp\_addextendedproperty 'MS\_Description','员工信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes'  exec sp\_addextendedproperty 'MS\_Description','账号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','administer\_id'  exec sp\_addextendedproperty 'MS\_Description','密码','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','administer\_pw'  exec sp\_addextendedproperty 'MS\_Description','姓名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','name'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','id\_card\_num'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','employee\_type'  exec sp\_addextendedproperty 'MS\_Description','类型名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','employee\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','手机号码','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','phone'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_employee\_mes','COLUMN','station\_name' |

#### 列车信息的说明

表10.2.3‑6视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train | train\_id |  |  |
| 2 | 运行时间 | train\_runtime | train | train\_runtime |  |  |
| 3 | 类型 | train\_type | train | train\_type |  |  |
| 4 | 类型名称 | train\_type\_name | user\_dict | content | user\_dict.category='404'  and user\_dict.code=train\_type |  |
| 5 | 速度 | train\_speed | train | train\_speed |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：列车信息的说明  create view y\_1\_6\_0\_2.v\_train\_mes(train\_id, train\_runtime, train\_type, train\_type\_name, train\_speed)  as  select a.train\_id, a.train\_runtime, a.train\_type, b.content, a.train\_speed  from train a, user\_dict b  where b.category='404'  and b.code=train\_type  ;  exec sp\_addextendedproperty 'MS\_Description','列车信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_train\_mes'  exec sp\_addextendedproperty 'MS\_Description','车次号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_train\_mes','COLUMN','train\_id'  exec sp\_addextendedproperty 'MS\_Description','运行时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_train\_mes','COLUMN','train\_runtime'  exec sp\_addextendedproperty 'MS\_Description','类型','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_train\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','类型名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_train\_mes','COLUMN','train\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','速度','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_train\_mes','COLUMN','train\_speed' |

#### 车厢信息的说明

表10.2.3‑7 视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | carriage | carriage\_no |  |  |
| 2 | 类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 类别名称 | carriage\_type\_name | user\_dict as1 | content | as1.category='405'  and as1.code= carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict as2 | content | as2.category='405'  and as2.code= seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：车厢信息的说明  create view y\_1\_6\_0\_2.v\_carriage\_mes(carriage\_no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total)  as  select a.carriage\_no, a.carriage\_type, as1.content, a.seat\_type, as2.content, a.seat\_total  from carriage a, user\_dict as1, user\_dict as2  where as1.category='405'  and as1.code= carriage\_type and as2.category='405'  and as2.code= seat\_type  ;  exec sp\_addextendedproperty 'MS\_Description','车厢信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_carriage\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','类别','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','类别名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_carriage\_mes','COLUMN','carriage\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','实际类别','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','实际类别名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','座位总数','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_carriage\_mes','COLUMN','seat\_total' |

#### 网络售票终端信息的说明

表10.2.3‑8视图v\_terminal\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | terminal | no |  |  |
| 2 | 语言类型 | terminal\_type | terminal | terminal\_type |  |  |
| 3 | 语言类型名称 | terminal\_type\_name | user\_dict | content | user\_dict.category='406'  and user\_dict.code= terminal\_type |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：网络售票终端信息的说明  create view y\_1\_6\_0\_2.v\_terminal\_mes(no, terminal\_type, terminal\_type\_name)  as  select a.no, a.terminal\_type, b.content  from terminal a, user\_dict b  where b.category='406'  and b.code= terminal\_type  ;  exec sp\_addextendedproperty 'MS\_Description','网络售票终端信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_terminal\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_terminal\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','语言类型','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_terminal\_mes','COLUMN','terminal\_type'  exec sp\_addextendedproperty 'MS\_Description','语言类型名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_terminal\_mes','COLUMN','terminal\_type\_name' |

#### 从事信息的说明

表10.2.3‑9视图v\_work\_on\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | emp\_no | work\_on | emp\_no |  |  |
| 2 | 员工姓名 | emp\_name | employee | name | employee.administer\_id= work\_on. emp\_no |  |
| 3 | 岗位编号 | post\_no | work\_on | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | name | post.no= work\_on.post\_no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：从事信息的说明  create view y\_1\_6\_0\_2.v\_work\_on\_mes(emp\_no, emp\_name, post\_no, post\_name)  as  select a.emp\_no, b.name, a.post\_no, c.name  from work\_on a, employee b, post c  where b.administer\_id= a. emp\_no and c.no= a.post\_no  ;  exec sp\_addextendedproperty 'MS\_Description','从事信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_work\_on\_mes'  exec sp\_addextendedproperty 'MS\_Description','员工编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_work\_on\_mes','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_work\_on\_mes','COLUMN','emp\_name'  exec sp\_addextendedproperty 'MS\_Description','岗位编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_work\_on\_mes','COLUMN','post\_no'  exec sp\_addextendedproperty 'MS\_Description','岗位名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_work\_on\_mes','COLUMN','post\_name' |

#### 经过信息的说明

表10.2.3‑10 视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | pass\_id | pass\_by | pass\_id |  |  |
| 2 | 列车编号 | train\_no | pass\_by | train\_no |  |  |
| 3 | 火车站编号 | station\_no | pass\_by | station\_no |  |  |
| 4 | 停车时间 | stoptime | pass\_by | stoptime |  |  |
| 5 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 6 | 里程数 | mileage | pass\_by | mileage |  |  |
| 7 | 站点序 | station\_order | pass\_by | station\_order |  |  |
| 8 | 区间基础票价 | base\_price | pass\_by | base\_price |  |  |
| 9 | 票价上浮比率 | up\_rate | pass\_by | up\_rate |  |  |
| 10 | 站点名 | station\_name | station | name | station.no= pass\_by.station\_no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：经过信息的说明  create view y\_1\_6\_0\_2.v\_pass\_by\_mes(pass\_id, train\_no, station\_no, stoptime, start\_time, mileage, station\_order, base\_price, up\_rate, station\_name)  as  select a.pass\_id, a.train\_no, a.station\_no, a.stoptime, a.start\_time, a.mileage, a.station\_order, a.base\_price, a.up\_rate, b.name  from pass\_by a, station b  where b.no= a.station\_no  ;  exec sp\_addextendedproperty 'MS\_Description','经过信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','pass\_id'  exec sp\_addextendedproperty 'MS\_Description','列车编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','停车时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','stoptime'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','里程数','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','mileage'  exec sp\_addextendedproperty 'MS\_Description','站点序','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_order'  exec sp\_addextendedproperty 'MS\_Description','区间基础票价','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','base\_price'  exec sp\_addextendedproperty 'MS\_Description','票价上浮比率','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','up\_rate'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_pass\_by\_mes','COLUMN','station\_name' |

#### 车票业务信息的说明

表10.2.3‑11 视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | ticket\_business | no |  |  |
| 2 | 乘客号 | passenger\_no | ticket\_business | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | ticket\_business.passenger\_no=passenger.no |  |
| 4 | 员工号 | emp\_no | ticket\_business | emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | employee | name | ticket\_business.emp\_no=employee.administer\_id |  |
| 6 | 车次编号 | train\_no | ticket\_business | train\_no |  |  |
| 7 | 列车类型 | train\_type | train | train\_type | ticket\_business.train\_no=train.train\_id |  |
| 8 | 车厢编号 | carriage\_no | ticket\_business | carriage\_no |  |  |
| 9 | 车厢实际类别 | seat\_type | carriage | seat\_type | ticket\_business.carriage\_no=carriage.seat\_type |  |
| 10 | 乘客出发站 | origin\_station | ticket\_business | origin\_station |  |  |
| 11 | 出发站点名 | origin\_station\_name | station | name | ticket\_business.origin\_station=station.station\_no |  |
| 12 | 乘客到达站 | destination\_station | ticket\_business | destination\_station |  |  |
| 13 | 到达站点名 | destination\_station\_n | station | name | ticket\_business.destination\_station=station.station\_no |  |
| 14 | 业务类别 | busi\_type | ticket\_business | busi\_type |  |  |
| 15 | 业务类别名称 | busi\_type\_name | user\_dict j1 | content | j1.category='407'  and j1.code=ticket\_business.busi\_type |  |
| 16 | 办理时间 | do\_time | ticket\_business | do\_time |  |  |
| 17 | 订单状态 | busi\_status | ticket\_business | busi\_status |  |  |
| 18 | 订单状态名称 | busi\_status\_name | user\_dict j2 | content | j2.category='408'  and j2.code=ticket\_business.busi\_status |  |
| 19 | 业务金额 | busi\_amount | ticket\_business | busi\_amount |  |  |
| 20 | 车厢号 | carriage\_number | ticket\_business | carriage\_number |  |  |
| 21 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 22 | 发车时间 | start\_time | ticket\_business | start\_time |  |  |
| 23 | 到达时间 | arrive\_time | ticket\_business | arrive\_time |  |  |
| 24 | 出票状态 | ticket\_status | ticket\_business | ticket\_status |  |  |
| 25 | 出票状态名称 | ticket\_status\_name | user\_dict j3 | content | j3.category='409'  and j3.code=ticket\_business.ticket\_status |  |
| 26 | 变更到站状态 | change\_station | ticket\_business | change\_station |  |  |
| 27 | 变更到站状态名称 | ch\_station\_name | user\_dict j4 | content | j4.category='410'  and j4.code=ticket\_business.change\_station |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：车票业务信息的说明  create view y\_1\_6\_0\_2.v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, train\_type, carriage\_no, seat\_type, origin\_station, origin\_station\_name, destination\_station, destination\_station\_n, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, ch\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, d.train\_type, a.carriage\_no, e.seat\_type, a.origin\_station, f.name, a.destination\_station, f.name, a.busi\_type, j1.content, a.do\_time, a.busi\_status, j2.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, j3.content, a.change\_station, j4.content  from ticket\_business a, passenger b, employee c, train d, carriage e, station f, user\_dict j1, user\_dict j2, user\_dict j3, user\_dict j4  where a.passenger\_no=b.no and a.emp\_no=c.administer\_id and a.train\_no=d.train\_id and a.carriage\_no=e.seat\_type and a.origin\_station=f.station\_no and a.destination\_station=f.station\_no and j1.category='407'  and j1.code=a.busi\_type and j2.category='408'  and j2.code=a.busi\_status and j3.category='409'  and j3.code=a.ticket\_status and j4.category='410'  and j4.code=a.change\_station  ;  exec sp\_addextendedproperty 'MS\_Description','车票业务信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','passenger\_name'  exec sp\_addextendedproperty 'MS\_Description','员工号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','emp\_name'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','列车类型','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢实际类别','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','出发站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','origin\_station\_name'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','到达站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','destination\_station\_n'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','业务类别名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','订单状态名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','ticket\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','change\_station'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_ticket\_business\_mes','COLUMN','ch\_station\_name' |

#### 隶属信息的说明

表10.2.3‑12 视图v\_belong\_to\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | depart\_no | belong\_to | depart\_no |  |  |
| 2 | 火车站编号 | station\_no | belong\_to | station\_no |  |  |
| 3 | 部门名称 | depart\_name | depart | name | depart.no= belong\_to.depart\_no |  |
| 4 | 站点名 | station\_name | station | name | station.station\_no=belong\_to.station\_no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：隶属信息的说明  create view y\_1\_6\_0\_2.v\_belong\_to\_mes(depart\_no, station\_no, depart\_name, station\_name)  as  select a.depart\_no, a.station\_no, b.name, c.name  from belong\_to a, depart b, station c  where b.no= a.depart\_no and c.station\_no=a.station\_no  ;  exec sp\_addextendedproperty 'MS\_Description','隶属信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_belong\_to\_mes'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_belong\_to\_mes','COLUMN','depart\_no'  exec sp\_addextendedproperty 'MS\_Description','火车站编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_belong\_to\_mes','COLUMN','station\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_belong\_to\_mes','COLUMN','depart\_name'  exec sp\_addextendedproperty 'MS\_Description','站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_belong\_to\_mes','COLUMN','station\_name' |

#### 自助操作信息的说明

表10.2.3‑13 视图v\_self\_service\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | self\_service | no |  |  |
| 2 | 终端编号 | terminal\_no | self\_service | terminal\_no |  |  |
| 3 | 乘客号 | passenger\_no | self\_service | passenger\_no |  |  |
| 4 | 乘客姓名 | passenger\_name | passenger | name | self\_service.passenger\_no=passenger.no |  |
| 5 | 列车号 | train\_no | self\_service | train\_no |  |  |
| 6 | 车厢编号 | carriage\_no | self\_service | carriage\_no |  |  |
| 7 | 乘客出发站 | origin\_station | self\_service | origin\_station |  |  |
| 8 | 出发站点名 | origin\_station\_name | station | name | self\_service.origin\_station=station.station\_no |  |
| 9 | 乘客到达站 | destination\_station | self\_service | destination\_station |  |  |
| 10 | 到达站点名 | destination\_station\_n | station | name | self\_service.destination\_station=station.station\_no |  |
| 11 | 业务类别 | busi\_type | self\_service | busi\_type |  |  |
| 12 | 业务类别名称 | busi\_type\_name | user\_dict | content | user\_dict.category='407'  and user\_dict.code=busi\_type |  |
| 13 | 办理时间 | do\_time | self\_service | do\_time |  |  |
| 14 | 订单状态 | busi\_status | self\_service | busi\_status |  |  |
| 15 | 订单状态名称 | busi\_status\_name | user\_dict | content | user\_dict.category= '408'  and user\_dict.code=busi\_status |  |
| 16 | 业务金额 | busi\_amount | self\_service | busi\_amount |  |  |
| 17 | 车厢号 | carriage\_number | self\_service | carriage\_number |  |  |
| 18 | 座位号 | seat\_number | self\_service | seat\_number |  |  |
| 19 | 发车时间 | start\_time | self\_service | start\_time |  |  |
| 20 | 到达时间 | arrive\_time | self\_service | arrive\_time |  |  |
| 21 | 出票状态 | ticket\_status | self\_service | ticket\_status |  |  |
| 22 | 出票状态名称 | ticket\_status\_name | user\_dict | content | user\_dict.category='409'   and user\_dict.code= ticket\_status |  |
| 23 | 变更到站状态 | change\_station | self\_service | change\_station |  |  |
| 24 | 变更到站状态名称 | ch\_station\_name | user\_dict nk1 | content | nk1.category='410'  and nk1.code= change\_station |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：自助操作信息的说明  create view y\_1\_6\_0\_2.v\_self\_service\_mes(no, terminal\_no, passenger\_no, passenger\_name, train\_no, carriage\_no, origin\_station, origin\_station\_name, destination\_station, destination\_station\_n, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, ch\_station\_name)  as  select a.no, a.terminal\_no, a.passenger\_no, b.name, a.train\_no, a.carriage\_no, a.origin\_station, c.name, a.destination\_station, c.name, a.busi\_type, d.content, a.do\_time, a.busi\_status, d.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, d.content, a.change\_station, nk1.content  from self\_service a, passenger b, station c, user\_dict d, user\_dict nk1  where a.passenger\_no=b.no and a.origin\_station=c.station\_no and a.destination\_station=c.station\_no and d.category='407'  and d.code=busi\_type and d.category= '408'  and d.code=busi\_status and d.category='409'   and d.code= ticket\_status and nk1.category='410'  and nk1.code= change\_station  ;  exec sp\_addextendedproperty 'MS\_Description','自助操作信息的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','终端编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','terminal\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','passenger\_name'  exec sp\_addextendedproperty 'MS\_Description','列车号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','出发站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','origin\_station\_name'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','到达站点名','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','destination\_station\_n'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','业务类别名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','订单状态名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','ticket\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','change\_station'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_self\_service\_mes','COLUMN','ch\_station\_name' |

#### 上级的说明

表10.2.3‑14视图v\_superior\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | depart\_no | superior | depart\_no |  |  |
| 2 | 上级部门编号 | superior\_depart\_no | superior | superior\_depart\_no |  |  |
| 3 | 部门名称 | depart\_name | depart | name | superior.depart\_no= depart.no |  |

执行脚本（SQL Server，y\_1\_6\_0\_2）

|  |
| --- |
| -- 创建视图：上级的说明  create view y\_1\_6\_0\_2.v\_superior\_mes(depart\_no, superior\_depart\_no, depart\_name)  as  select a.depart\_no, a.superior\_depart\_no, b.name  from superior a, depart b  where a.depart\_no= b.no  ;  exec sp\_addextendedproperty 'MS\_Description','上级的说明','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_superior\_mes'  exec sp\_addextendedproperty 'MS\_Description','部门编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_superior\_mes','COLUMN','depart\_no'  exec sp\_addextendedproperty 'MS\_Description','上级部门编号','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_superior\_mes','COLUMN','superior\_depart\_no'  exec sp\_addextendedproperty 'MS\_Description','部门名称','SCHEMA','y\_1\_6\_0\_2','VIEW','v\_superior\_mes','COLUMN','depart\_name' |

### 函数

表10.2‑5函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

#### 函数中文名

函数代码

|  |
| --- |
|  |

### 过程

表10.2‑6过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表10.2‑7触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 中文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 触发器中文名

触发器代码

|  |
| --- |
|  |

### 赋对象权限

表10.2‑8语句

|  |
| --- |
| select 'grant all on '||owner||'.'||table\_name||' to y\_1\_7\_1\_2; '||table\_name||' to y\_1\_7\_2\_2; '||table\_name||' to y\_1\_7\_3\_2;' from dba\_tables  where owner = ' y\_1\_6\_0\_2';  select 'grant select on '||owner||'.'||view\_name||' to y\_1\_7\_1\_2; '||view\_name||' to y\_1\_7\_2\_2; '||view\_name||' to y\_1\_7\_3\_2;' from dba\_views  where owner = ' y\_1\_6\_0\_2'; |

## 站点3

### 序列

表10.3‑1序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 6 | 1 | 1 | 1 | 999999 | 区域编号 |  |
| 2 | seq\_branch\_company\_no | 8 | 1 | 1 | 1 | 99999999 | 分公司编号 |  |
| 3 | seq\_station\_no | 4 | 1 | 1 | 1 | 9999 | 火车站编号 |  |
| 4 | seq\_depart\_no | 2 | 1 | 1 | 1 | 99 | 部门编号 |  |
| 5 | seq\_post\_no | 2 | 1 | 1 | 1 | 99 | 岗位编号 |  |
| 6 | seq\_employee\_administer\_id | 12 | 1 | 1 | 1 | 999999999999 | 员工账号 |  |
| 7 | seq\_carriage\_no | 2 | 1 | 1 | 1 | 99 | 车厢编号 |  |
| 8 | seq\_terminal\_no | 8 | 1 | 1 | 1 | 99999999 | 网络售票终端编号 |  |
| 9 | seq\_pass\_by\_pass\_id | 12 | 1 | 1 | 1 | 999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_no | 12 | 1 | 1 | 1 | 999999999999 | 车票业务编号 |  |
| 11 | seq\_self\_service\_no | 12 | 1 | 1 | 1 | 999999999999 | 自助操作编号 |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_6\_0\_3.seq\_area\_no start with 1 increment by 1 minvalue 1 maxvalue 999999 ;  --创建序列，用于：分公司编号  create sequence y\_1\_6\_0\_3.seq\_branch\_company\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：火车站编号  create sequence y\_1\_6\_0\_3.seq\_station\_no start with 1 increment by 1 minvalue 1 maxvalue 9999 ;  --创建序列，用于：部门编号  create sequence y\_1\_6\_0\_3.seq\_depart\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：岗位编号  create sequence y\_1\_6\_0\_3.seq\_post\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：员工账号  create sequence y\_1\_6\_0\_3.seq\_employee\_administer\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车厢编号  create sequence y\_1\_6\_0\_3.seq\_carriage\_no start with 1 increment by 1 minvalue 1 maxvalue 99 ;  --创建序列，用于：网络售票终端编号  create sequence y\_1\_6\_0\_3.seq\_terminal\_no start with 1 increment by 1 minvalue 1 maxvalue 99999999 ;  --创建序列，用于：经过编号  create sequence y\_1\_6\_0\_3.seq\_pass\_by\_pass\_id start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：车票业务编号  create sequence y\_1\_6\_0\_3.seq\_ticket\_business\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  --创建序列，用于：自助操作编号  create sequence y\_1\_6\_0\_3.seq\_self\_service\_no start with 1 increment by 1 minvalue 1 maxvalue 999999999999 ;  comment on sequence y\_1\_6\_0\_3.seq\_area\_no is '区域编号'  comment on sequence y\_1\_6\_0\_3.seq\_branch\_company\_no is '分公司编号'  comment on sequence y\_1\_6\_0\_3.seq\_station\_no is '火车站编号'  comment on sequence y\_1\_6\_0\_3.seq\_depart\_no is '部门编号'  comment on sequence y\_1\_6\_0\_3.seq\_post\_no is '岗位编号'  comment on sequence y\_1\_6\_0\_3.seq\_employee\_administer\_id is '员工账号'  comment on sequence y\_1\_6\_0\_3.seq\_carriage\_no is '车厢编号'  comment on sequence y\_1\_6\_0\_3.seq\_terminal\_no is '网络售票终端编号'  comment on sequence y\_1\_6\_0\_3.seq\_pass\_by\_pass\_id is '经过编号'  comment on sequence y\_1\_6\_0\_3.seq\_ticket\_business\_no is '车票业务编号'  comment on sequence y\_1\_6\_0\_3.seq\_self\_service\_no is '自助操作编号' |

### 表

表10.3.2‑1表名列表

|  |  |  |  |
| --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 备注 |
| 1 | 区域 | area |  |
| 2 | 分公司 | branch\_company |  |
| 3 | 火车站 | station |  |
| 4 | 部门 | depart |  |
| 5 | 岗位 | post |  |
| 6 | 员工 | employee |  |
| 7 | 列车 | train |  |
| 8 | 车厢 | carriage |  |
| 9 | 乘客 | passenger |  |
| 10 | 网络售票终端 | terminal |  |
| 11 | 包含 | include |  |
| 12 | 从事 | work\_on |  |
| 13 | 经过 | pass\_by |  |
| 14 | 车票业务 | ticket\_business |  |
| 15 | 隶属 | belong\_to |  |
| 16 | 自主操作 | self\_service |  |
| 17 | 上级 | superior |  |
| 18 | 字典 | user\_dict |  |

#### 创建基本表

##### 区域

表10.3.2.1‑1 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(6) | n |  |  | 来自序列seq\_area\_no |
| 2 | 名称 | name | varchar(100) | n |  | y |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_6\_0\_3.area  (  no char(6) default nextval('seq\_area\_no') not null ,  name varchar(100) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.area is '区域';  comment on column y\_1\_6\_0\_3.area.no is '编号';  comment on column y\_1\_6\_0\_3.area.name is '名称'; |

##### 分公司

表10.3.2.1‑2 branch\_company（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(8) | n |  |  | 来自序列seq\_branch\_company\_no |
| 2 | 名称 | name | varchar(100) | n |  | y |  |
| 3 | 地址 | address | varchar(100) | n |  | y |  |
| 4 | 联系电话 | phone | varchar(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：分公司  create table y\_1\_6\_0\_3.branch\_company  (  no char(8) default nextval('seq\_branch\_company\_no') not null ,  name varchar(100) unique not null ,  address varchar(100) unique not null ,  phone varchar(20) not null ,  area\_no char(6) references y\_1\_6\_0\_3.area(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.branch\_company is '分公司';  comment on column y\_1\_6\_0\_3.branch\_company.no is '编号';  comment on column y\_1\_6\_0\_3.branch\_company.name is '名称';  comment on column y\_1\_6\_0\_3.branch\_company.address is '地址';  comment on column y\_1\_6\_0\_3.branch\_company.phone is '联系电话';  comment on column y\_1\_6\_0\_3.branch\_company.area\_no is '区域编号'; |

##### 火车站

表10.3.2.1‑3 station（station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | station\_no | char(4) | n |  |  | 来自序列seq\_station\_no |
| 2 | 站点名 | name | varchar(71) | n |  | y |  |
| 3 | 英文名 | english\_name | varchar(60) | n |  |  |  |
| 4 | 等级 | station\_level | char(1) | n |  |  | 401 |
| 5 | 次序 | station\_order | dec(4) | n |  |  |  |
| 6 | 供给站标志 | station\_provide\_flag | char(1) | n |  |  | 402 |
| 7 | 分公司编号 | comp\_no | branch\_company(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：火车站  create table y\_1\_6\_0\_3.station  (  station\_no char(4) default nextval('seq\_station\_no') not null ,  name varchar(71) unique not null ,  english\_name varchar(60) not null ,  station\_level char(1) not null ,  station\_order dec(4) not null ,  station\_provide\_flag char(1) not null ,  comp\_no char(8) references y\_1\_6\_0\_3.branch\_company(no) not null ,  primary key(station\_no)  )  ;  comment on table y\_1\_6\_0\_3.station is '火车站';  comment on column y\_1\_6\_0\_3.station.station\_no is '编号';  comment on column y\_1\_6\_0\_3.station.name is '站点名';  comment on column y\_1\_6\_0\_3.station.english\_name is '英文名';  comment on column y\_1\_6\_0\_3.station.station\_level is '等级';  comment on column y\_1\_6\_0\_3.station.station\_order is '次序';  comment on column y\_1\_6\_0\_3.station.station\_provide\_flag is '供给站标志';  comment on column y\_1\_6\_0\_3.station.comp\_no is '分公司编号'; |

##### 部门

表10.3.2.1‑4 depart（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_depart\_no |
| 2 | 名称 | name | varchar(20) | n |  | y |  |
| 3 | 简介 | introduce | varchar(500) |  |  |  |  |
| 4 | 分公司编号 | comp\_no | branch\_company(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：部门  create table y\_1\_6\_0\_3.depart  (  no char(2) default nextval('seq\_depart\_no') not null ,  name varchar(20) unique not null ,  introduce varchar(500) ,  comp\_no char(8) references y\_1\_6\_0\_3.branch\_company(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.depart is '部门';  comment on column y\_1\_6\_0\_3.depart.no is '编号';  comment on column y\_1\_6\_0\_3.depart.name is '名称';  comment on column y\_1\_6\_0\_3.depart.introduce is '简介';  comment on column y\_1\_6\_0\_3.depart.comp\_no is '分公司编号'; |

##### 岗位

表10.3.2.1‑5 post（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(2) | n |  |  | 来自序列seq\_post\_no |
| 2 | 名称 | name | varchar(20) | n |  | y |  |
| 3 | 职责 | duty | varchar(200) | n |  |  |  |
| 4 | 部门编号 | dept\_no | depart(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：岗位  create table y\_1\_6\_0\_3.post  (  no char(2) default nextval('seq\_post\_no') not null ,  name varchar(20) unique not null ,  duty varchar(200) not null ,  dept\_no char(2) references y\_1\_6\_0\_3.depart(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.post is '岗位';  comment on column y\_1\_6\_0\_3.post.no is '编号';  comment on column y\_1\_6\_0\_3.post.name is '名称';  comment on column y\_1\_6\_0\_3.post.duty is '职责';  comment on column y\_1\_6\_0\_3.post.dept\_no is '部门编号'; |

##### 员工

表10.3.2.1‑6 employee（administer\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 账号 | administer\_id | char(12) | n |  |  | 来自序列seq\_employee\_administer\_id |
| 2 | 密码 | administer\_pw | varchar(20) | n |  |  |  |
| 3 | 姓名 | name | varchar(15) | n |  |  |  |
| 4 | 身份证号 | id\_card\_num | char(18) | n |  |  |  |
| 5 | 类型 | employee\_type | char(1) | n |  |  | 403 |
| 6 | 手机号码 | phone | char(11) | n |  |  |  |
| 7 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：员工  create table y\_1\_6\_0\_3.employee  (  administer\_id char(12) default nextval('seq\_employee\_administer\_id') not null ,  administer\_pw varchar(20) not null ,  name varchar(15) not null ,  id\_card\_num char(18) not null ,  employee\_type char(1) not null ,  phone char(11) not null ,  station\_no char(4) references y\_1\_6\_0\_3.station(station\_no) not null ,  primary key(administer\_id)  )  ;  comment on table y\_1\_6\_0\_3.employee is '员工';  comment on column y\_1\_6\_0\_3.employee.administer\_id is '账号';  comment on column y\_1\_6\_0\_3.employee.administer\_pw is '密码';  comment on column y\_1\_6\_0\_3.employee.name is '姓名';  comment on column y\_1\_6\_0\_3.employee.id\_card\_num is '身份证号';  comment on column y\_1\_6\_0\_3.employee.employee\_type is '类型';  comment on column y\_1\_6\_0\_3.employee.phone is '手机号码';  comment on column y\_1\_6\_0\_3.employee.station\_no is '火车站编号'; |

##### 列车

表10.3.2.1‑7 train（train\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 车次号 | train\_id | varchar(5) | n |  |  |  |
| 2 | 运行时间 | train\_runtime | interval | n |  |  |  |
| 3 | 类型 | train\_type | char(1) | n |  |  | 404 |
| 4 | 速度 | train\_speed | dec(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：列车  create table y\_1\_6\_0\_3.train  (  train\_id varchar(5) not null ,  train\_runtime interval not null ,  train\_type char(1) not null ,  train\_speed dec(3) not null ,  primary key(train\_id)  )  ;  comment on table y\_1\_6\_0\_3.train is '列车';  comment on column y\_1\_6\_0\_3.train.train\_id is '车次号';  comment on column y\_1\_6\_0\_3.train.train\_runtime is '运行时间';  comment on column y\_1\_6\_0\_3.train.train\_type is '类型';  comment on column y\_1\_6\_0\_3.train.train\_speed is '速度'; |

##### 车厢

表10.3.2.1‑8 carriage（carriage\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | carriage\_no | char(2) | n |  |  | 来自序列seq\_carriage\_no |
| 2 | 类别 | carriage\_type | varchar(2) | n |  |  | 405 |
| 3 | 实际类别 | seat\_type | varchar(2) | n |  |  | 405 |
| 4 | 座位总数 | seat\_total | dec(3) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：车厢  create table y\_1\_6\_0\_3.carriage  (  carriage\_no char(2) default nextval('seq\_carriage\_no') not null ,  carriage\_type varchar(2) not null ,  seat\_type varchar(2) not null ,  seat\_total dec(3) not null ,  primary key(carriage\_no)  )  ;  comment on table y\_1\_6\_0\_3.carriage is '车厢';  comment on column y\_1\_6\_0\_3.carriage.carriage\_no is '编号';  comment on column y\_1\_6\_0\_3.carriage.carriage\_type is '类别';  comment on column y\_1\_6\_0\_3.carriage.seat\_type is '实际类别';  comment on column y\_1\_6\_0\_3.carriage.seat\_total is '座位总数'; |

##### 乘客

表10.3.2.1‑9 passenger（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 身份证号 | no | char(18) | n |  |  |  |
| 2 | 姓名 | name | varchar(15) | n |  |  |  |
| 3 | 手机号码 | phone | char(11) | n |  |  |  |
| 4 | 登录密码 | password | varchar(50) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：乘客  create table y\_1\_6\_0\_3.passenger  (  no char(18) not null ,  name varchar(15) not null ,  phone char(11) not null ,  password varchar(50) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.passenger is '乘客';  comment on column y\_1\_6\_0\_3.passenger.no is '身份证号';  comment on column y\_1\_6\_0\_3.passenger.name is '姓名';  comment on column y\_1\_6\_0\_3.passenger.phone is '手机号码';  comment on column y\_1\_6\_0\_3.passenger.password is '登录密码'; |

##### 网络售票终端

表10.3.2.1‑10 terminal（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(8) | n |  |  | 来自序列seq\_terminal\_no |
| 2 | 语言类型 | terminal\_type | char(1) | n |  |  | 406 |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：网络售票终端  create table y\_1\_6\_0\_3.terminal  (  no char(8) default nextval('seq\_terminal\_no') not null ,  terminal\_type char(1) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.terminal is '网络售票终端';  comment on column y\_1\_6\_0\_3.terminal.no is '编号';  comment on column y\_1\_6\_0\_3.terminal.terminal\_type is '语言类型'; |

##### 包含

表10.3.2.1‑11 include（train\_no, carriage \_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 列车编号 | train\_no | train(train\_id) | n |  |  |  |
| 2 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 3 | 车厢号分布范围 | carriage\_range | varchar(44) | n |  |  |  |
| 4 | 车厢数量 | carriage\_amount | dec(2) | n |  |  |  |
| 5 | 发车时间 | start\_time | timestamp | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：包含  create table y\_1\_6\_0\_3.include  (  train\_no varchar(5) references y\_1\_6\_0\_3.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_6\_0\_3.carriage(carriage\_no) not null ,  carriage\_range varchar(44) not null ,  carriage\_amount dec(2) not null ,  start\_time timestamp not null ,  primary key(train\_no, carriage \_no)  )  ;  comment on table y\_1\_6\_0\_3.include is '包含';  comment on column y\_1\_6\_0\_3.include.train\_no is '列车编号';  comment on column y\_1\_6\_0\_3.include.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_3.include.carriage\_range is '车厢号分布范围';  comment on column y\_1\_6\_0\_3.include.carriage\_amount is '车厢数量';  comment on column y\_1\_6\_0\_3.include.start\_time is '发车时间'; |

##### 从事

表10.3.2.1‑12 work\_on（emp\_no, post\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 员工编号 | emp\_no | employee(administer\_id) | n |  |  |  |
| 2 | 岗位编号 | post\_no | post(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：从事  create table y\_1\_6\_0\_3.work\_on  (  emp\_no char(12) references y\_1\_6\_0\_3.employee(administer\_id) not null ,  post\_no char(2) references y\_1\_6\_0\_3.post(no) not null ,  primary key(emp\_no, post\_no)  )  ;  comment on table y\_1\_6\_0\_3.work\_on is '从事';  comment on column y\_1\_6\_0\_3.work\_on.emp\_no is '员工编号';  comment on column y\_1\_6\_0\_3.work\_on.post\_no is '岗位编号'; |

##### 经过

表10.3.2.1‑13 pass\_by（pass\_id）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | pass\_id | char(12) | n |  |  | 来自序列seq\_pass\_by\_pass\_id |
| 2 | 列车编号 | train\_no | train(train\_id) | n |  |  |  |
| 3 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |
| 4 | 停车时间 | stoptime | timestamp | n |  |  |  |
| 5 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 6 | 里程数 | mileage | dec(7,2) | n |  |  | 量纲：公里 |
| 7 | 站点序 | station\_order | dec(2) | n |  |  |  |
| 8 | 区间基础票价 | base\_price | dec(6,2) | n |  |  |  |
| 9 | 票价上浮比率 | up\_rate | dec(6,4) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：经过  create table y\_1\_6\_0\_3.pass\_by  (  pass\_id char(12) default nextval('seq\_pass\_by\_pass\_id') not null ,  train\_no varchar(5) references y\_1\_6\_0\_3.train(train\_id) not null ,  station\_no char(4) references y\_1\_6\_0\_3.station(station\_no) not null ,  stoptime timestamp not null ,  start\_time timestamp not null ,  mileage dec(7,2) not null ,  station\_order dec(2) not null ,  base\_price dec(6,2) not null ,  up\_rate dec(6,4) not null ,  primary key(pass\_id)  )  ;  comment on table y\_1\_6\_0\_3.pass\_by is '经过';  comment on column y\_1\_6\_0\_3.pass\_by.pass\_id is '编号';  comment on column y\_1\_6\_0\_3.pass\_by.train\_no is '列车编号';  comment on column y\_1\_6\_0\_3.pass\_by.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_3.pass\_by.stoptime is '停车时间';  comment on column y\_1\_6\_0\_3.pass\_by.start\_time is '发车时间';  comment on column y\_1\_6\_0\_3.pass\_by.mileage is '里程数';  comment on column y\_1\_6\_0\_3.pass\_by.station\_order is '站点序';  comment on column y\_1\_6\_0\_3.pass\_by.base\_price is '区间基础票价';  comment on column y\_1\_6\_0\_3.pass\_by.up\_rate is '票价上浮比率'; |

##### 车票业务

表10.3.2.1‑14 ticket\_business（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_ticket\_business\_no |
| 2 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 3 | 员工号 | emp\_no | employee(administer\_id) | n |  |  |  |
| 4 | 车次编号 | train\_no | train(train\_id) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(carriage\_no) | n |  |  |  |
| 6 | 乘客出发站 | origin\_station | station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 407 |
| 9 | 办理时间 | do\_time | timestamp | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 408 |
| 11 | 业务金额 | busi\_amount | dec(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(3) | n |  |  |  |
| 14 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 15 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 409 |
| 17 | 变更到站状态 | change\_station | char(9) | n |  |  | 410 |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：车票业务  create table y\_1\_6\_0\_3.ticket\_business  (  no dec(12) default nextval('seq\_ticket\_business\_no') not null ,  passenger\_no char(18) references y\_1\_6\_0\_3.passenger(no) not null ,  emp\_no char(12) references y\_1\_6\_0\_3.employee(administer\_id) not null ,  train\_no varchar(5) references y\_1\_6\_0\_3.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_6\_0\_3.carriage(carriage\_no) not null ,  origin\_station varchar(71) references y\_1\_6\_0\_3.station(name) not null ,  destination\_station varchar(71) references y\_1\_6\_0\_3.station(name) not null ,  busi\_type char(1) not null ,  do\_time timestamp not null ,  busi\_status char(1) not null ,  busi\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(3) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  ticket\_status char(1) not null ,  change\_station char(9) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.ticket\_business is '车票业务';  comment on column y\_1\_6\_0\_3.ticket\_business.no is '编号';  comment on column y\_1\_6\_0\_3.ticket\_business.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_3.ticket\_business.emp\_no is '员工号';  comment on column y\_1\_6\_0\_3.ticket\_business.train\_no is '车次编号';  comment on column y\_1\_6\_0\_3.ticket\_business.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_3.ticket\_business.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_3.ticket\_business.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_3.ticket\_business.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_3.ticket\_business.do\_time is '办理时间';  comment on column y\_1\_6\_0\_3.ticket\_business.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_3.ticket\_business.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_3.ticket\_business.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_3.ticket\_business.seat\_number is '座位号';  comment on column y\_1\_6\_0\_3.ticket\_business.start\_time is '发车时间';  comment on column y\_1\_6\_0\_3.ticket\_business.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_3.ticket\_business.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_3.ticket\_business.change\_station is '变更到站状态'; |

##### 隶属

表10.3.2.1‑15 belong\_to（depart\_no, station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | depart\_no | depart(no) | n |  |  |  |
| 2 | 火车站编号 | station\_no | station(station\_no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：隶属  create table y\_1\_6\_0\_3.belong\_to  (  depart\_no char(2) references y\_1\_6\_0\_3.depart(no) not null ,  station\_no char(4) references y\_1\_6\_0\_3.station(station\_no) not null ,  primary key(depart\_no, station\_no)  )  ;  comment on table y\_1\_6\_0\_3.belong\_to is '隶属';  comment on column y\_1\_6\_0\_3.belong\_to.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_3.belong\_to.station\_no is '火车站编号'; |

##### 自助操作

表10.3.2.1‑16 self\_service（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | dec(12) | n |  |  | 来自序列seq\_self\_service\_no |
| 2 | 终端编号 | terminal\_no | terminal(no) | n |  |  |  |
| 3 | 乘客号 | passenger\_no | passenger(no) | n |  |  |  |
| 4 | 列车号 | train\_no | train(train\_id) | n |  |  |  |
| 5 | 车厢编号 | carriage\_no | carriage(carriage\_no) |  |  |  |  |
| 6 | 乘客出发站 | origin\_station | station(name) | n |  |  |  |
| 7 | 乘客到达站 | destination\_station | station(name) | n |  |  |  |
| 8 | 业务类别 | busi\_type | char(1) | n |  |  | 407 |
| 9 | 办理时间 | do\_time | timestamp | n |  |  |  |
| 10 | 订单状态 | busi\_status | char(1) | n |  |  | 408 |
| 11 | 业务金额 | busi\_amount | dec(5,2) | n |  |  |  |
| 12 | 车厢号 | carriage\_number | dec(2) | n |  |  |  |
| 13 | 座位号 | seat\_number | varchar(3) | n |  |  |  |
| 14 | 发车时间 | start\_time | timestamp | n |  |  |  |
| 15 | 到达时间 | arrive\_time | timestamp | n |  |  |  |
| 16 | 出票状态 | ticket\_status | char(1) | n |  |  | 409 |
| 17 | 变更到站状态 | change\_station | char(9) | n |  |  | 410 |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：自助操作  create table y\_1\_6\_0\_3.self\_service  (  no dec(12) default nextval('seq\_self\_service\_no') not null ,  terminal\_no char(8) references y\_1\_6\_0\_3.terminal(no) not null ,  passenger\_no char(18) references y\_1\_6\_0\_3.passenger(no) not null ,  train\_no varchar(5) references y\_1\_6\_0\_3.train(train\_id) not null ,  carriage\_no char(2) references y\_1\_6\_0\_3.carriage(carriage\_no) ,  origin\_station varchar(71) references y\_1\_6\_0\_3.station(name) not null ,  destination\_station varchar(71) references y\_1\_6\_0\_3.station(name) not null ,  busi\_type char(1) not null ,  do\_time timestamp not null ,  busi\_status char(1) not null ,  busi\_amount dec(5,2) not null ,  carriage\_number dec(2) not null ,  seat\_number varchar(3) not null ,  start\_time timestamp not null ,  arrive\_time timestamp not null ,  ticket\_status char(1) not null ,  change\_station char(9) not null ,  primary key(no)  )  ;  comment on table y\_1\_6\_0\_3.self\_service is '自助操作';  comment on column y\_1\_6\_0\_3.self\_service.no is '编号';  comment on column y\_1\_6\_0\_3.self\_service.terminal\_no is '终端编号';  comment on column y\_1\_6\_0\_3.self\_service.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_3.self\_service.train\_no is '列车号';  comment on column y\_1\_6\_0\_3.self\_service.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_3.self\_service.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_3.self\_service.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_3.self\_service.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_3.self\_service.do\_time is '办理时间';  comment on column y\_1\_6\_0\_3.self\_service.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_3.self\_service.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_3.self\_service.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_3.self\_service.seat\_number is '座位号';  comment on column y\_1\_6\_0\_3.self\_service.start\_time is '发车时间';  comment on column y\_1\_6\_0\_3.self\_service.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_3.self\_service.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_3.self\_service.change\_station is '变更到站状态'; |

##### 上级

表10.3.2.1‑17 superior（depart\_no, superior\_depart\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 部门编号 | depart\_no | depart(no) | n |  |  |  |
| 2 | 上级部门编号 | superior\_depart\_no | depart(no) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：上级  create table y\_1\_6\_0\_3.superior  (  depart\_no char(2) references y\_1\_6\_0\_3.depart(no) not null ,  superior\_depart\_no char(2) references y\_1\_6\_0\_3.depart(no) not null ,  primary key(depart\_no, superior\_depart\_no)  )  ;  comment on table y\_1\_6\_0\_3.superior is '上级';  comment on column y\_1\_6\_0\_3.superior.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_3.superior.superior\_depart\_no is '上级部门编号'; |

##### 字典

表10.3.2.1‑18 user\_dict（category, code）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 大类编号 | category | char(3) | n |  |  | 第1位为4 |
| 2 | 编号 | code | varchar(6) | n |  |  |  |
| 3 | 内容 | content | varchar(100) | n |  |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建表：字典  create table y\_1\_6\_0\_3.user\_dict  (  category char(3) not null ,  code varchar(6) not null ,  content varchar(100) not null ,  primary key(category, code)  )  ;  comment on table y\_1\_6\_0\_3.user\_dict is '字典';  comment on column y\_1\_6\_0\_3.user\_dict.category is '大类编号';  comment on column y\_1\_6\_0\_3.user\_dict.code is '编号';  comment on column y\_1\_6\_0\_3.user\_dict.content is '内容'; |

#### 添加检查约束

表10.3.2‑2语句

|  |
| --- |
| alter table pass\_by add check (stoptime < start\_time);  alter table ticket\_business add check (start\_time < arrive\_time);  alter table self\_service add check (start\_time < arrive\_time); |

### 同义词

表10.3‑2同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | brc | branch\_company | 分公司别称 |  |
| 2 | dep | depart | 部门别称 |  |
| 3 | emp | employee | 员工别称 |  |
| 4 | pas | passenger | 乘客别称 |  |
| 5 | inc | include | 包含别称 |  |
| 6 | tib | ticket\_business | 车票业务别称 |  |
| 7 | sup | superior | 上级别称 |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| --创建同义词：分公司别称  create view y\_1\_6\_0\_3.brc as select \* from y\_1\_6\_0\_3.branch\_company;  --创建同义词：部门别称  create view y\_1\_6\_0\_3.dep as select \* from y\_1\_6\_0\_3.depart;  --创建同义词：员工别称  create view y\_1\_6\_0\_3.emp as select \* from y\_1\_6\_0\_3.employee;  --创建同义词：乘客别称  create view y\_1\_6\_0\_3.pas as select \* from y\_1\_6\_0\_3.passenger;  --创建同义词：包含别称  create view y\_1\_6\_0\_3.inc as select \* from y\_1\_6\_0\_3.include;  --创建同义词：车票业务别称  create view y\_1\_6\_0\_3.tib as select \* from y\_1\_6\_0\_3.ticket\_business;  --创建同义词：上级别称  create view y\_1\_6\_0\_3.sup as select \* from y\_1\_6\_0\_3.superior;  comment on view y\_1\_6\_0\_3.brc is '分公司别称';  comment on view y\_1\_6\_0\_3.dep is '部门别称';  comment on view y\_1\_6\_0\_3.emp is '员工别称';  comment on view y\_1\_6\_0\_3.pas is '乘客别称';  comment on view y\_1\_6\_0\_3.inc is '包含别称';  comment on view y\_1\_6\_0\_3.tib is '车票业务别称';  comment on view y\_1\_6\_0\_3.sup is '上级别称'; |

### 视图

表10.3‑3视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 | 分公司信息 | v\_branch\_company\_mes | 显示带区域名称的分公司 | 将区域名称加进来 |
| 2 | 火车站信息 | v\_station\_mes | 显示带等级名称、供给站标志名称、分公司名称的火车站 | 将等级名称、供给站标志名称、分公司名称加进来 |
| 3 | 部门信息 | v\_depart\_mes | 显示带分公司名称的部门 | 将分公司名称加进来 |
| 4 | 岗位信息 | v\_post\_mes | 显示带部门名称的岗位 | 将部门名称加进来 |
| 5 | 员工信息 | v\_employee\_mes | 显示带类型名称、站点名的员工 | 将类型名称、站点名加进来 |
| 6 | 列车信息 | v\_train\_mes | 显示带类型名称的列车 | 将类型名称加进来 |
| 7 | 车厢信息 | v\_carriage\_mes | 显示带类别名称、实际类别名称的车厢 | 将类别名称、实际类别名称加进来 |
| 8 | 网络售票终端 | v\_terminal\_mes | 显示带语言类型名称的网络售票终端 | 将语言类型名称加进来 |
| 9 | 从事信息 | v\_work\_on\_mes | 显示带员工姓名、岗位名称的从事 | 将员工姓名、岗位名称加进来 |
| 10 | 经过信息 | v\_pass\_by\_mes | 显示带站点名的经过 | 将站点名加进来 |
| 11 | 车票业务信息 | v\_ticket\_business\_mes | 显示带乘客姓名、员工姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称的车票业务 | 将乘客姓名、员工姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称加进来 |
| 12 | 隶属信息 | v\_belong\_to\_mes | 显示带部门名称、站点名的隶属 | 将部门名称、站点名加进来 |
| 13 | 自助操作信息 | v\_self\_service\_mes | 显示带乘客姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称的自助操作 | 将乘客姓名、出发站点名、到达站点名、业务类别名称、订单状态名称、出票状态名称加进来 |
| 14 | 上级信息 | v\_superior\_mes | 显示带部门名称的上级 | 将部门名称加进来 |
|  | 包含信息 | v\_ include\_mes | 显示带车厢类别名称的包含信息 | 将车厢类别名称加进来 |

#### 分公司信息的说明

表10.3.4‑1视图v\_branch\_company\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | branch\_company | no |  |  |
| 2 | 名称 | name | branch\_company | name |  |  |
| 3 | 地址 | address | branch\_company | address |  |  |
| 4 | 联系电话 | phone | branch\_company | phone |  |  |
| 5 | 区域编号 | area\_no | branch\_company | area\_no |  |  |
| 6 | 区域名称 | area\_name | area | name | branch\_company.area\_no= area.no |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：分公司信息的说明  create view v\_branch\_company\_mes(no, name, address, phone, area\_no, area\_name)  as  select a.no, a.name, a.address, a.phone, a.area\_no, b.name  from branch\_company a, area b  where a.area\_no= b.no  ;  comment on view y\_1\_6\_0\_3.v\_branch\_company\_mes is '分公司信息的说明';  comment on column y\_1\_6\_0\_3.v\_branch\_company\_mes.no is '编号';  comment on column y\_1\_6\_0\_3.v\_branch\_company\_mes.name is '名称';  comment on column y\_1\_6\_0\_3.v\_branch\_company\_mes.address is '地址';  comment on column y\_1\_6\_0\_3.v\_branch\_company\_mes.phone is '联系电话';  comment on column y\_1\_6\_0\_3.v\_branch\_company\_mes.area\_no is '区域编号';  comment on column y\_1\_6\_0\_3.v\_branch\_company\_mes.area\_name is '区域名称'; |

#### 火车站信息的说明

表10.3.4‑2 视图v\_station\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | station | station\_no |  |  |
| 2 | 站点名 | name | station | name |  |  |
| 3 | 英文名 | english\_name | station | english\_name |  |  |
| 4 | 等级 | station\_level | station | station\_level |  |  |
| 5 | 等级名称 | station\_level\_name | user\_dict d1 | content | d1.category='401' and  d1.code=station.station\_level |  |
| 6 | 供给站标志 | station\_provide\_flag | station | station\_provide\_flag |  |  |
| 7 | 供给站标志名称 | station\_provide\_flag\_name | user\_dict d2 | content | d2.category='402' and  d2.code=station.station\_provide\_flag |  |
| 8 | 分公司编号 | comp\_no | station | comp\_no |  |  |
| 9 | 分公司名称 | comp\_no\_name | branch\_company | name | station.comp\_no= branch\_company.no |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：火车站信息的说明  create view v\_station\_mes(station\_no, name, english\_name, station\_level, station\_level\_name, station\_provide\_flag, station\_provide\_flag\_name, comp\_no, comp\_no\_name)  as  select a.station\_no, a.name, a.english\_name, a.station\_level, d1.content, a.station\_provide\_flag, d2.content, a.comp\_no, d.name  from station a, user\_dict d1, user\_dict d2, branch\_company d  where d1.category='401' and d1.code= a.station\_level and d2.category='402' and d2.code=a.station\_provide\_flag and a.comp\_no= d.no  ;  comment on view y\_1\_6\_0\_3.v\_station\_mes is '火车站信息的说明';  comment on column y\_1\_6\_0\_3.v\_station\_mes.station\_no is '编号';  comment on column y\_1\_6\_0\_3.v\_station\_mes.name is '站点名';  comment on column y\_1\_6\_0\_3.v\_station\_mes.english\_name is '英文名';  comment on column y\_1\_6\_0\_3.v\_station\_mes.station\_level is '等级';  comment on column y\_1\_6\_0\_3.v\_station\_mes.station\_level\_name is '等级名称';  comment on column y\_1\_6\_0\_3.v\_station\_mes.station\_provide\_flag is '供给站标志';  comment on column y\_1\_6\_0\_3.v\_station\_mes.station\_provide\_flag\_name is '供给站标志名称';  comment on column y\_1\_6\_0\_3.v\_station\_mes.comp\_no is '分公司编号';  comment on column y\_1\_6\_0\_3.v\_station\_mes.comp\_no\_name is '分公司名称'; |

#### 部门信息的说明

表10.3.4‑3 视图v\_depart\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | depart | no |  |  |
| 2 | 名称 | name | depart | name |  |  |
| 3 | 简介 | introduce | depart | introduce |  |  |
| 4 | 分公司编号 | comp\_no | depart | comp\_no |  |  |
| 5 | 分公司名称 | comp\_name | branch\_company | name | depart.comp\_no= branch\_company.no |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：部门信息的说明  create view v\_depart\_mes(no, name, introduce, comp\_no, comp\_name)  as  select a.no, a.name, a.introduce, a.comp\_no, b.name  from depart a, branch\_company b  where a.comp\_no= b.no  ;  comment on view y\_1\_6\_0\_3.v\_depart\_mes is '部门信息的说明';  comment on column y\_1\_6\_0\_3.v\_depart\_mes.no is '编号';  comment on column y\_1\_6\_0\_3.v\_depart\_mes.name is '名称';  comment on column y\_1\_6\_0\_3.v\_depart\_mes.introduce is '简介';  comment on column y\_1\_6\_0\_3.v\_depart\_mes.comp\_no is '分公司编号';  comment on column y\_1\_6\_0\_3.v\_depart\_mes.comp\_name is '分公司名称'; |

#### 岗位信息的说明

表10.3.4‑4 视图v\_post\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | post | no |  |  |
| 2 | 名称 | name | post | name |  |  |
| 3 | 职责 | duty | post | duty |  |  |
| 4 | 部门编号 | dept\_no | post | dept\_no |  |  |
| 5 | 部门名称 | dept\_name | depart | name | post.dept\_no= depart.no |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：岗位信息的说明  create view v\_post\_mes(no, name, duty, dept\_no, dept\_name)  as  select a.no, a.name, a.duty, a.dept\_no, b.name  from post a, depart b  where a.dept\_no= b.no  ;  comment on view y\_1\_6\_0\_3.v\_post\_mes is '岗位信息的说明';  comment on column y\_1\_6\_0\_3.v\_post\_mes.no is '编号';  comment on column y\_1\_6\_0\_3.v\_post\_mes.name is '名称';  comment on column y\_1\_6\_0\_3.v\_post\_mes.duty is '职责';  comment on column y\_1\_6\_0\_3.v\_post\_mes.dept\_no is '部门编号';  comment on column y\_1\_6\_0\_3.v\_post\_mes.dept\_name is '部门名称'; |

#### 员工信息的说明

表10.3.4‑5视图v\_employee\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 账号 | administer\_id | emp | administer\_id |  |  |
| 2 | 密码 | administer\_pw | emp | administer\_pw |  |  |
| 3 | 姓名 | name | emp | name |  |  |
| 4 | 身份证号 | id\_card\_num | emp | id\_card\_num |  |  |
| 5 | 类型 | employee\_type | emp | employee\_type |  |  |
| 6 | 类型名称 | employee\_type\_name | user\_dict | content | user\_dict.category='403' and  user\_dict.code=emp.employee\_type |  |
| 7 | 手机号码 | phone | emp | phone |  |  |
| 8 | 火车站编号 | station\_no | emp | station\_no |  |  |
| 9 | 站点名 | station\_name | station | name | employee.station\_no=station.station\_no |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：员工信息的说明  create view v\_employee\_mes(administer\_id, administer\_pw, name, id\_card\_num, employee\_type, employee\_type\_name, phone, station\_no, station\_name)  as  select a.administer\_id, a.administer\_pw, a.name, a.id\_card\_num, a.employee\_type, b.content, a.phone, a.station\_no, c.name  from emp a, user\_dict b, station c  where b.category='403' and b.code=a.employee\_type and employee.station\_no=c.station\_no  ;  comment on view y\_1\_6\_0\_3.v\_employee\_mes is '员工信息的说明';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.administer\_id is '账号';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.administer\_pw is '密码';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.name is '姓名';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.id\_card\_num is '身份证号';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.employee\_type is '类型';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.employee\_type\_name is '类型名称';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.phone is '手机号码';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_3.v\_employee\_mes.station\_name is '站点名'; |

#### 列车信息的说明

表10.3.4‑6视图v\_train\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train | train\_id |  |  |
| 2 | 运行时间 | train\_runtime | train | train\_runtime |  |  |
| 3 | 类型 | train\_type | train | train\_type |  |  |
| 4 | 类型名称 | train\_type\_name | user\_dict | content | user\_dict.category='404'   and user\_dict.code=train.train\_type |  |
| 5 | 速度 | train\_speed | train | train\_speed |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：列车信息的说明  create view v\_train\_mes(train\_id, train\_runtime, train\_type, train\_type\_name, train\_speed)  as  select a.train\_id, a.train\_runtime, a.train\_type, b.content, a.train\_speed  from train a, user\_dict b  where b.category='404'   and b.code=a.train\_type  ;  comment on view y\_1\_6\_0\_3.v\_train\_mes is '列车信息的说明';  comment on column y\_1\_6\_0\_3.v\_train\_mes.train\_id is '车次号';  comment on column y\_1\_6\_0\_3.v\_train\_mes.train\_runtime is '运行时间';  comment on column y\_1\_6\_0\_3.v\_train\_mes.train\_type is '类型';  comment on column y\_1\_6\_0\_3.v\_train\_mes.train\_type\_name is '类型名称';  comment on column y\_1\_6\_0\_3.v\_train\_mes.train\_speed is '速度'; |

#### 车厢信息的说明

表10.3.4‑7 视图v\_carriage\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | carriage | carriage\_no |  |  |
| 2 | 类别 | carriage\_type | carriage | carriage\_type |  |  |
| 3 | 类别名称 | carriage\_type\_name | user\_dict d1 | content | d1.category='405'  and d1.code=carriage.carriage\_type |  |
| 4 | 实际类别 | seat\_type | carriage | seat\_type |  |  |
| 5 | 实际类别名称 | seat\_type\_name | user\_dict d2 | content | d2.category='405'  and d2.code=carriage.seat\_type |  |
| 6 | 座位总数 | seat\_total | carriage | seat\_total |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：车厢信息的说明  create view v\_carriage\_mes(carriage\_no, carriage\_type, carriage\_type\_name, seat\_type, seat\_type\_name, seat\_total)  as  select a.carriage\_no, a.carriage\_type, d1.content, a.seat\_type, d2.content, a.seat\_total  from carriage a, user\_dict d1, user\_dict d2  where d1.category='405'  and d1.code=a.carriage\_type and d2.category='405'  and d2.code=a.seat\_type  ;  comment on view y\_1\_6\_0\_3.v\_carriage\_mes is '车厢信息的说明';  comment on column y\_1\_6\_0\_3.v\_carriage\_mes.carriage\_no is '编号';  comment on column y\_1\_6\_0\_3.v\_carriage\_mes.carriage\_type is '类别';  comment on column y\_1\_6\_0\_3.v\_carriage\_mes.carriage\_type\_name is '类别名称';  comment on column y\_1\_6\_0\_3.v\_carriage\_mes.seat\_type is '实际类别';  comment on column y\_1\_6\_0\_3.v\_carriage\_mes.seat\_type\_name is '实际类别名称';  comment on column y\_1\_6\_0\_3.v\_carriage\_mes.seat\_total is '座位总数'; |

#### 网络售票终端信息的说明

表10.3.4‑8视图v\_terminal\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | terminal | no |  |  |
| 2 | 语言类型 | terminal\_type | terminal | terminal\_type |  |  |
| 3 | 语言类型名称 | terminal\_type\_name | user\_dict | content | user\_dict.category='406'  and user\_dict.code= terminal.terminal\_type |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：网络售票终端信息的说明  create view v\_terminal\_mes(no, terminal\_type, terminal\_type\_name)  as  select a.no, a.terminal\_type, b.content  from terminal a, user\_dict b  where b.category='406'  and b.code= a.terminal\_type  ;  comment on view y\_1\_6\_0\_3.v\_terminal\_mes is '网络售票终端信息的说明';  comment on column y\_1\_6\_0\_3.v\_terminal\_mes.no is '编号';  comment on column y\_1\_6\_0\_3.v\_terminal\_mes.terminal\_type is '语言类型';  comment on column y\_1\_6\_0\_3.v\_terminal\_mes.terminal\_type\_name is '语言类型名称'; |

#### 从事信息的说明

表10.3.4‑9视图v\_work\_on\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 员工编号 | emp\_no | work\_on | emp\_no |  |  |
| 2 | 员工姓名 | emp\_name | emp | name | emp.administer\_id=work\_on.emp\_no |  |
| 3 | 岗位编号 | post\_no | work\_on | post\_no |  |  |
| 4 | 岗位名称 | post\_name | post | name | post.no= work\_on.post\_no |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：从事信息的说明  create view v\_work\_on\_mes(emp\_no, emp\_name, post\_no, post\_name)  as  select a.emp\_no, b.name, a.post\_no, c.name  from work\_on a, emp b, post c  where b.administer\_id=a.emp\_no and c.no= a.post\_no  ;  comment on view y\_1\_6\_0\_3.v\_work\_on\_mes is '从事信息的说明';  comment on column y\_1\_6\_0\_3.v\_work\_on\_mes.emp\_no is '员工编号';  comment on column y\_1\_6\_0\_3.v\_work\_on\_mes.emp\_name is '员工姓名';  comment on column y\_1\_6\_0\_3.v\_work\_on\_mes.post\_no is '岗位编号';  comment on column y\_1\_6\_0\_3.v\_work\_on\_mes.post\_name is '岗位名称'; |

#### 经过信息的说明

表10.3.4‑10 视图v\_pass\_by\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | pass\_id | pass\_by | pass\_id |  |  |
| 2 | 列车编号 | train\_no | pass\_by | train\_no |  |  |
| 3 | 火车站编号 | station\_no | pass\_by | station\_no |  |  |
| 4 | 站点名 | station\_name | station | name | station.no=pass\_by.station\_no |  |
| 5 | 停车时间 | stoptime | pass\_by | stoptime |  |  |
| 6 | 发车时间 | start\_time | pass\_by | start\_time |  |  |
| 7 | 里程数 | mileage | pass\_by | mileage |  |  |
| 8 | 站点序 | station\_order | pass\_by | station\_order |  |  |
| 9 | 区间基础票价 | base\_price | pass\_by | base\_price |  |  |
| 10 | 票价上浮比率 | up\_rate | pass\_by | up\_rate |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：经过信息的说明  create view v\_pass\_by\_mes(pass\_id, train\_no, station\_no, station\_name, stoptime, start\_time, mileage, station\_order, base\_price, up\_rate)  as  select a.pass\_id, a.train\_no, a.station\_no, b.name, a.stoptime, a.start\_time, a.mileage, a.station\_order, a.base\_price, a.up\_rate  from pass\_by a, station b  where b.no= a.station\_no  ;  comment on view y\_1\_6\_0\_3.v\_pass\_by\_mes is '经过信息的说明';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.pass\_id is '编号';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.train\_no is '列车编号';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.station\_name is '站点名';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.stoptime is '停车时间';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.start\_time is '发车时间';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.mileage is '里程数';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.station\_order is '站点序';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.base\_price is '区间基础票价';  comment on column y\_1\_6\_0\_3.v\_pass\_by\_mes.up\_rate is '票价上浮比率'; |

#### 车票业务信息的说明

表10.3.4‑11 视图v\_ticket\_business\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | ticket\_business | no |  |  |
| 2 | 乘客号 | passenger\_no | ticket\_business | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | passenger | name | ticket\_business.passenger\_no=passenger.no |  |
| 4 | 员工号 | emp\_no | ticket\_business | emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | employee | name | ticket\_business.emp\_no=employee.administer\_id |  |
| 6 | 车次编号 | train\_no | ticket\_business | train\_no |  |  |
| 7 | 车厢编号 | carriage\_no | ticket\_business | carriage\_no |  |  |
| 8 | 乘客出发站 | origin\_station | ticket\_business | origin\_station |  |  |
| 9 | 出发站点名 | origin\_station\_name | station | name | ticket\_business.origin\_station=station.station\_no |  |
| 10 | 乘客到达站 | destination\_station | ticket\_business | destination\_station |  |  |
| 11 | 到达站点名 | destination\_station\_name | station | name | ticket\_business.destination\_station=station.station\_no |  |
| 12 | 业务类别 | busi\_type | ticket\_business | busi\_type |  |  |
| 13 | 业务类别名称 | busi\_type\_name | user\_dict d1 | content | d1.category='407'  and  d1.code=tib.busi\_type |  |
| 14 | 办理时间 | do\_time | ticket\_business | do\_time |  |  |
| 15 | 订单状态 | busi\_status | ticket\_business | busi\_status |  |  |
| 16 | 订单状态名称 | busi\_status\_name | user\_dict d2 | content | d2.category='408'  and d2.code=tib.busi\_status |  |
| 17 | 业务金额 | busi\_amount | ticket\_business | busi\_amount |  |  |
| 18 | 车厢号 | carriage\_number | ticket\_business | carriage\_number |  |  |
| 19 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 20 | 发车时间 | start\_time | ticket\_business | start\_time |  |  |
| 21 | 到达时间 | arrive\_time | ticket\_business | arrive\_time |  |  |
| 22 | 出票状态 | ticket\_status | ticket\_business | ticket\_status |  |  |
| 23 | 出票状态名称 | ticket\_status\_name | user\_dict d3 | content | d3.category='409'  and d3.code= tib.ticket\_status |  |
| 24 | 变更到站状态 | change\_station | ticket\_business | change\_station |  |  |
| 25 | 变更到站状态名称 | change\_station\_name | user\_dict d4 | change\_station\_name | d4.category='410'  and  d4.code=tib.change\_station |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：车票业务信息的说明  create view v\_ticket\_business\_mes(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, carriage\_no, origin\_station, origin\_station\_name, destination\_station, destination\_station\_name, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, a.carriage\_no, a.origin\_station, d.name, a.destination\_station, d.name, a.busi\_type, d1.content, a.do\_time, a.busi\_status, d2.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, d3.content, a.change\_station, d4.change\_station\_name  from ticket\_business a, passenger b, employee c, station d, user\_dict d1, user\_dict d2, user\_dict d3, user\_dict d4  where a.passenger\_no=b.no and a.emp\_no=c.administer\_id and a.origin\_station=d.station\_no and a.destination\_station=d.station\_no and d1.category='407'  and d1.code=tib.busi\_type and d2.category='408'  and d2.code=tib.busi\_status and d3.category='409'  and d3.code= tib.ticket\_status and d4.category='410'  and d4.code=tib.change\_station  ;  comment on view y\_1\_6\_0\_3.v\_ticket\_business\_mes is '车票业务信息的说明';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.no is '编号';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.emp\_no is '员工号';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.emp\_name is '员工姓名';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.train\_no is '车次编号';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.origin\_station\_name is '出发站点名';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.destination\_station\_name is '到达站点名';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.do\_time is '办理时间';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.seat\_number is '座位号';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.start\_time is '发车时间';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.change\_station is '变更到站状态';  comment on column y\_1\_6\_0\_3.v\_ticket\_business\_mes.change\_station\_name is '变更到站状态名称'; |

#### 隶属信息的说明

表10.3.4‑12 视图v\_belong\_to\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | depart\_no | belong\_to | depart\_no |  |  |
| 2 | 部门名称 | depart\_name | depart | name | depart.no= belong\_to.depart\_no |  |
| 3 | 火车站编号 | station\_no | belong\_to | station\_no |  |  |
| 4 | 站点名 | station\_name | station | name | station.station\_no=belong\_to.station\_no |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：隶属信息的说明  create view v\_belong\_to\_mes(depart\_no, depart\_name, station\_no, station\_name)  as  select a.depart\_no, b.name, a.station\_no, c.name  from belong\_to a, depart b, station c  where b.no= a.depart\_no and c.station\_no=a. station\_no  ;  comment on view y\_1\_6\_0\_3.v\_belong\_to\_mes is '隶属信息的说明';  comment on column y\_1\_6\_0\_3.v\_belong\_to\_mes.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_3.v\_belong\_to\_mes.depart\_name is '部门名称';  comment on column y\_1\_6\_0\_3.v\_belong\_to\_mes.station\_no is '火车站编号';  comment on column y\_1\_6\_0\_3.v\_belong\_to\_mes.station\_name is '站点名'; |

#### 自助操作信息的说明

表10.3.4‑13 视图v\_self\_service\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | self\_service | no |  |  |
| 2 | 终端编号 | terminal\_no | self\_service | terminal\_no |  |  |
| 3 | 乘客号 | passenger\_no | self\_service | passenger\_no |  |  |
| 4 | 乘客姓名 | passenger\_name | passenger | name | self\_service.passenger\_no=passenger.no |  |
| 5 | 列车号 | train\_no | self\_service | train\_no |  |  |
| 6 | 车厢编号 | carriage\_no | self\_service | carriage\_no |  |  |
| 7 | 乘客出发站 | origin\_station | self\_service | origin\_station |  |  |
| 8 | 出发站点名 | origin\_station\_name | station | name | self\_service.origin\_station=station.station\_no |  |
| 9 | 乘客到达站 | destination\_station | self\_service | destination\_station |  |  |
| 10 | 到达站点名 | destination\_station\_name | station | name | self\_service.destination\_station=station.station\_no |  |
| 11 | 业务类别 | busi\_type | self\_service | busi\_type |  |  |
| 12 | 业务类别名称 | busi\_type\_name | user\_dict d1 | content | d1.category='407'  and d1.code= self\_service.busi\_type |  |
| 13 | 办理时间 | do\_time | self\_service | do\_time |  |  |
| 14 | 订单状态 | busi\_status | self\_service | busi\_status |  |  |
| 15 | 订单状态名称 | busi\_status\_name | user\_dict d2 | content | d2.category='408'  and d2.code= self\_service.busi\_status |  |
| 16 | 业务金额 | busi\_amount | self\_service | busi\_amount |  |  |
| 17 | 车厢号 | carriage\_number | self\_service | carriage\_number |  |  |
| 18 | 座位号 | seat\_number | self\_service | seat\_number |  |  |
| 19 | 发车时间 | start\_time | self\_service | start\_time |  |  |
| 20 | 到达时间 | arrive\_time | self\_service | arrive\_time |  |  |
| 21 | 出票状态 | ticket\_status | self\_service | ticket\_status |  |  |
| 22 | 出票状态名称 | ticket\_status\_name | user\_dict d3 | content | d3.category='409'   and d3.code= self\_service.ticket\_status |  |
| 23 | 变更到站状态 | change\_station | self\_service | change\_station |  |  |
| 24 | 变更到站状态名称 | change\_station\_name | user\_dict d4 | content | d4.category='410'   and d4.code= self\_service.change\_station |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：自助操作信息的说明  create view v\_self\_service\_mes(no, terminal\_no, passenger\_no, passenger\_name, train\_no, carriage\_no, origin\_station, origin\_station\_name, destination\_station, destination\_station\_name, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.terminal\_no, a.passenger\_no, b.name, a.train\_no, a.carriage\_no, a.origin\_station, c.name, a.destination\_station, c.name, a.busi\_type, d1.content, a.do\_time, a.busi\_status, d2.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, d3.content, a.change\_station, d4.content  from self\_service a, passenger b, station c, user\_dict d1, user\_dict d2, user\_dict d3, user\_dict d4  where a.passenger\_no=b.no and a.origin\_station=c.station\_no and a.destination\_station=c.station\_no and d1.category='407'  and d1.code= a.busi\_type and d2.category='408'  and d2.code= a.busi\_status and d3.category='409'   and d3.code= a.ticket\_status and d4.category='410'   and d4.code= a.change\_station  ;  comment on view y\_1\_6\_0\_3.v\_self\_service\_mes is '自助操作信息的说明';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.no is '编号';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.terminal\_no is '终端编号';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.passenger\_no is '乘客号';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.passenger\_name is '乘客姓名';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.train\_no is '列车号';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.origin\_station is '乘客出发站';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.origin\_station\_name is '出发站点名';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.destination\_station is '乘客到达站';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.destination\_station\_name is '到达站点名';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.busi\_type is '业务类别';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.busi\_type\_name is '业务类别名称';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.do\_time is '办理时间';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.busi\_status is '订单状态';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.busi\_status\_name is '订单状态名称';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.busi\_amount is '业务金额';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.carriage\_number is '车厢号';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.seat\_number is '座位号';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.start\_time is '发车时间';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.arrive\_time is '到达时间';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.ticket\_status is '出票状态';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.change\_station is '变更到站状态';  comment on column y\_1\_6\_0\_3.v\_self\_service\_mes.change\_station\_name is '变更到站状态名称'; |

#### 上级的说明

表10.3.4‑14视图v\_superior\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 部门编号 | depart\_no | superior | depart\_no |  |  |
| 2 | 部门名称 | depart\_name | depart | name | superior.depart\_no= depart.no |  |
| 3 | 上级部门编号 | superior\_depart\_no | superior | superior\_depart\_no |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：上级的说明  create view v\_superior\_mes(depart\_no, depart\_name, superior\_depart\_no)  as  select a.depart\_no, b.name, a.superior\_depart\_no  from superior a, depart b  where a.depart\_no= b.no  ;  comment on view y\_1\_6\_0\_3.v\_superior\_mes is '上级的说明';  comment on column y\_1\_6\_0\_3.v\_superior\_mes.depart\_no is '部门编号';  comment on column y\_1\_6\_0\_3.v\_superior\_mes.depart\_name is '部门名称';  comment on column y\_1\_6\_0\_3.v\_superior\_mes.superior\_depart\_no is '上级部门编号'; |

#### 包含的说明

表10.3.4‑14视图v\_ include\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 列车编号 | train\_no | inc | train\_no |  |  |
| 2 | 列车类型 | train\_type | train | train\_type | train.train\_id=inc.train\_no |  |
| 3 | 车厢编号 | carriage\_no | inc | carriage\_no |  |  |
| 4 | 车厢类别 | carriage\_type | carriage | carriage\_type | carriage.carriage\_no=inc.carriage\_no |  |
| 5 | 车厢号分布范围 | carriage\_range | inc | carriage\_range |  |  |
| 6 | 车厢数量 | carriage\_amount | inc | carriage\_amount |  |  |
| 7 | 发车时间 | start\_time | inc | start\_time |  |  |

执行脚本（PostgreSQL，y\_1\_6\_0\_3）

|  |
| --- |
| -- 创建视图：包含的说明  create view v\_ include\_mes(train\_no, train\_type, carriage\_no, carriage\_type, carriage\_range, carriage\_amount, start\_time)  as  select a.train\_no, b.train\_type, a.carriage\_no, c.carriage\_type, a.carriage\_range, a.carriage\_amount, a.start\_time  from inc a, train b, carriage c  where b.train\_id=a.train\_no and c.carriage\_no=a.carriage\_no  ;  comment on view y\_1\_6\_0\_3.v\_ include\_mes is '包含的说明';  comment on column y\_1\_6\_0\_3.v\_ include\_mes.train\_no is '列车编号';  comment on column y\_1\_6\_0\_3.v\_ include\_mes.train\_type is '列车类型';  comment on column y\_1\_6\_0\_3.v\_ include\_mes.carriage\_no is '车厢编号';  comment on column y\_1\_6\_0\_3.v\_ include\_mes.carriage\_type is '车厢类别';  comment on column y\_1\_6\_0\_3.v\_ include\_mes.carriage\_range is '车厢号分布范围';  comment on column y\_1\_6\_0\_3.v\_ include\_mes.carriage\_amount is '车厢数量';  comment on column y\_1\_6\_0\_3.v\_ include\_mes.start\_time is '发车时间'; |

### 普通函数

表10.3‑5函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

#### 函数中文名

函数代码

|  |
| --- |
|  |

### 触发器函数

触发器函数列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

#### 触发器函数中文名

触发器函数代码

|  |
| --- |
|  |

### 触发器

表10.3‑6触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 中文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 触发器中文名

触发器代码

|  |
| --- |
|  |

### 赋对象权限

表10.3‑7语句

|  |
| --- |
| select 'grant all on '||owner||'.'||table\_name||' to y\_1\_3\_1\_3;' from dba\_tables  where owner = ' y\_1\_6\_0\_3';  select 'grant all on '||owner||'.'||table\_name||' to y\_1\_3\_2\_3;' from dba\_tables  where owner = ' y\_1\_6\_0\_3';  select 'grant all on '||owner||'.'||table\_name||' to y\_1\_3\_3\_3;' from dba\_tables  where owner = ' y\_1\_6\_0\_3';  select 'grant select on '||owner||'.'||view\_name||' to y\_1\_3\_1\_3;' from dba\_views  where owner = ' y\_1\_6\_0\_3';  select 'grant select on '||owner||'.'||view\_name||' to y\_1\_3\_2\_3;' from dba\_views  where owner = ' y\_1\_6\_0\_3';  select 'grant select on '||owner||'.'||view\_name||' to y\_1\_3\_3\_3;' from dba\_views  where owner = ' y\_1\_6\_0\_3'; |

# 全局外模式的实现

## 售票员业务

### 站点1（Oracle）

#### 同义词

表11.1.1‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_1.area | 指向集中式数据库第6类用户y\_1\_6\_0\_1的区域表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_1.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_1的分公司表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_1.station | 指向集中式数据库第6类用户y\_1\_6\_0\_1的火车站表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_1.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_1的部门表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_1.post | 指向集中式数据库第6类用户y\_1\_6\_0\_1的岗位表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_1.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_1的员工表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_1.train | 指向集中式数据库第6类用户y\_1\_6\_0\_1的列车表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_1.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_1的车厢表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_1.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_1的乘客表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_1.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_1的网络售票终端表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_1.include | 指向集中式数据库第6类用户y\_1\_6\_0\_1的包含表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_1.work on | 指向集中式数据库第6类用户y\_1\_6\_0\_1的从事表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_1.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_1的经过表，实现位置透明 |  |
| 14 | ticket\_bussiness | y\_1\_6\_0\_1.ticket\_bussiness | 指向集中式数据库第6类用户y\_1\_6\_0\_1的车票业务表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_1.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_1的隶属表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_1.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_1的自助操作表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_1.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_1的上级表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_1.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的分公司信息视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_1.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的火车站信息视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_1.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的部门信息视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_1.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的岗位信息视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_1.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的员工信息视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_1.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的列车信息视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_1.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的车厢信息视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_1.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的网络售票终端信息视图，实现位置透明 |  |
| 26 | v\_include\_mes | y\_1\_6\_0\_1.v\_include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的包含信息视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_1.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的从事信息视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_1.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的经过信息视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_1.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的车票业务信息视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_1.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的隶属信息视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_1.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的自助操作信息视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_1.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的上级信息视图，实现位置透明 |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的区域表，实现位置透明  create synonym y\_1\_7\_1\_1.area for y\_1\_6\_0\_1.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的分公司表，实现位置透明  create synonym y\_1\_7\_1\_1.branch\_company for y\_1\_6\_0\_1.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的火车站表，实现位置透明  create synonym y\_1\_7\_1\_1.station for y\_1\_6\_0\_1.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的部门表，实现位置透明  create synonym y\_1\_7\_1\_1.depart for y\_1\_6\_0\_1.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的岗位表，实现位置透明  create synonym y\_1\_7\_1\_1.post for y\_1\_6\_0\_1.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的员工表，实现位置透明  create synonym y\_1\_7\_1\_1.employee for y\_1\_6\_0\_1.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的列车表，实现位置透明  create synonym y\_1\_7\_1\_1.train for y\_1\_6\_0\_1.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的车厢表，实现位置透明  create synonym y\_1\_7\_1\_1.carriage for y\_1\_6\_0\_1.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的乘客表，实现位置透明  create synonym y\_1\_7\_1\_1.passenger for y\_1\_6\_0\_1.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的网络售票终端表，实现位置透明  create synonym y\_1\_7\_1\_1.terminal for y\_1\_6\_0\_1.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的包含表，实现位置透明  create synonym y\_1\_7\_1\_1.include for y\_1\_6\_0\_1.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的从事表，实现位置透明  create synonym y\_1\_7\_1\_1.work\_on for y\_1\_6\_0\_1.work on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的经过表，实现位置透明  create synonym y\_1\_7\_1\_1.pass\_by for y\_1\_6\_0\_1.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的车票业务表，实现位置透明  create synonym y\_1\_7\_1\_1.ticket\_bussiness for y\_1\_6\_0\_1.ticket\_bussiness;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的隶属表，实现位置透明  create synonym y\_1\_7\_1\_1.belong\_to for y\_1\_6\_0\_1.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的自助操作表，实现位置透明  create synonym y\_1\_7\_1\_1.self\_service for y\_1\_6\_0\_1.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的上级表，实现位置透明  create synonym y\_1\_7\_1\_1.superior for y\_1\_6\_0\_1.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的分公司信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_branch\_company\_mes for y\_1\_6\_0\_1.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的火车站信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_station\_mes for y\_1\_6\_0\_1.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的部门信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_depart\_mes for y\_1\_6\_0\_1.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的岗位信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_post\_mes for y\_1\_6\_0\_1.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的员工信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_employee\_mes for y\_1\_6\_0\_1.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的列车信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_train\_mes for y\_1\_6\_0\_1.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的车厢信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_carriage\_mes for y\_1\_6\_0\_1.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的网络售票终端信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_terminal\_mes for y\_1\_6\_0\_1.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的包含信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_include\_mes for y\_1\_6\_0\_1.v\_include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的从事信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_work\_on\_mes for y\_1\_6\_0\_1.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的经过信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_pass\_by\_mes for y\_1\_6\_0\_1.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的车票业务信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_ticket\_business\_mes for y\_1\_6\_0\_1.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的隶属信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_belong\_to\_mes for y\_1\_6\_0\_1.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的自助操作信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_self\_service\_mes for y\_1\_6\_0\_1.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的上级信息视图，实现位置透明  create synonym y\_1\_7\_1\_1.v\_superior\_mes for y\_1\_6\_0\_1.v\_superior\_mes; |

#### 视图

表11.1.1‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 乘客车票订单 | order\_info | 单据 |  |
| 2 | 退票详细信息 | refund\_info | 单据 |  |
| 3 | 改签详细信息 | rebook\_info | 单据 |  |
| 4 | 余票信息 | ticketleft\_info | 单据 |  |
| 5 | 乘客信息 | passenger\_info | 报表 |  |
| 6 | 车次信息 | train\_info | 报表 |  |
| 7 | 票价信息 | price\_info | 报表 |  |
| 8 | 售票员信息 | conductor\_info | 报表 |  |

##### 乘客车票订单

表11.1.1.2‑1视图order\_info（order\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_id | v\_ticket\_business\_mes | no |  |  |
| 2 | 业务类别 | busi\_type | v\_ticket\_business\_mes | busi\_type |  |  |
| 3 | 乘客号 | passenger\_id | v\_ticket\_business\_mes | passenger\_no |  |  |
| 4 | 编号 | Id | v\_pass\_by\_mes | pass\_id |  |  |
| 5 | 乘客出发站 | origin\_station | v\_ticket\_business\_mes | origin\_station |  |  |
| 6 | 乘客到达站 | destination\_station | v\_ticket\_business\_mes | destination\_station |  |  |
| 7 | 车厢号 | carriage\_number | v\_ticket\_business\_mes | carriage\_number |  |  |
| 8 | 座位号 | seat\_number | v\_ticket\_business\_mes | seat\_number |  |  |
| 9 | 发车时间 | start\_time | v\_ticket\_business\_mes | start\_time |  |  |
| 10 | 到达时间 | arrive\_time | v\_ticket\_business\_mes | arrive\_time |  |  |
| 11 | 订购时间 | order\_time | v\_ticket\_business\_mes | do\_time |  |  |
| 12 | 票价 | Price | v\_ticket\_business\_mes | busi\_amount |  |  |
| 13 | 订单状态 | order\_status | v\_ticket\_business\_mes | busi\_status |  |  |
| 14 | 车座种类 | seat\_type | carriage | carriage\_type |  |  |
| 15 | 售票员号 | conductor\_id | v\_ticket\_business\_mes | emp\_no |  |  |
| 16 | 车次编号 | train\_id | v\_ticket\_business\_mes | train\_no |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：乘客车票订单  create view y\_1\_7\_1\_1.order\_info（order\_id）(order\_id, busi\_type, passenger\_id, id, origin\_station, destination\_station, carriage\_number, seat\_number, start\_time, arrive\_time, order\_time, price, order\_status, seat\_type, conductor\_id, train\_id)  as  select a.no, a.busi\_type, a.passenger\_no, b.pass\_id, a.origin\_station, a.destination\_station, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.do\_time, a.busi\_amount, a.busi\_status, c.carriage\_type, a.emp\_no, a.train\_no  from v\_ticket\_business\_mes a, v\_pass\_by\_mes b, carriage c  ;  comment on table y\_1\_7\_1\_1.order\_info（order\_id） is '乘客车票订单';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.order\_id is '订单号';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.busi\_type is '业务类别';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.passenger\_id is '乘客号';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.id is '编号';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.origin\_station is '乘客出发站';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.destination\_station is '乘客到达站';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.carriage\_number is '车厢号';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.seat\_number is '座位号';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.start\_time is '发车时间';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.arrive\_time is '到达时间';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.order\_time is '订购时间';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.price is '票价';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.order\_status is '订单状态';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.seat\_type is '车座种类';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.conductor\_id is '售票员号';  comment on column y\_1\_7\_1\_1.order\_info（order\_id）.train\_id is '车次编号'; |

##### 退票详细信息

表11.1.1.2‑2视图refund\_info（refund\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 退票号 | refund\_id | v\_ticket\_bussiness tb2 | no | tb2.busi\_type=’1’ and tb2.passenger\_id= tb1.passenger\_id |  |
| 2 | 订单号 | order\_id | v\_ticket\_bussiness tb1 | no | tb1.busi\_type=’0’ and tb2.passenger\_id= tb1.passenger\_id |  |
| 3 | 业务类别 | busi\_type | v\_ticket\_bussiness tb2 | busi\_type |  |  |
| 4 | 乘客号 | passenger\_id | v\_ticket\_bussiness tb1 | passenger\_no |  |  |
| 5 | 车次编号 | train\_id | v\_ticket\_bussiness tb1 | train\_no |  |  |
| 6 | 票价 | Price | v\_ticket\_bussiness tb1 | busi\_amount |  |  |
| 7 | 退款金额 | refund\_money | v\_ticket\_bussiness tb2 | busi\_amount |  |  |
| 8 | 退票时间 | refund\_time | v\_ticket\_bussiness tb2 | do\_time |  |  |
| 9 | 售票员号 | conductor\_id | v\_ticket\_bussiness tb2 | emp\_no |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：退票详细信息  create view y\_1\_7\_1\_1.refund\_info（refund\_id）(refund\_id, order\_id, busi\_type, passenger\_id, train\_id, price, refund\_money, refund\_time, conductor\_id)  as  select tb2.no, tb1.no, tb2.busi\_type, tb1.passenger\_no, tb1.train\_no, tb1.busi\_amount, tb2.busi\_amount, tb2.do\_time, tb2.emp\_no  from v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb2  ;  comment on table y\_1\_7\_1\_1.refund\_info（refund\_id） is '退票详细信息';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.refund\_id is '退票号';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.order\_id is '订单号';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.busi\_type is '业务类别';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.passenger\_id is '乘客号';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.train\_id is '车次编号';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.price is '票价';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.refund\_money is '退款金额';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.refund\_time is '退票时间';  comment on column y\_1\_7\_1\_1.refund\_info（refund\_id）.conductor\_id is '售票员号'; |

##### 改签详细信息

表11.1.1.2‑3视图rebook\_info（rebook\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 改签号 | rebook\_id | v\_ticket\_bussiness tb2 | no | tb2.busi\_type=’2’ and tb2.passenger\_id= tb1.passenger\_id |  |
| 2 | 订单号 | order\_id | v\_ticket\_bussiness tb1 | no | tb2.busi\_type=’0’ and tb2.passenger\_id= tb1.passenger\_id |  |
| 3 | 业务类别 | busi\_type | v\_ticket\_bussiness tb2 | busi\_type |  |  |
| 4 | 乘客号 | passenger\_id | v\_ticket\_bussiness tb1 | passenger\_no |  |  |
| 5 | 原车次编号 | train\_id | v\_ticket\_bussiness tb1 | train\_no |  |  |
| 6 | 改签车次编号 | al\_train\_id | v\_ticket\_bussiness tb2 | train\_no |  |  |
| 7 | 原票价 | Price | v\_ticket\_bussiness tb1 | busi\_amount |  |  |
| 8 | 新票价 | al\_price | v\_ticket\_bussiness tb2 | busi\_amount |  |  |
| 9 | 改签时间 | refund\_time | v\_ticket\_bussiness tb2 | do\_time |  |  |
| 10 | 原车厢号 | carriage\_number | v\_ticket\_bussiness tb1 | carriage\_number |  |  |
| 11 | 改签车厢号 | al\_carriage\_number | v\_ticket\_bussiness tb2 | carriage\_number |  |  |
| 12 | 原座位种类 | seat\_type | v\_ticket\_bussiness tb1 | seat\_type |  |  |
| 13 | 改签座位种类 | al\_seat\_type | v\_ticket\_bussiness tb2 | seat\_type |  |  |
| 14 | 原座位号 | seat\_number | v\_ticket\_bussiness tb1 | seat\_number |  |  |
| 15 | 改签座位号 | al\_seat\_number | v\_ticket\_bussiness tb2 | seat\_number |  |  |
| 16 | 售票员号 | conductor\_id | v\_ticket\_bussiness | emp\_no |  |  |
| 17 | 编号 | Id | v\_pass\_by\_mes | pass\_id |  |  |
| 18 | 原发车时间 | start\_time | v\_ticket\_bussiness tb1 | start\_time |  |  |
| 19 | 改签发车时间 | arrive\_time | v\_ticket\_bussiness tb2 | arrive\_time |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：改签详细信息  create view y\_1\_7\_1\_1.rebook\_info（rebook\_id）(rebook\_id, order\_id, busi\_type, passenger\_id, train\_id, al\_train\_id, price, al\_price, refund\_time, carriage\_number, al\_carriage\_number, seat\_type, al\_seat\_type, seat\_number, al\_seat\_number, conductor\_id, id, start\_time, arrive\_time)  as  select tb2.no, tb1.no, tb2.busi\_type, tb1.passenger\_no, tb1.train\_no, tb2.train\_no, tb1.busi\_amount, tb2.busi\_amount, tb2.do\_time, tb1.carriage\_number, tb2.carriage\_number, tb1.seat\_type, tb2.seat\_type, tb1.seat\_number, tb2.seat\_number, tb2.emp\_no, p.pass\_id, tb1.start\_time, tb2.arrive\_time  from v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2, v\_pass\_by\_mes p, v\_ticket\_bussiness tb1, v\_ticket\_bussiness tb2  ;  comment on table y\_1\_7\_1\_1.rebook\_info（rebook\_id） is '改签详细信息';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.rebook\_id is '改签号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.order\_id is '订单号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.busi\_type is '业务类别';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.passenger\_id is '乘客号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.train\_id is '原车次编号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.al\_train\_id is '改签车次编号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.price is '原票价';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.al\_price is '新票价';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.refund\_time is '改签时间';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.carriage\_number is '原车厢号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.al\_carriage\_number is '改签车厢号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.seat\_type is '原座位种类';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.al\_seat\_type is '改签座位种类';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.seat\_number is '原座位号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.al\_seat\_number is '改签座位号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.conductor\_id is '售票员号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.id is '编号';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.start\_time is '原发车时间';  comment on column y\_1\_7\_1\_1.rebook\_info（rebook\_id）.arrive\_time is '改签发车时间'; |

##### 余票信息

表11.1.1.2‑4视图ticketleft\_info（ticketleft\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 余票编号 | ticketleft\_id | v\_ticket\_bussiness | no |  |  |
| 2 | 业务类别 | busi\_type | v\_ticket\_bussiness | busi\_type |  |  |
| 3 | 车次编号 | train\_id | v\_ticket\_bussiness | train\_no |  |  |
| 4 | 编号 | Id | v\_pass\_by\_mes | pass\_id |  |  |
| 5 | 站点名 | station\_name | v\_pass\_by\_mes | name |  |  |
| 6 | 车厢号 | carriage\_number | v\_ticket\_bussiness | carriage\_number |  |  |
| 7 | 车厢类别 | carriage\_type | v\_carriage\_mes | carriage\_type |  |  |
| 8 | 座位总数 | seat\_total | v\_carriage\_mes | seat\_total |  |  |
| 9 | 当前正售座位号 | seat\_number | v\_ticket\_bussines | seat\_number |  |  |
| 10 | 余票 | ticketleft\_total | v\_ticket\_bussines | select (seat\_total -seat\_number) as ticketleft\_total from v\_ticket\_bussines |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：余票信息  create view y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）(ticketleft\_id, busi\_type, train\_id, id, station\_name, carriage\_number, carriage\_type, seat\_total, seat\_number, ticketleft\_total)  as  select a.no, a.busi\_type, a.train\_no, b.pass\_id, b.name, a.carriage\_number, c.carriage\_type, c.seat\_total, d.seat\_number, d.seat\_total||'-'||d.eat\_number  from v\_ticket\_bussiness a, v\_pass\_by\_mes b, v\_carriage\_mes c, v\_ticket\_bussines d  ;  comment on table y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id） is '余票信息';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.ticketleft\_id is '余票编号';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.busi\_type is '业务类别';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.train\_id is '车次编号';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.id is '编号';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.station\_name is '站点名';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.carriage\_number is '车厢号';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.carriage\_type is '车厢类别';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.seat\_total is '座位总数';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.seat\_number is '当前正售座位号';  comment on column y\_1\_7\_1\_1.ticketleft\_info（ticketleft\_id）.ticketleft\_total is '余票'; |

##### 乘客信息

表11.1.1.2‑5视图passenger\_info（passenger\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 乘客号 | passenger\_id | passenger | no |  |  |
| 2 | 姓名 | name | passenger | name |  |  |
| 3 | 性别 | gender | passenger | Select decode(mod(to\_number(substr(t.no,17,1)),2),0,'女','男')as gender from passenger\_info t; |  |  |
| 4 | 手机号码 | phone | passenger | Phone |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：乘客信息  create view y\_1\_7\_1\_1.passenger\_info（passenger\_id）(passenger\_id, name, gender, phone)  as  select no, name, no, phone  from passenger  where select decode(mod(to\_number(substr(t.no,17,1)),2),0,'女','男')as gender from passenger\_info t;  ;  comment on table y\_1\_7\_1\_1.passenger\_info（passenger\_id） is '乘客信息';  comment on column y\_1\_7\_1\_1.passenger\_info（passenger\_id）.passenger\_id is '乘客号';  comment on column y\_1\_7\_1\_1.passenger\_info（passenger\_id）.name is '姓名';  comment on column y\_1\_7\_1\_1.passenger\_info（passenger\_id）.gender is '性别';  comment on column y\_1\_7\_1\_1.passenger\_info（passenger\_id）.phone is '手机号码'; |

##### 车次信息

表1.1.1.2‑6视图train\_info（id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | id | v\_pass\_by\_mes | pass\_id |  |  |
| 2 | 站点名 | station\_name | v\_pass\_by\_mes | station\_name |  |  |
| 3 | 站点次序 | station\_order | v\_pass\_by\_mes | station\_order |  |  |
| 4 | 车次编号 | train\_id | v\_pass\_by\_mes | train\_no |  |  |
| 5 | 车厢数 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_total | include | select sum(carriage\_amount) from include |  |  |
| 6 | 发车时间 | start\_time | v\_pass\_by\_mes | start\_time |  |  |
| 7 | 到达时间 | arrive\_time | v\_pass\_by\_mes | stop\_time |  |  |
| 8 | 车次始发站 | orgion\_station | v\_pass\_by\_mes | select station\_name from v\_pass\_by\_mes where station\_order=min(station\_order) |  |  |
| 9 | 车次终点站 | destination\_station | v\_pass\_by\_mes | select station\_name from v\_pass\_by\_mes where station\_order=max(station\_order) |  |  |
| 10 | 经过站点数 | pass\_num | v\_pass\_by\_mes | select max(station\_order) from v\_pass\_by\_mes station\_order |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：车次信息  create view y\_1\_7\_1\_1.train\_info（id）(id, station\_name, station\_order, train\_id, carriage\_total, start\_time, arrive\_time, orgion\_station, destination\_station, pass\_num)  as  select a.pass\_id, a.station\_name, a.station\_order, a.train\_no, b.carriage\_amount, a.start\_time, a.stop\_time, a.station\_name, a.station\_name, a.station\_order  from v\_pass\_by\_mes a, include b  having select sum(carriage\_amount) from include, select station\_name from v\_pass\_by\_mes where station\_order=min(station\_order), select station\_name from v\_pass\_by\_mes where station\_order=max(station\_order), select max(station\_order) from v\_pass\_by\_mes  ;  comment on table y\_1\_7\_1\_1.train\_info（id） is '车次信息';  comment on column y\_1\_7\_1\_1.train\_info（id）.id is '编号';  comment on column y\_1\_7\_1\_1.train\_info（id）.station\_name is '站点名';  comment on column y\_1\_7\_1\_1.train\_info（id）.station\_order is '站点次序';  comment on column y\_1\_7\_1\_1.train\_info（id）.train\_id is '车次编号';  comment on column y\_1\_7\_1\_1.train\_info（id）.carriage\_total is '车厢数';  comment on column y\_1\_7\_1\_1.train\_info（id）.start\_time is '发车时间';  comment on column y\_1\_7\_1\_1.train\_info（id）.arrive\_time is '到达时间';  comment on column y\_1\_7\_1\_1.train\_info（id）.orgion\_station is '车次始发站';  comment on column y\_1\_7\_1\_1.train\_info（id）.destination\_station is '车次终点站';  comment on column y\_1\_7\_1\_1.train\_info（id）.pass\_num is '经过站点数'; |

##### 票价信息

表11.1.1.2‑7视图price\_info（price\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 票价编号 | price\_id | ticket\_business\_mes | no |  |  |
| 2 | 业务类别 | busi\_type | ticket\_business\_mes | busi\_type |  |  |
| 3 | 编号 | id | v\_pass\_by\_mes | pass\_id |  |  |
| 4 | 站点名 | station\_name | v\_pass\_by\_mes | origin\_station |  |  |
| 5 | 站点次序 | station\_order | v\_pass\_by\_mes | station\_order |  |  |
| 6 | 车厢类别 | [carriage](http://www.baidu.com/link?url=5HRyYEqj19bJYnECGkzBzQkOcMrmuh6Sh54ztJQsPEeaUmCCczvETGe6ISy91fdoRAmFdb3pYMMfvrHOEaWFOgerHWXhKkOHp9GiX0SVz2pbl52buCR--DSGrGPmg1pe)\_type | v\_carriage\_mes | carriage\_type |  |  |
| 7 | 铺位类别 | seat\_type | v\_carriage\_mes | seat\_type |  |  |
| 8 | 站点区间基础票价 | base\_price | v\_pass\_by\_mes | base\_price |  |  |
| 9 | 票价上浮比率 | up\_rate | v\_pass\_by\_mes | up\_rate |  |  |
| 10 | 站点区间总票价 | total\_price | v\_pass\_by\_mes | select base\_price\*(1.0+up\_rate) as total\_price from v\_pass\_by\_mes |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：票价信息  create view y\_1\_7\_1\_1.price\_info（price\_id）(price\_id, busi\_type, id, station\_name , station\_order, carriage\_type, seat\_type, base\_price, up\_rate, total\_price)  as  select a.no, a.busi\_type, b.pass\_id, b.origin\_station, b.station\_order, c.carriage\_type, c.seat\_type, b.base\_price, b.up\_rate, b.base\_price||'-'||b. up\_rate  from ticket\_business\_mes a, v\_pass\_by\_mes b, v\_carriage\_mes c  where select base\_price\*(1.0+up\_rate) as total\_price from v\_pass\_by\_mes  ;  comment on table y\_1\_7\_1\_1.price\_info（price\_id） is '票价信息';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.price\_id is '票价编号';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.busi\_type is '业务类别';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.id is '编号';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.station\_name is '站点名';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.station\_order is '站点次序';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.carriage\_type is '车厢类别';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.seat\_type is '铺位类别';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.base\_price is '站点区间基础票价';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.up\_rate is '票价上浮比率';  comment on column y\_1\_7\_1\_1.price\_info（price\_id）.total\_price is '站点区间总票价'; |

##### 售票员信息

表11.1.1.2‑8视图conductor\_info（conductor\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 售票员号 | conductor\_id | v\_employee\_mes | administer\_id |  |  |
| 2 | 姓名 | name | v\_employee\_mes | name |  |  |
| 3 | 性别 | gender | v\_employee\_mes | Select decode(mod(to\_number(substr(t.id\_card\_num,17,1)),2),0,'女','男')as gender from conductor\_info t; |  |  |
| 4 | 手机号码 | phone | v\_employee\_mes | phone |  |  |
| 5 | 密码 | password | v\_employee\_mes | administer\_pw |  |  |

执行脚本（Oracle，y\_1\_7\_1\_1）

|  |
| --- |
| -- 创建视图：售票员信息  create view y\_1\_7\_1\_1.conductor\_info（conductor\_id）(conductor\_id, name, gender, phone, password)  as  select administer\_id, name, id\_card\_num, phone, administer\_pw  from v\_employee\_mes  where select decode(mod(to\_number(substr(t.id\_card\_num,17,1)),2),0,'女','男')as gender from conductor\_info t;  ;  comment on table y\_1\_7\_1\_1.conductor\_info（conductor\_id） is '售票员信息';  comment on column y\_1\_7\_1\_1.conductor\_info（conductor\_id）.conductor\_id is '售票员号';  comment on column y\_1\_7\_1\_1.conductor\_info（conductor\_id）.name is '姓名';  comment on column y\_1\_7\_1\_1.conductor\_info（conductor\_id）.gender is '性别';  comment on column y\_1\_7\_1\_1.conductor\_info（conductor\_id）.phone is '手机号码';  comment on column y\_1\_7\_1\_1.conductor\_info（conductor\_id）.password is '密码'; |

#### 函数

表11.1.1‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表11.1.1‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表11.1.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点2（SQL Server）

#### 同义词

表11.1.2‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_2.area | 指向集中式数据库第6类用户y\_1\_6\_0\_2的区域表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_2.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_2的分公司表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_2.station | 指向集中式数据库第6类用户y\_1\_6\_0\_2的火车站表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_2.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_2的部门表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_2.post | 指向集中式数据库第6类用户y\_1\_6\_0\_2的岗位表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_2.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_2的员工表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_2.train | 指向集中式数据库第6类用户y\_1\_6\_0\_2的列车表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_2.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_2的车厢表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_2.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_2的乘客表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_2.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_2的网络售票终端表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_2.include | 指向集中式数据库第6类用户y\_1\_6\_0\_2的包含表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_2.work\_on | 指向集中式数据库第6类用户y\_1\_6\_0\_2的从事表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_2.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_2的经过表，实现位置透明 |  |
| 14 | ticket\_business | y\_1\_6\_0\_2.ticket\_business | 指向集中式数据库第6类用户y\_1\_6\_0\_2的车票业务表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_2.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_2的隶属表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_2.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_2的自助操作表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_2.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_2的上级表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_2.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的分公司信息视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_2.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的火车站信息视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_2.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的部门信息视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_2.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的岗位信息视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_2.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的员工信息视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_2.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的列车信息视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_2.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的车厢信息视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_2.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的网络售票终端信息视图，实现位置透明 |  |
| 26 | v\_include\_mes | y\_1\_6\_0\_2.v\_include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的包含信息视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_2.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的从事信息视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_2.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的经过信息视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_2.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的车票业务信息视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_2.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的隶属信息视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_2.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的自助操作信息视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_2.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的上级信息视图，实现位置透明 |  |

执行脚本（SQL Server，y\_1\_7\_1\_2）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的区域表，实现位置透明  create synonym y\_1\_7\_1\_2.area for y\_1\_6\_0\_2.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的分公司表，实现位置透明  create synonym y\_1\_7\_1\_2.branch\_company for y\_1\_6\_0\_2.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的火车站表，实现位置透明  create synonym y\_1\_7\_1\_2.station for y\_1\_6\_0\_2.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的部门表，实现位置透明  create synonym y\_1\_7\_1\_2.depart for y\_1\_6\_0\_2.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的岗位表，实现位置透明  create synonym y\_1\_7\_1\_2.post for y\_1\_6\_0\_2.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的员工表，实现位置透明  create synonym y\_1\_7\_1\_2.employee for y\_1\_6\_0\_2.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的列车表，实现位置透明  create synonym y\_1\_7\_1\_2.train for y\_1\_6\_0\_2.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的车厢表，实现位置透明  create synonym y\_1\_7\_1\_2.carriage for y\_1\_6\_0\_2.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的乘客表，实现位置透明  create synonym y\_1\_7\_1\_2.passenger for y\_1\_6\_0\_2.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的网络售票终端表，实现位置透明  create synonym y\_1\_7\_1\_2.terminal for y\_1\_6\_0\_2.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的包含表，实现位置透明  create synonym y\_1\_7\_1\_2.include for y\_1\_6\_0\_2.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的从事表，实现位置透明  create synonym y\_1\_7\_1\_2.work\_on for y\_1\_6\_0\_2.work\_on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的经过表，实现位置透明  create synonym y\_1\_7\_1\_2.pass\_by for y\_1\_6\_0\_2.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的车票业务表，实现位置透明  create synonym y\_1\_7\_1\_2.ticket\_business for y\_1\_6\_0\_2.ticket\_business;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的隶属表，实现位置透明  create synonym y\_1\_7\_1\_2.belong\_to for y\_1\_6\_0\_2.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的自助操作表，实现位置透明  create synonym y\_1\_7\_1\_2.self\_service for y\_1\_6\_0\_2.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的上级表，实现位置透明  create synonym y\_1\_7\_1\_2.superior for y\_1\_6\_0\_2.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的分公司信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_branch\_company\_mes for y\_1\_6\_0\_2.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的火车站信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_station\_mes for y\_1\_6\_0\_2.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的部门信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_depart\_mes for y\_1\_6\_0\_2.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的岗位信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_post\_mes for y\_1\_6\_0\_2.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的员工信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_employee\_mes for y\_1\_6\_0\_2.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的列车信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_train\_mes for y\_1\_6\_0\_2.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的车厢信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_carriage\_mes for y\_1\_6\_0\_2.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的网络售票终端信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_terminal\_mes for y\_1\_6\_0\_2.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的包含信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_include\_mes for y\_1\_6\_0\_2.v\_include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的从事信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_work\_on\_mes for y\_1\_6\_0\_2.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的经过信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_pass\_by\_mes for y\_1\_6\_0\_2.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的车票业务信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_ticket\_business\_mes for y\_1\_6\_0\_2.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的隶属信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_belong\_to\_mes for y\_1\_6\_0\_2.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的自助操作信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_self\_service\_mes for y\_1\_6\_0\_2.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的上级信息视图，实现位置透明  create synonym y\_1\_7\_1\_2.v\_superior\_mes for y\_1\_6\_0\_2.v\_superior\_mes;  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的区域表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','area'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的分公司表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','branch\_company'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的火车站表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','station'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的部门表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','depart'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的岗位表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','post'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的员工表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','employee'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的列车表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','train'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的车厢表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','carriage'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的乘客表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','passenger'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的网络售票终端表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','terminal'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的包含表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','include'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的从事表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','work\_on'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的经过表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','pass\_by'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的车票业务表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','ticket\_business'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的隶属表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','belong\_to'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的自助操作表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','self\_service'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的上级表，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','superior'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的分公司信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_branch\_company\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的火车站信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_station\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的部门信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_depart\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的岗位信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_post\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的员工信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_employee\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的列车信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_train\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的车厢信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_carriage\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的网络售票终端信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_terminal\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的包含信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_include\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的从事信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_work\_on\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的经过信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_pass\_by\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的车票业务信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_ticket\_business\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的隶属信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_belong\_to\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的自助操作信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_self\_service\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的上级信息视图，实现位置透明','SCHEMA','y\_1\_7\_1\_2','SYNONYM','v\_superior\_mes' |

#### 视图

表11.1.2‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 乘客车票订单 | order\_info | 单据 |  |
| 2 | 退票详细信息 | refund\_info | 单据 |  |
| 3 | 改签详细信息 | rebook\_info | 单据 |  |
| 4 | 余票信息 | ticketleft\_info | 单据 |  |
| 5 | 乘客信息 | passenger\_info | 报表 |  |
| 6 | 车次信息 | train\_info | 报表 |  |
| 7 | 票价信息 | price\_info | 报表 |  |
| 8 | 售票员信息 | conductor\_info | 报表 |  |

##### 视图1

表11.1.2.2‑1视图xxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（SQL Server，用户名）

|  |
| --- |
|  |

#### 函数

表11.1.2‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表11.1.2‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表11.1.2‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点3（PostgreSQL）

#### 同义词

表11.1.3‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_3.area | 指向集中式数据库第6类用户y\_1\_6\_0\_3的区域表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_3.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_3的分公司表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_3.station | 指向集中式数据库第6类用户y\_1\_6\_0\_3的火车站表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_3.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_3的部门表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_3.post | 指向集中式数据库第6类用户y\_1\_6\_0\_3的岗位表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_3.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_3的员工表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_3.train | 指向集中式数据库第6类用户y\_1\_6\_0\_3的列车表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_3.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_3的车厢表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_3.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_3的乘客表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_3.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_3的网络售票终端表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_3.include | 指向集中式数据库第6类用户y\_1\_6\_0\_3的包含表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_3.work\_on | 指向集中式数据库第6类用户y\_1\_6\_0\_3的从事表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_3.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_3的经过表，实现位置透明 |  |
| 14 | ticket\_business | y\_1\_6\_0\_3.ticket\_business | 指向集中式数据库第6类用户y\_1\_6\_0\_3的车票业务表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_3.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_3的隶属表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_3.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_3的自助操作表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_3.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_3的上级表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_3.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的分公司信息视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_3.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的火车站信息视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_3.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的部门信息视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_3.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的岗位信息视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_3.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的员工信息视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_3.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的列车信息视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_3.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的车厢信息视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_3.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的网络售票终端信息视图，实现位置透明 |  |
| 26 | v\_work\_on\_mes | y\_1\_6\_0\_3.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的从事信息视图，实现位置透明 |  |
| 27 | v\_pass\_by\_mes | y\_1\_6\_0\_3.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的经过信息视图，实现位置透明 |  |
| 28 | v\_ticket\_business\_mes | y\_1\_6\_0\_3.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的车票业务信息视图，实现位置透明 |  |
| 29 | v\_belong\_to\_mes | y\_1\_6\_0\_3.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的隶属信息视图，实现位置透明 |  |
| 30 | v\_self\_service\_mes | y\_1\_6\_0\_3.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的自助操作信息视图，实现位置透明 |  |
| 31 | v\_superior\_mes | y\_1\_6\_0\_3.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的上级信息视图，实现位置透明 |  |
| 32 | v\_ include\_mes | v\_ include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的包含信息视图，实现位置透明 |  |

执行脚本（PostgreSQL，y\_1\_7\_1\_3）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的区域表，实现位置透明  create view y\_1\_7\_1\_3.area as select \* from y\_1\_6\_0\_3.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的分公司表，实现位置透明  create view y\_1\_7\_1\_3.branch\_company as select \* from y\_1\_6\_0\_3.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的火车站表，实现位置透明  create view y\_1\_7\_1\_3.station as select \* from y\_1\_6\_0\_3.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的部门表，实现位置透明  create view y\_1\_7\_1\_3.depart as select \* from y\_1\_6\_0\_3.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的岗位表，实现位置透明  create view y\_1\_7\_1\_3.post as select \* from y\_1\_6\_0\_3.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的员工表，实现位置透明  create view y\_1\_7\_1\_3.employee as select \* from y\_1\_6\_0\_3.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的列车表，实现位置透明  create view y\_1\_7\_1\_3.train as select \* from y\_1\_6\_0\_3.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的车厢表，实现位置透明  create view y\_1\_7\_1\_3.carriage as select \* from y\_1\_6\_0\_3.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的乘客表，实现位置透明  create view y\_1\_7\_1\_3.passenger as select \* from y\_1\_6\_0\_3.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的网络售票终端表，实现位置透明  create view y\_1\_7\_1\_3.terminal as select \* from y\_1\_6\_0\_3.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的包含表，实现位置透明  create view y\_1\_7\_1\_3.include as select \* from y\_1\_6\_0\_3.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的从事表，实现位置透明  create view y\_1\_7\_1\_3.work\_on as select \* from y\_1\_6\_0\_3.work\_on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的经过表，实现位置透明  create view y\_1\_7\_1\_3.pass\_by as select \* from y\_1\_6\_0\_3.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的车票业务表，实现位置透明  create view y\_1\_7\_1\_3.ticket\_business as select \* from y\_1\_6\_0\_3.ticket\_business;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的隶属表，实现位置透明  create view y\_1\_7\_1\_3.belong\_to as select \* from y\_1\_6\_0\_3.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的自助操作表，实现位置透明  create view y\_1\_7\_1\_3.self\_service as select \* from y\_1\_6\_0\_3.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的上级表，实现位置透明  create view y\_1\_7\_1\_3.superior as select \* from y\_1\_6\_0\_3.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的分公司信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_branch\_company\_mes as select \* from y\_1\_6\_0\_3.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的火车站信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_station\_mes as select \* from y\_1\_6\_0\_3.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的部门信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_depart\_mes as select \* from y\_1\_6\_0\_3.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的岗位信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_post\_mes as select \* from y\_1\_6\_0\_3.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的员工信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_employee\_mes as select \* from y\_1\_6\_0\_3.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的列车信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_train\_mes as select \* from y\_1\_6\_0\_3.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的车厢信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_carriage\_mes as select \* from y\_1\_6\_0\_3.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的网络售票终端信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_terminal\_mes as select \* from y\_1\_6\_0\_3.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的从事信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_work\_on\_mes as select \* from y\_1\_6\_0\_3.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的经过信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_pass\_by\_mes as select \* from y\_1\_6\_0\_3.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的车票业务信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_ticket\_business\_mes as select \* from y\_1\_6\_0\_3.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的隶属信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_belong\_to\_mes as select \* from y\_1\_6\_0\_3.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的自助操作信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_self\_service\_mes as select \* from y\_1\_6\_0\_3.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的上级信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_superior\_mes as select \* from y\_1\_6\_0\_3.v\_superior\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的包含信息视图，实现位置透明  create view y\_1\_7\_1\_3.v\_ include\_mes as select \* from y\_1\_7\_1\_3.v\_ include\_mes;  comment on view y\_1\_7\_1\_3.area is '指向集中式数据库第6类用户y\_1\_6\_0\_3的区域表，实现位置透明';  comment on view y\_1\_7\_1\_3.branch\_company is '指向集中式数据库第6类用户y\_1\_6\_0\_3的分公司表，实现位置透明';  comment on view y\_1\_7\_1\_3.station is '指向集中式数据库第6类用户y\_1\_6\_0\_3的火车站表，实现位置透明';  comment on view y\_1\_7\_1\_3.depart is '指向集中式数据库第6类用户y\_1\_6\_0\_3的部门表，实现位置透明';  comment on view y\_1\_7\_1\_3.post is '指向集中式数据库第6类用户y\_1\_6\_0\_3的岗位表，实现位置透明';  comment on view y\_1\_7\_1\_3.employee is '指向集中式数据库第6类用户y\_1\_6\_0\_3的员工表，实现位置透明';  comment on view y\_1\_7\_1\_3.train is '指向集中式数据库第6类用户y\_1\_6\_0\_3的列车表，实现位置透明';  comment on view y\_1\_7\_1\_3.carriage is '指向集中式数据库第6类用户y\_1\_6\_0\_3的车厢表，实现位置透明';  comment on view y\_1\_7\_1\_3.passenger is '指向集中式数据库第6类用户y\_1\_6\_0\_3的乘客表，实现位置透明';  comment on view y\_1\_7\_1\_3.terminal is '指向集中式数据库第6类用户y\_1\_6\_0\_3的网络售票终端表，实现位置透明';  comment on view y\_1\_7\_1\_3.include is '指向集中式数据库第6类用户y\_1\_6\_0\_3的包含表，实现位置透明';  comment on view y\_1\_7\_1\_3.work\_on is '指向集中式数据库第6类用户y\_1\_6\_0\_3的从事表，实现位置透明';  comment on view y\_1\_7\_1\_3.pass\_by is '指向集中式数据库第6类用户y\_1\_6\_0\_3的经过表，实现位置透明';  comment on view y\_1\_7\_1\_3.ticket\_business is '指向集中式数据库第6类用户y\_1\_6\_0\_3的车票业务表，实现位置透明';  comment on view y\_1\_7\_1\_3.belong\_to is '指向集中式数据库第6类用户y\_1\_6\_0\_3的隶属表，实现位置透明';  comment on view y\_1\_7\_1\_3.self\_service is '指向集中式数据库第6类用户y\_1\_6\_0\_3的自助操作表，实现位置透明';  comment on view y\_1\_7\_1\_3.superior is '指向集中式数据库第6类用户y\_1\_6\_0\_3的上级表，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_branch\_company\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的分公司信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_station\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的火车站信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_depart\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的部门信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_post\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的岗位信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_employee\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的员工信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_train\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的列车信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_carriage\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的车厢信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_terminal\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的网络售票终端信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_work\_on\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的从事信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_pass\_by\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的经过信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_ticket\_business\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的车票业务信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_belong\_to\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的隶属信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_self\_service\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的自助操作信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_superior\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的上级信息视图，实现位置透明';  comment on view y\_1\_7\_1\_3.v\_ include\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的包含信息视图，实现位置透明'; |

#### 视图

表11.1.3‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 乘客车票订单 | order\_info | 单据 |  |
| 2 | 退票详细信息 | refund\_info | 单据 |  |
| 3 | 改签详细信息 | rebook\_info | 单据 |  |
| 4 | 余票信息 | ticketleft\_info | 单据 |  |
| 5 | 乘客信息 | passenger\_info | 报表 |  |
| 6 | 车次信息 | train\_info | 报表 |  |
| 7 | 票价信息 | price\_info | 报表 |  |
| 8 | 售票员信息 | conductor\_info | 报表 |  |

##### 视图1

表11.1.3.2‑1视图xxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（PostgreSQL，用户名）

|  |
| --- |
|  |

#### 函数

表11.1.3‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表11.1.3‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表11.1.3‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

## 乘客业务

### 站点1（oracle）

#### 同义词

表1.1.1‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_1.area | 指向集中式数据库第6类用户y\_1\_6\_0\_1的area表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_1.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_1的branch\_company表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_1.station | 指向集中式数据库第6类用户y\_1\_6\_0\_1的station表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_1.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_1的depart表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_1.post | 指向集中式数据库第6类用户y\_1\_6\_0\_1的post表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_1.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_1的employee表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_1.train | 指向集中式数据库第6类用户y\_1\_6\_0\_1的train表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_1.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_1的carriage表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_1.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_1的passenger表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_1.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_1的terminal表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_1.include | 指向集中式数据库第6类用户y\_1\_6\_0\_1的include表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_1.work on | 指向集中式数据库第6类用户y\_1\_6\_0\_1的work on表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_1.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_1的pass\_by表，实现位置透明 |  |
| 14 | ticket\_bussiness | y\_1\_6\_0\_1.ticket\_bussiness | 指向集中式数据库第6类用户y\_1\_6\_0\_1的ticket\_bussiness表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_1.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_1的belong\_to表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_1.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_1的self\_service表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_1.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_1的superior表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_1.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_branch\_company\_mes视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_1.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_station\_mes视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_1.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_depart\_mes视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_1.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_post\_mes视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_1.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_employee\_mes视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_1.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_train\_mes视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_1.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_carriage\_mes视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_1.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_terminal\_mes视图，实现位置透明 |  |
| 26 | v\_include\_mes | y\_1\_6\_0\_1.v\_include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_include\_mes视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_1.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_work\_on\_mes视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_1.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_pass\_by\_mes视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_1.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_ticket\_business\_mes视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_1.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_belong\_to\_mes视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_1.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_self\_service\_mes视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_1.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_superior\_mes视图，实现位置透明 |  |

执行脚本（Oracle，y\_1\_7\_2\_1）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的area表，实现位置透明  create synonym y\_1\_7\_2\_1.area for y\_1\_6\_0\_1.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的branch\_company表，实现位置透明  create synonym y\_1\_7\_2\_1.branch\_company for y\_1\_6\_0\_1.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的station表，实现位置透明  create synonym y\_1\_7\_2\_1.station for y\_1\_6\_0\_1.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的depart表，实现位置透明  create synonym y\_1\_7\_2\_1.depart for y\_1\_6\_0\_1.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的post表，实现位置透明  create synonym y\_1\_7\_2\_1.post for y\_1\_6\_0\_1.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的employee表，实现位置透明  create synonym y\_1\_7\_2\_1.employee for y\_1\_6\_0\_1.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的train表，实现位置透明  create synonym y\_1\_7\_2\_1.train for y\_1\_6\_0\_1.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的carriage表，实现位置透明  create synonym y\_1\_7\_2\_1.carriage for y\_1\_6\_0\_1.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的passenger表，实现位置透明  create synonym y\_1\_7\_2\_1.passenger for y\_1\_6\_0\_1.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的terminal表，实现位置透明  create synonym y\_1\_7\_2\_1.terminal for y\_1\_6\_0\_1.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的include表，实现位置透明  create synonym y\_1\_7\_2\_1.include for y\_1\_6\_0\_1.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的work on表，实现位置透明  create synonym y\_1\_7\_2\_1.work\_on for y\_1\_6\_0\_1.work on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的pass\_by表，实现位置透明  create synonym y\_1\_7\_2\_1.pass\_by for y\_1\_6\_0\_1.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的ticket\_bussiness表，实现位置透明  create synonym y\_1\_7\_2\_1.ticket\_bussiness for y\_1\_6\_0\_1.ticket\_bussiness;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的belong\_to表，实现位置透明  create synonym y\_1\_7\_2\_1.belong\_to for y\_1\_6\_0\_1.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的self\_service表，实现位置透明  create synonym y\_1\_7\_2\_1.self\_service for y\_1\_6\_0\_1.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的superior表，实现位置透明  create synonym y\_1\_7\_2\_1.superior for y\_1\_6\_0\_1.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_branch\_company\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_branch\_company\_mes for y\_1\_6\_0\_1.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_station\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_station\_mes for y\_1\_6\_0\_1.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_depart\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_depart\_mes for y\_1\_6\_0\_1.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_post\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_post\_mes for y\_1\_6\_0\_1.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_employee\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_employee\_mes for y\_1\_6\_0\_1.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_train\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_train\_mes for y\_1\_6\_0\_1.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_carriage\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_carriage\_mes for y\_1\_6\_0\_1.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_terminal\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_terminal\_mes for y\_1\_6\_0\_1.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_include\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_include\_mes for y\_1\_6\_0\_1.v\_include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_work\_on\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_work\_on\_mes for y\_1\_6\_0\_1.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_pass\_by\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_pass\_by\_mes for y\_1\_6\_0\_1.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_ticket\_business\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_ticket\_business\_mes for y\_1\_6\_0\_1.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_belong\_to\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_belong\_to\_mes for y\_1\_6\_0\_1.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_self\_service\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_self\_service\_mes for y\_1\_6\_0\_1.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_superior\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_1.v\_superior\_mes for y\_1\_6\_0\_1.v\_superior\_mes; |

#### 视图

表1.1.1‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 订单信息 | order\_mes | 单据 |  |
| 2 | 余票信息 | surplus\_ticket\_mes | 单据 |  |
| 3 | 乘客信息 | passenger\_mes | 报表 |  |
| 4 | 车次信息 | train\_num\_mes | 报表 |  |
| 5 | 票价信息 | ticket\_price\_mes | 报表 |  |

##### 订单信息视图

表1.1.1.2‑1视图order\_mes（order\_number）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | ticket\_business | no |  |  |
| 2 | 车次编号 | train\_number | ticket\_business | train\_no |  |  |
| 3 | 车号 | train\_id\_num | train | train\_id | train. train\_id= ticket\_business. train\_no |  |
| 4 | 乘客出发站 | pa\_start\_sta | station | name | station. name= ticket\_business. origin\_station |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | station | name | station. name= ticket\_business. destination\_station |  |
| 6 | 身份证号 | pa\_id | passenger | no | Passenger.no= ticket\_business. passenger\_no |  |
| 7 | 乘客姓名 | pa\_name | passenger | name | Passenger. Name= ticket\_business. passenger\_name |  |
| 8 | 票价 | ticket\_price | ticket\_business | busi\_amount |  |  |
| 9 | 车厢号 | carr\_num | carriage | carriage\_no | Carriage. carriage\_no= ticket\_business. carriage\_no |  |
| 10 | 车座种类 | seat\_type | carriage | carriage\_type | Carriage. carriage\_type= ticket\_business. carriage\_type |  |
| 11 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 12 | 订票日期 | reser\_date | ticket\_business | do\_time |  |  |
| 13 | 到达时间 | arri\_time | ticket\_business | arrive\_time |  |  |
| 14 | 发车时间 | str\_time | ticket\_business | start\_time |  |  |
| 15 | 订单状态 | order\_status | ticket\_business | busi\_status |  |  |
| 16 | 出票状态 | ticket\_out\_if | ticket\_business | ticket\_status |  |  |
| 17 | 变更到站状态 | change\_sta\_if | ticket\_business | change\_station |  |  |

执行脚本（Oracle，y\_1\_7\_2\_1）

|  |
| --- |
| -- 创建视图：订单信息视图  create view y\_1\_7\_2\_1.order\_mes（order\_number）(order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select a.no, a.train\_no, b.train\_id, c.name, c.name, d.no, d.name, a.busi\_amount, e.carriage\_no, e.carriage\_type, a.seat\_number, a.do\_time, a.arrive\_time, a.start\_time, a.busi\_status, a.ticket\_status, a.change\_station  from ticket\_business a, train b, station c, passenger d, carriage e  where b. train\_id= a. train\_no and c. name= a. origin\_station and c. name= a. destination\_station and d.no= a. passenger\_no and d. name= a. passenger\_name and e. carriage\_no= a. carriage\_no and e. carriage\_type= a. carriage\_type  ;  comment on table y\_1\_7\_2\_1.order\_mes（order\_number） is '订单信息视图';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.order\_number is '订单号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.train\_number is '车次编号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.train\_id\_num is '车号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_id is '身份证号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_name is '乘客姓名';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.ticket\_price is '票价';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.carr\_num is '车厢号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.seat\_type is '车座种类';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.seat\_number is '座位号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.reser\_date is '订票日期';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.arri\_time is '到达时间 ';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.str\_time is '发车时间';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.order\_status is '订单状态';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.ticket\_out\_if is '出票状态';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.change\_sta\_if is '变更到站状态'; |

##### 余票信息视图

表1.1.2.2‑2视图surplus\_ticket\_mes（surplus\_ticket\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（oracle，y\_1\_7\_2\_1）

|  |
| --- |
|  |

##### 乘客信息视图

表1.1.1.2‑1视图passenger\_mes（pa\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（oracle，y\_1\_7\_2\_1）

|  |
| --- |
|  |

##### 车次信息视图

表1.1.1.2‑1视图train\_num\_mes（train\_id\_num）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（oracle，y\_1\_7\_2\_1）

|  |
| --- |
|  |

##### 票价信息视图

表1.1.1.2‑1视图ticket\_price\_mes（ticket\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（oracle，y\_1\_7\_2\_1）

|  |
| --- |
|  |

#### 函数

表1.1.1‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表1.1.1‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表1.1.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点2（sql server）

#### 同义词

表1.1.2‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_2.area | 指向集中式数据库第6类用户y\_1\_6\_0\_2的area表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_2.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_2的branch\_company表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_2.station | 指向集中式数据库第6类用户y\_1\_6\_0\_2的station表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_2.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_2的depart表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_2.post | 指向集中式数据库第6类用户y\_1\_6\_0\_2的post表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_2.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_2的employee表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_2.train | 指向集中式数据库第6类用户y\_1\_6\_0\_2的train表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_2.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_2的carriage表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_2.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_2的passenger表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_2.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_2的terminal表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_2.include | 指向集中式数据库第6类用户y\_1\_6\_0\_2的include表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_2.work on | 指向集中式数据库第6类用户y\_1\_6\_0\_2的work on表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_2.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_2的pass\_by表，实现位置透明 |  |
| 14 | ticket\_bussiness | y\_1\_6\_0\_2.ticket\_bussiness | 指向集中式数据库第6类用户y\_1\_6\_0\_2的ticket\_bussiness表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_2.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_2的belong\_to表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_2.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_2的self\_service表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_2.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_2的superior表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_2.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_branch\_company\_mes视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_2.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_station\_mes视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_2.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_depart\_mes视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_2.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_post\_mes视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_2.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_employee\_mes视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_2.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_train\_mes视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_2.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_carriage\_mes视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_2.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_terminal\_mes视图，实现位置透明 |  |
| 26 | v\_include\_mes | y\_1\_6\_0\_2.v\_include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_include\_mes视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_2.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_work\_on\_mes视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_2.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_pass\_by\_mes视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_2.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_ticket\_business\_mes视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_2.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_belong\_to\_mes视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_2.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_self\_service\_mes视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_2.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_superior\_mes视图，实现位置透明 |  |

执行脚本（SQL Server，y\_1\_7\_2\_2）

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| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的area表，实现位置透明  create synonym y\_1\_7\_2\_2.area for y\_1\_6\_0\_2.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的branch\_company表，实现位置透明  create synonym y\_1\_7\_2\_2.branch\_company for y\_1\_6\_0\_2.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的station表，实现位置透明  create synonym y\_1\_7\_2\_2.station for y\_1\_6\_0\_2.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的depart表，实现位置透明  create synonym y\_1\_7\_2\_2.depart for y\_1\_6\_0\_2.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的post表，实现位置透明  create synonym y\_1\_7\_2\_2.post for y\_1\_6\_0\_2.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的employee表，实现位置透明  create synonym y\_1\_7\_2\_2.employee for y\_1\_6\_0\_2.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的train表，实现位置透明  create synonym y\_1\_7\_2\_2.train for y\_1\_6\_0\_2.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的carriage表，实现位置透明  create synonym y\_1\_7\_2\_2.carriage for y\_1\_6\_0\_2.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的passenger表，实现位置透明  create synonym y\_1\_7\_2\_2.passenger for y\_1\_6\_0\_2.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的terminal表，实现位置透明  create synonym y\_1\_7\_2\_2.terminal for y\_1\_6\_0\_2.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的include表，实现位置透明  create synonym y\_1\_7\_2\_2.include for y\_1\_6\_0\_2.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的work on表，实现位置透明  create synonym y\_1\_7\_2\_2.work\_on for y\_1\_6\_0\_2.work on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的pass\_by表，实现位置透明  create synonym y\_1\_7\_2\_2.pass\_by for y\_1\_6\_0\_2.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的ticket\_bussiness表，实现位置透明  create synonym y\_1\_7\_2\_2.ticket\_bussiness for y\_1\_6\_0\_2.ticket\_bussiness;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的belong\_to表，实现位置透明  create synonym y\_1\_7\_2\_2.belong\_to for y\_1\_6\_0\_2.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的self\_service表，实现位置透明  create synonym y\_1\_7\_2\_2.self\_service for y\_1\_6\_0\_2.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的superior表，实现位置透明  create synonym y\_1\_7\_2\_2.superior for y\_1\_6\_0\_2.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_branch\_company\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_branch\_company\_mes for y\_1\_6\_0\_2.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_station\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_station\_mes for y\_1\_6\_0\_2.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_depart\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_depart\_mes for y\_1\_6\_0\_2.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_post\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_post\_mes for y\_1\_6\_0\_2.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_employee\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_employee\_mes for y\_1\_6\_0\_2.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_train\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_train\_mes for y\_1\_6\_0\_2.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_carriage\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_carriage\_mes for y\_1\_6\_0\_2.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_terminal\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_terminal\_mes for y\_1\_6\_0\_2.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_include\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_include\_mes for y\_1\_6\_0\_2.v\_include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_work\_on\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_work\_on\_mes for y\_1\_6\_0\_2.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_pass\_by\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_pass\_by\_mes for y\_1\_6\_0\_2.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_ticket\_business\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_ticket\_business\_mes for y\_1\_6\_0\_2.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_belong\_to\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_belong\_to\_mes for y\_1\_6\_0\_2.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_self\_service\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_self\_service\_mes for y\_1\_6\_0\_2.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_superior\_mes视图，实现位置透明  create synonym y\_1\_7\_2\_2.v\_superior\_mes for y\_1\_6\_0\_2.v\_superior\_mes;  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的area表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','area'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的branch\_company表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','branch\_company'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的station表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','station'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的depart表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','depart'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的post表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','post'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的employee表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','employee'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的train表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','train'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的carriage表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','carriage'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的passenger表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','passenger'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的terminal表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','terminal'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的include表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','include'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的work on表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','work\_on'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的pass\_by表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','pass\_by'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的ticket\_bussiness表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','ticket\_bussiness'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的belong\_to表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','belong\_to'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的self\_service表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','self\_service'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的superior表，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','superior'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_branch\_company\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_branch\_company\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_station\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_station\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_depart\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_depart\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_post\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_post\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_employee\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_employee\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_train\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_train\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_carriage\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_carriage\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_terminal\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_terminal\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_include\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_include\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_work\_on\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_work\_on\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_pass\_by\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_pass\_by\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_ticket\_business\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_ticket\_business\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_belong\_to\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_belong\_to\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_self\_service\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_self\_service\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_superior\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_2\_2','SYNONYM','v\_superior\_mes' |

#### 视图

表1.1.2‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 订单信息 | order\_mes | 单据 |  |
| 2 | 余票信息 | surplus\_ticket\_mes | 单据 |  |
| 3 | 乘客信息 | passenger\_mes | 报表 |  |
| 4 | 车次信息 | train\_num\_mes | 报表 |  |
| 5 | 票价信息 | ticket\_price\_mes | 报表 |  |

##### 订单信息视图

表1.1.2.2‑2视图order\_mes（order\_number）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | ticket\_business | no |  |  |
| 2 | 车次编号 | train\_number | ticket\_business | train\_no |  |  |
| 3 | 车号 | train\_id\_num | train | train\_id | train. train\_id= ticket\_business. train\_no |  |
| 4 | 乘客出发站 | pa\_start\_sta | station | name | station. name= ticket\_business. origin\_station |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | station | name | station. name= ticket\_business. destination\_station |  |
| 6 | 身份证号 | pa\_id | passenger | no | Passenger.no= ticket\_business. passenger\_no |  |
| 7 | 乘客姓名 | pa\_name | passenger | name | Passenger. Name= ticket\_business. passenger\_name |  |
| 8 | 票价 | ticket\_price | ticket\_business | busi\_amount |  |  |
| 9 | 车厢号 | carr\_num | carriage | carriage\_no | Carriage. carriage\_no= ticket\_business. carriage\_no |  |
| 10 | 车座种类 | seat\_type | carriage | carriage\_type | Carriage. carriage\_type= ticket\_business. carriage\_type |  |
| 11 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 12 | 订票日期 | reser\_date | ticket\_business | do\_time |  |  |
| 13 | 到达时间 | arri\_time | ticket\_business | arrive\_time |  |  |
| 14 | 发车时间 | str\_time | ticket\_business | start\_time |  |  |
| 15 | 订单状态 | order\_status | ticket\_business | busi\_status |  |  |
| 16 | 出票状态 | ticket\_out\_if | ticket\_business | ticket\_status |  |  |
| 17 | 变更到站状态 | change\_sta\_if | ticket\_business | change\_station |  |  |

执行脚本（SQL Server，y\_1\_7\_2\_1）

|  |
| --- |
| -- 创建视图：订单信息视图  create view y\_1\_7\_2\_1.order\_mes（order\_number）(order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select a.no, a.train\_no, b.train\_id, c.name, c.name, d.no, d.name, a.busi\_amount, e.carriage\_no, e.carriage\_type, a.seat\_number, a.do\_time, a.arrive\_time, a.start\_time, a.busi\_status, a.ticket\_status, a.change\_station  from ticket\_business a, train b, station c, passenger d, carriage e  where b. train\_id= a. train\_no and c. name= a. origin\_station and c. name= a. destination\_station and d.no= a. passenger\_no and d. name= a. passenger\_name and e. carriage\_no= a. carriage\_no and e. carriage\_type= a. carriage\_type  ;  exec sp\_addextendedproperty 'MS\_Description','订单信息视图','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）'  exec sp\_addextendedproperty 'MS\_Description','订单号','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','order\_number'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','train\_number'  exec sp\_addextendedproperty 'MS\_Description','车号','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','train\_id\_num'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','pa\_start\_sta'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','pa\_arrive\_sta'  exec sp\_addextendedproperty 'MS\_Description','身份证号','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','pa\_id'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','pa\_name'  exec sp\_addextendedproperty 'MS\_Description','票价','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','ticket\_price'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','carr\_num'  exec sp\_addextendedproperty 'MS\_Description','车座种类','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','seat\_type'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','订票日期','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','reser\_date'  exec sp\_addextendedproperty 'MS\_Description','到达时间 ','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','arri\_time'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','str\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','order\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','ticket\_out\_if'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_7\_2\_1','VIEW','order\_mes（order\_number）','COLUMN','change\_sta\_if' |

##### 余票信息视图

表1.1.2.2‑2视图surplus\_ticket\_mes（surplus\_ticket\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | y\_1\_6\_0\_1.tib | No |  |  |
| 2 | 乘客号 | passenger\_no | y\_1\_6\_0\_1.tib | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | y\_1\_6\_0\_1.pas | Name | tib.passenger\_no=passenger.no |  |
| 4 | 员工号 | emp\_no | y\_1\_6\_0\_1.tib | Emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | y\_1\_6\_0\_1.employee | Name | tib.emp\_no=employee.administer\_id |  |
| 6 | 车次编号 | train\_no | y\_1\_6\_0\_1.tib | train\_no |  |  |
| 7 | 列车类型 | train\_type | y\_1\_6\_0\_1.train | train\_type | tib.train\_no =train. train\_no |  |
| 8 | 车厢编号 | carriage\_no | y\_1\_6\_0\_1.tib | carriage\_no |  |  |
| 9 | 车厢类别 | carriage\_type | y\_1\_6\_0\_1.carriage | carriage\_type | tib.carriage\_no = carriage. carriage\_no |  |
| 10 | 乘客出发站 | origin\_station | y\_1\_6\_0\_1.tib | origin\_station |  |  |
| 11 | 出发站点名 | origin\_station\_name | y\_1\_6\_0\_1.station | Name | tib.origin\_station=station.station\_no |  |
| 12 | 乘客到达站 | destination\_station | y\_1\_6\_0\_1.tib | destination\_station |  |  |
| 13 | 到达站点名 | destination\_station\_n | y\_1\_6\_0\_1.station | Name | tib.destination\_station=station.station\_no |  |
| 14 | 业务类别 | busi\_type | y\_1\_6\_0\_1.tib | busi\_type |  |  |
| 15 | 业务类别名称 | busi\_type\_name | y\_1\_6\_0\_1.user\_dict c1 | Content | c1.category='407'  and c1.code=busi\_type |  |
| 16 | 办理时间 | do\_time | y\_1\_6\_0\_1.tib | do\_time |  |  |
| 17 | 订单状态 | busi\_status | y\_1\_6\_0\_1.tib | busi\_status |  |  |
| 18 | 订单状态名称 | busi\_status\_name | y\_1\_6\_0\_1.user\_dict c2 | Content | c2.category='408'  and c2.code=busi\_status |  |
| 19 | 业务金额 | busi\_amount | y\_1\_6\_0\_1.tib | busi\_amount |  |  |
| 20 | 车厢号 | carriage\_number | y\_1\_6\_0\_1.tib | carriage\_number |  |  |
| 21 | 座位号 | seat\_number | y\_1\_6\_0\_1.tib | seat\_number |  |  |
| 22 | 发车时间 | start\_time | y\_1\_6\_0\_1.tib | start\_time |  |  |
| 23 | 到达时间 | arrive\_time | y\_1\_6\_0\_1.tib | arrive\_time |  |  |
| 24 | 出票状态 | ticket\_status | y\_1\_6\_0\_1.tib | ticket\_status |  |  |
| 25 | 出票状态名称 | ticket\_status\_name | y\_1\_6\_0\_1.user\_dict c3 | content | c3.category='409'  and c3.code= ticket\_status |  |
| 26 | 变更到站状态 | change\_station | y\_1\_6\_0\_1.tib | change\_station |  |  |
| 27 | 变更到站状态名称 | change\_station\_name | y\_1\_6\_0\_1.user\_dict c4 | content | c4.category='410'  and c4.code= change\_station |  |

执行脚本（SQL Server，y\_1\_7\_2\_1）

|  |
| --- |
| -- 创建视图：余票信息视图  create view y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, train\_type, carriage\_no, carriage\_type, origin\_station, origin\_station\_name, destination\_station, destination\_station\_n, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, d.train\_type, a.carriage\_no, e.carriage\_type, a.origin\_station, f.name, a.destination\_station, f.name, a.busi\_type, c1.content, a.do\_time, a.busi\_status, c2.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, c3.content, a.change\_station, c4.content  from y\_1\_6\_0\_1.tib a, y\_1\_6\_0\_1.pas b, y\_1\_6\_0\_1.employee c, y\_1\_6\_0\_1.train d, y\_1\_6\_0\_1.carriage e, y\_1\_6\_0\_1.station f, y\_1\_6\_0\_1.user\_dict c1, y\_1\_6\_0\_1.user\_dict c2, y\_1\_6\_0\_1.user\_dict c3, y\_1\_6\_0\_1.user\_dict c4  where tib.passenger\_no=passenger.no and tib.emp\_no=employee.administer\_id and tib.train\_no =train. train\_no and tib.carriage\_no = carriage. carriage\_no and tib.origin\_station=station.station\_no and tib.destination\_station=station.station\_no and c1.category='407'  and c1.code=busi\_type and c2.category='408'  and c2.code=busi\_status and c3.category='409'  and c3.code= ticket\_status and c4.category='410'  and c4.code= change\_station  ;  exec sp\_addextendedproperty 'MS\_Description','余票信息视图','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）'  exec sp\_addextendedproperty 'MS\_Description','编号','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','no'  exec sp\_addextendedproperty 'MS\_Description','乘客号','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','passenger\_no'  exec sp\_addextendedproperty 'MS\_Description','乘客姓名','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','passenger\_name'  exec sp\_addextendedproperty 'MS\_Description','员工号','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','emp\_no'  exec sp\_addextendedproperty 'MS\_Description','员工姓名','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','emp\_name'  exec sp\_addextendedproperty 'MS\_Description','车次编号','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','train\_no'  exec sp\_addextendedproperty 'MS\_Description','列车类型','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','train\_type'  exec sp\_addextendedproperty 'MS\_Description','车厢编号','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','carriage\_no'  exec sp\_addextendedproperty 'MS\_Description','车厢类别','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','carriage\_type'  exec sp\_addextendedproperty 'MS\_Description','乘客出发站','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','origin\_station'  exec sp\_addextendedproperty 'MS\_Description','出发站点名','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','origin\_station\_name'  exec sp\_addextendedproperty 'MS\_Description','乘客到达站','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','destination\_station'  exec sp\_addextendedproperty 'MS\_Description','到达站点名','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','destination\_station\_n'  exec sp\_addextendedproperty 'MS\_Description','业务类别','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','busi\_type'  exec sp\_addextendedproperty 'MS\_Description','业务类别名称','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','busi\_type\_name'  exec sp\_addextendedproperty 'MS\_Description','办理时间','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','do\_time'  exec sp\_addextendedproperty 'MS\_Description','订单状态','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','busi\_status'  exec sp\_addextendedproperty 'MS\_Description','订单状态名称','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','busi\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','业务金额','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','busi\_amount'  exec sp\_addextendedproperty 'MS\_Description','车厢号','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','carriage\_number'  exec sp\_addextendedproperty 'MS\_Description','座位号','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','seat\_number'  exec sp\_addextendedproperty 'MS\_Description','发车时间','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','start\_time'  exec sp\_addextendedproperty 'MS\_Description','到达时间','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','arrive\_time'  exec sp\_addextendedproperty 'MS\_Description','出票状态','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','ticket\_status'  exec sp\_addextendedproperty 'MS\_Description','出票状态名称','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','ticket\_status\_name'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','change\_station'  exec sp\_addextendedproperty 'MS\_Description','变更到站状态名称','SCHEMA','y\_1\_7\_2\_1','VIEW','surplus\_ticket\_mes（surplus\_ticket\_id）','COLUMN','change\_station\_name' |

##### 乘客信息视图

表1.1.1.2‑1视图passenger\_mes（pa\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（sql server，y\_1\_7\_2\_1）

|  |
| --- |
|  |

##### 车次信息视图

表1.1.1.2‑1视图train\_num\_mes（train\_id\_num）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（sql server，y\_1\_7\_2\_1）

|  |
| --- |
|  |

##### 票价信息视图

表1.1.1.2‑1视图ticket\_price\_mes（ticket\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（sql server，y\_1\_7\_2\_1）

|  |
| --- |
|  |

#### 函数

表1.1.2‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表1.1.2‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表1.1.2‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点3（postgresql）

#### 同义词

表1.1.3‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_3.area | 指向集中式数据库第6类用户y\_1\_6\_0\_3的area表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_3.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_3的branch\_company表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_3.station | 指向集中式数据库第6类用户y\_1\_6\_0\_3的station表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_3.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_3的depart表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_3.post | 指向集中式数据库第6类用户y\_1\_6\_0\_3的post表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_3.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_3的employee表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_3.train | 指向集中式数据库第6类用户y\_1\_6\_0\_3的train表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_3.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_3的carriage表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_3.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_3的passenger表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_3.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_3的terminal表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_3.include | 指向集中式数据库第6类用户y\_1\_6\_0\_3的include表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_3.work on | 指向集中式数据库第6类用户y\_1\_6\_0\_3的work on表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_3.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_3的pass\_by表，实现位置透明 |  |
| 14 | ticket\_bussiness | y\_1\_6\_0\_3.ticket\_bussiness | 指向集中式数据库第6类用户y\_1\_6\_0\_3的ticket\_bussiness表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_3.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_3的belong\_to表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_3.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_3的self\_service表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_3.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_3的superior表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_3.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_branch\_company\_mes视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_3.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_station\_mes视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_3.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_depart\_mes视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_3.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_post\_mes视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_3.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_employee\_mes视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_3.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_train\_mes视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_3.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_carriage\_mes视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_3.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_terminal\_mes视图，实现位置透明 |  |
| 26 | v\_include\_mes | y\_1\_6\_0\_3.v\_include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_include\_mes视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_3.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_work\_on\_mes视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_3.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_pass\_by\_mes视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_3.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ticket\_business\_mes视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_3.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_belong\_to\_mes视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_3.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_self\_service\_mes视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_3.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_superior\_mes视图，实现位置透明 |  |

执行脚本（PostgreSQL，y\_1\_7\_2\_3）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的area表，实现位置透明  create view y\_1\_7\_2\_3.area as select \* from y\_1\_6\_0\_3.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的branch\_company表，实现位置透明  create view y\_1\_7\_2\_3.branch\_company as select \* from y\_1\_6\_0\_3.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的station表，实现位置透明  create view y\_1\_7\_2\_3.station as select \* from y\_1\_6\_0\_3.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的depart表，实现位置透明  create view y\_1\_7\_2\_3.depart as select \* from y\_1\_6\_0\_3.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的post表，实现位置透明  create view y\_1\_7\_2\_3.post as select \* from y\_1\_6\_0\_3.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的employee表，实现位置透明  create view y\_1\_7\_2\_3.employee as select \* from y\_1\_6\_0\_3.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的train表，实现位置透明  create view y\_1\_7\_2\_3.train as select \* from y\_1\_6\_0\_3.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的carriage表，实现位置透明  create view y\_1\_7\_2\_3.carriage as select \* from y\_1\_6\_0\_3.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的passenger表，实现位置透明  create view y\_1\_7\_2\_3.passenger as select \* from y\_1\_6\_0\_3.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的terminal表，实现位置透明  create view y\_1\_7\_2\_3.terminal as select \* from y\_1\_6\_0\_3.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的include表，实现位置透明  create view y\_1\_7\_2\_3.include as select \* from y\_1\_6\_0\_3.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的work on表，实现位置透明  create view y\_1\_7\_2\_3.work\_on as select \* from y\_1\_6\_0\_3.work on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的pass\_by表，实现位置透明  create view y\_1\_7\_2\_3.pass\_by as select \* from y\_1\_6\_0\_3.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的ticket\_bussiness表，实现位置透明  create view y\_1\_7\_2\_3.ticket\_bussiness as select \* from y\_1\_6\_0\_3.ticket\_bussiness;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的belong\_to表，实现位置透明  create view y\_1\_7\_2\_3.belong\_to as select \* from y\_1\_6\_0\_3.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的self\_service表，实现位置透明  create view y\_1\_7\_2\_3.self\_service as select \* from y\_1\_6\_0\_3.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的superior表，实现位置透明  create view y\_1\_7\_2\_3.superior as select \* from y\_1\_6\_0\_3.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_branch\_company\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_branch\_company\_mes as select \* from y\_1\_6\_0\_3.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_station\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_station\_mes as select \* from y\_1\_6\_0\_3.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_depart\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_depart\_mes as select \* from y\_1\_6\_0\_3.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_post\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_post\_mes as select \* from y\_1\_6\_0\_3.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_employee\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_employee\_mes as select \* from y\_1\_6\_0\_3.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_train\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_train\_mes as select \* from y\_1\_6\_0\_3.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_carriage\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_carriage\_mes as select \* from y\_1\_6\_0\_3.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_terminal\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_terminal\_mes as select \* from y\_1\_6\_0\_3.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_include\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_include\_mes as select \* from y\_1\_6\_0\_3.v\_include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_work\_on\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_work\_on\_mes as select \* from y\_1\_6\_0\_3.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_pass\_by\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_pass\_by\_mes as select \* from y\_1\_6\_0\_3.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ticket\_business\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_ticket\_business\_mes as select \* from y\_1\_6\_0\_3.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_belong\_to\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_belong\_to\_mes as select \* from y\_1\_6\_0\_3.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_self\_service\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_self\_service\_mes as select \* from y\_1\_6\_0\_3.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_superior\_mes视图，实现位置透明  create view y\_1\_7\_2\_3.v\_superior\_mes as select \* from y\_1\_6\_0\_3.v\_superior\_mes;  comment on view y\_1\_7\_2\_3.area is '指向集中式数据库第6类用户y\_1\_6\_0\_3的area表，实现位置透明';  comment on view y\_1\_7\_2\_3.branch\_company is '指向集中式数据库第6类用户y\_1\_6\_0\_3的branch\_company表，实现位置透明';  comment on view y\_1\_7\_2\_3.station is '指向集中式数据库第6类用户y\_1\_6\_0\_3的station表，实现位置透明';  comment on view y\_1\_7\_2\_3.depart is '指向集中式数据库第6类用户y\_1\_6\_0\_3的depart表，实现位置透明';  comment on view y\_1\_7\_2\_3.post is '指向集中式数据库第6类用户y\_1\_6\_0\_3的post表，实现位置透明';  comment on view y\_1\_7\_2\_3.employee is '指向集中式数据库第6类用户y\_1\_6\_0\_3的employee表，实现位置透明';  comment on view y\_1\_7\_2\_3.train is '指向集中式数据库第6类用户y\_1\_6\_0\_3的train表，实现位置透明';  comment on view y\_1\_7\_2\_3.carriage is '指向集中式数据库第6类用户y\_1\_6\_0\_3的carriage表，实现位置透明';  comment on view y\_1\_7\_2\_3.passenger is '指向集中式数据库第6类用户y\_1\_6\_0\_3的passenger表，实现位置透明';  comment on view y\_1\_7\_2\_3.terminal is '指向集中式数据库第6类用户y\_1\_6\_0\_3的terminal表，实现位置透明';  comment on view y\_1\_7\_2\_3.include is '指向集中式数据库第6类用户y\_1\_6\_0\_3的include表，实现位置透明';  comment on view y\_1\_7\_2\_3.work\_on is '指向集中式数据库第6类用户y\_1\_6\_0\_3的work on表，实现位置透明';  comment on view y\_1\_7\_2\_3.pass\_by is '指向集中式数据库第6类用户y\_1\_6\_0\_3的pass\_by表，实现位置透明';  comment on view y\_1\_7\_2\_3.ticket\_bussiness is '指向集中式数据库第6类用户y\_1\_6\_0\_3的ticket\_bussiness表，实现位置透明';  comment on view y\_1\_7\_2\_3.belong\_to is '指向集中式数据库第6类用户y\_1\_6\_0\_3的belong\_to表，实现位置透明';  comment on view y\_1\_7\_2\_3.self\_service is '指向集中式数据库第6类用户y\_1\_6\_0\_3的self\_service表，实现位置透明';  comment on view y\_1\_7\_2\_3.superior is '指向集中式数据库第6类用户y\_1\_6\_0\_3的superior表，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_branch\_company\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_branch\_company\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_station\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_station\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_depart\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_depart\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_post\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_post\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_employee\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_employee\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_train\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_train\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_carriage\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_carriage\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_terminal\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_terminal\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_include\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_include\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_work\_on\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_work\_on\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_pass\_by\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_pass\_by\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_ticket\_business\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ticket\_business\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_belong\_to\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_belong\_to\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_self\_service\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_self\_service\_mes视图，实现位置透明';  comment on view y\_1\_7\_2\_3.v\_superior\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_superior\_mes视图，实现位置透明'; |

#### 视图

表1.1.3‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 订单信息 | order\_mes | 单据 |  |
| 2 | 余票信息 | surplus\_ticket\_mes | 单据 |  |
| 3 | 乘客信息 | passenger\_mes | 报表 |  |
| 4 | 车次信息 | train\_num\_mes | 报表 |  |
| 5 | 票价信息 | ticket\_price\_mes | 报表 |  |

##### 订单信息视图

表1.1.2.2‑2视图order\_mes（order\_number）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | ticket\_business | no |  |  |
| 2 | 车次编号 | train\_number | ticket\_business | train\_no |  |  |
| 3 | 车号 | train\_id\_num | train | train\_id | train. train\_id= ticket\_business. train\_no |  |
| 4 | 乘客出发站 | pa\_start\_sta | station | name | station. name= ticket\_business. origin\_station |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | station | name | station. name= ticket\_business. destination\_station |  |
| 6 | 身份证号 | pa\_id | passenger | no | Passenger.no= ticket\_business. passenger\_no |  |
| 7 | 乘客姓名 | pa\_name | passenger | name | Passenger. Name= ticket\_business. passenger\_name |  |
| 8 | 票价 | ticket\_price | ticket\_business | busi\_amount |  |  |
| 9 | 车厢号 | carr\_num | carriage | carriage\_no | Carriage. carriage\_no= ticket\_business. carriage\_no |  |
| 10 | 车座种类 | seat\_type | carriage | carriage\_type | Carriage. carriage\_type= ticket\_business. carriage\_type |  |
| 11 | 座位号 | seat\_number | ticket\_business | seat\_number |  |  |
| 12 | 订票日期 | reser\_date | ticket\_business | do\_time |  |  |
| 13 | 到达时间 | arri\_time | ticket\_business | arrive\_time |  |  |
| 14 | 发车时间 | str\_time | ticket\_business | start\_time |  |  |
| 15 | 订单状态 | order\_status | ticket\_business | busi\_status |  |  |
| 16 | 出票状态 | ticket\_out\_if | ticket\_business | ticket\_status |  |  |
| 17 | 变更到站状态 | change\_sta\_if | ticket\_business | change\_station |  |  |

执行脚本（PostgreSQL，y\_1\_7\_2\_1）

|  |
| --- |
| -- 创建视图：订单信息视图  create view order\_mes（order\_number）(order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select a.no, a.train\_no, b.train\_id, c.name, c.name, d.no, d.name, a.busi\_amount, e.carriage\_no, e.carriage\_type, a.seat\_number, a.do\_time, a.arrive\_time, a.start\_time, a.busi\_status, a.ticket\_status, a.change\_station  from ticket\_business a, train b, station c, passenger d, carriage e  where b. train\_id= a. train\_no and c. name= a. origin\_station and c. name= a. destination\_station and d.no= a. passenger\_no and d. name= a. passenger\_name and e. carriage\_no= a. carriage\_no and e. carriage\_type= a. carriage\_type  ;  comment on view y\_1\_7\_2\_1.order\_mes（order\_number） is '订单信息视图';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.order\_number is '订单号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.train\_number is '车次编号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.train\_id\_num is '车号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_id is '身份证号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.pa\_name is '乘客姓名';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.ticket\_price is '票价';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.carr\_num is '车厢号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.seat\_type is '车座种类';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.seat\_number is '座位号';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.reser\_date is '订票日期';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.arri\_time is '到达时间 ';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.str\_time is '发车时间';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.order\_status is '订单状态';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.ticket\_out\_if is '出票状态';  comment on column y\_1\_7\_2\_1.order\_mes（order\_number）.change\_sta\_if is '变更到站状态'; |

##### 余票信息视图

表1.1.2.2‑2视图surplus\_ticket\_mes（surplus\_ticket\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | no | y\_1\_6\_0\_1.tib | no |  |  |
| 2 | 乘客号 | passenger\_no | y\_1\_6\_0\_1.tib | passenger\_no |  |  |
| 3 | 乘客姓名 | passenger\_name | y\_1\_6\_0\_1.pas | name | tib.passenger\_no=passenger.no |  |
| 4 | 员工号 | emp\_no | y\_1\_6\_0\_1.tib | Emp\_no |  |  |
| 5 | 员工姓名 | emp\_name | y\_1\_6\_0\_1.employee | Name | tib.emp\_no=employee.administer\_id |  |
| 6 | 车次编号 | train\_no | y\_1\_6\_0\_1.tib | train\_no |  |  |
| 7 | 列车类型 | train\_type | y\_1\_6\_0\_1.train | train\_type | tib.train\_no =train. train\_no |  |
| 8 | 车厢编号 | carriage\_no | y\_1\_6\_0\_1.tib | carriage\_no |  |  |
| 9 | 车厢类别 | carriage\_type | y\_1\_6\_0\_1.carriage | carriage\_type | tib.carriage\_no = carriage. carriage\_no |  |
| 10 | 乘客出发站 | origin\_station | y\_1\_6\_0\_1.tib | origin\_station |  |  |
| 11 | 出发站点名 | origin\_station\_name | y\_1\_6\_0\_1.station | Name | tib.origin\_station=station.station\_no |  |
| 12 | 乘客到达站 | destination\_station | y\_1\_6\_0\_1.tib | destination\_station |  |  |
| 13 | 到达站点名 | destination\_station\_n | y\_1\_6\_0\_1.station | Name | tib.destination\_station=station.station\_no |  |
| 14 | 业务类别 | busi\_type | y\_1\_6\_0\_1.tib | busi\_type |  |  |
| 15 | 业务类别名称 | busi\_type\_name | y\_1\_6\_0\_1.user\_dict c1 | Content | c1.category='407'  and c1.code=busi\_type |  |
| 16 | 办理时间 | do\_time | y\_1\_6\_0\_1.tib | do\_time |  |  |
| 17 | 订单状态 | busi\_status | y\_1\_6\_0\_1.tib | busi\_status |  |  |
| 18 | 订单状态名称 | busi\_status\_name | y\_1\_6\_0\_1.user\_dict c2 | Content | c2.category='408'  and c2.code=busi\_status |  |
| 19 | 业务金额 | busi\_amount | y\_1\_6\_0\_1.tib | busi\_amount |  |  |
| 20 | 车厢号 | carriage\_number | y\_1\_6\_0\_1.tib | carriage\_number |  |  |
| 21 | 座位号 | seat\_number | y\_1\_6\_0\_1.tib | seat\_number |  |  |
| 22 | 发车时间 | start\_time | y\_1\_6\_0\_1.tib | start\_time |  |  |
| 23 | 到达时间 | arrive\_time | y\_1\_6\_0\_1.tib | arrive\_time |  |  |
| 24 | 出票状态 | ticket\_status | y\_1\_6\_0\_1.tib | ticket\_status |  |  |
| 25 | 出票状态名称 | ticket\_status\_name | y\_1\_6\_0\_1.user\_dict c3 | Content | c3.category='409'  and c3.code= ticket\_status |  |
| 26 | 变更到站状态 | change\_station | y\_1\_6\_0\_1.tib | change\_station |  |  |
| 27 | 变更到站状态名称 | change\_station\_name | y\_1\_6\_0\_1.user\_dict c4 | Content | c4.category='410'  and c4.code= change\_station |  |

执行脚本（PostgreSQL，y\_1\_7\_2\_1）

|  |
| --- |
| -- 创建视图：余票信息视图  create view surplus\_ticket\_mes（surplus\_ticket\_id）(no, passenger\_no, passenger\_name, emp\_no, emp\_name, train\_no, train\_type, carriage\_no, carriage\_type, origin\_station, origin\_station\_name, destination\_station, destination\_station\_n, busi\_type, busi\_type\_name, do\_time, busi\_status, busi\_status\_name, busi\_amount, carriage\_number, seat\_number, start\_time, arrive\_time, ticket\_status, ticket\_status\_name, change\_station, change\_station\_name)  as  select a.no, a.passenger\_no, b.name, a.emp\_no, c.name, a.train\_no, d.train\_type, a.carriage\_no, e.carriage\_type, a.origin\_station, f.name, a.destination\_station, f.name, a.busi\_type, c1.content, a.do\_time, a.busi\_status, c2.content, a.busi\_amount, a.carriage\_number, a.seat\_number, a.start\_time, a.arrive\_time, a.ticket\_status, c3.content, a.change\_station, c4.content  from y\_1\_6\_0\_1.tib a, y\_1\_6\_0\_1.pas b, y\_1\_6\_0\_1.employee c, y\_1\_6\_0\_1.train d, y\_1\_6\_0\_1.carriage e, y\_1\_6\_0\_1.station f, y\_1\_6\_0\_1.user\_dict c1, y\_1\_6\_0\_1.user\_dict c2, y\_1\_6\_0\_1.user\_dict c3, y\_1\_6\_0\_1.user\_dict c4  where tib.passenger\_no=passenger.no and tib.emp\_no=employee.administer\_id and tib.train\_no =train. train\_no and tib.carriage\_no = carriage. carriage\_no and tib.origin\_station=station.station\_no and tib.destination\_station=station.station\_no and c1.category='407'  and c1.code=busi\_type and c2.category='408'  and c2.code=busi\_status and c3.category='409'  and c3.code= ticket\_status and c4.category='410'  and c4.code= change\_station  ;  comment on view y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id） is '余票信息视图';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.no is '编号';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.passenger\_no is '乘客号';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.passenger\_name is '乘客姓名';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.emp\_no is '员工号';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.emp\_name is '员工姓名';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.train\_no is '车次编号';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.train\_type is '列车类型';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.carriage\_no is '车厢编号';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.carriage\_type is '车厢类别';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.origin\_station is '乘客出发站';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.origin\_station\_name is '出发站点名';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.destination\_station is '乘客到达站';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.destination\_station\_n is '到达站点名';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.busi\_type is '业务类别';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.busi\_type\_name is '业务类别名称';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.do\_time is '办理时间';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.busi\_status is '订单状态';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.busi\_status\_name is '订单状态名称';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.busi\_amount is '业务金额';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.carriage\_number is '车厢号';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.seat\_number is '座位号';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.start\_time is '发车时间';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.arrive\_time is '到达时间';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.ticket\_status is '出票状态';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.ticket\_status\_name is '出票状态名称';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.change\_station is '变更到站状态';  comment on column y\_1\_7\_2\_1.surplus\_ticket\_mes（surplus\_ticket\_id）.change\_station\_name is '变更到站状态名称'; |

##### 乘客信息视图

表1.1.1.2‑1视图passenger\_mes（pa\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（postgresql，y\_1\_7\_2\_1）

|  |
| --- |
|  |

##### 车次信息视图

表1.1.1.2‑1视图train\_num\_mes（train\_id\_num）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（postgresql，y\_1\_7\_2\_1）

|  |
| --- |
|  |

##### 票价信息视图

表1.1.1.2‑1视图ticket\_price\_mes（ticket\_id）的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

执行脚本（postgresql，y\_1\_7\_2\_1）

|  |
| --- |
|  |

#### 函数

表1.1.3‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表1.1.3‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表1.1.3‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

## 管理员业务

### 站点1（Oracle）

#### 同义词

表11.3.1‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_1.area | 指向集中式数据库第6类用户y\_1\_6\_0\_1的area表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_1.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_1的branch\_company表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_1.station | 指向集中式数据库第6类用户y\_1\_6\_0\_1的station表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_1.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_1的depart表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_1.post | 指向集中式数据库第6类用户y\_1\_6\_0\_1的post表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_1.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_1的employee表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_1.train | 指向集中式数据库第6类用户y\_1\_6\_0\_1的train表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_1.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_1的carriage表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_1.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_1的passenger表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_1.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_1的terminal表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_1.include | 指向集中式数据库第6类用户y\_1\_6\_0\_1的include表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_1.work\_on | 指向集中式数据库第6类用户y\_1\_6\_0\_1的work\_on表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_1.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_1的pass\_by表，实现位置透明 |  |
| 14 | ticket\_business | y\_1\_6\_0\_1.ticket\_business | 指向集中式数据库第6类用户y\_1\_6\_0\_1的ticket\_business表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_1.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_1的belong\_to表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_1.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_1的self\_service表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_1.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_1的superior表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_1.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_branch\_company\_mes视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_1.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_station\_mes视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_1.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_depart\_mes视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_1.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_post\_mes视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_1.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_employee\_mes视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_1.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_train\_mes视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_1.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_carriage\_mes视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_1.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_terminal\_mes视图，实现位置透明 |  |
| 26 | v\_include\_mes | y\_1\_6\_0\_1.v\_include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_include\_mes视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_1.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_work\_on\_mes视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_1.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_pass\_by\_mes视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_1.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_ticket\_business\_mes视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_1.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_belong\_to\_mes视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_1.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_self\_service\_mes视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_1.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_superior\_mes视图，实现位置透明 |  |

执行脚本（Oracle，y\_1\_7\_3\_1）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的area表，实现位置透明  create synonym y\_1\_7\_3\_1.area for y\_1\_6\_0\_1.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的branch\_company表，实现位置透明  create synonym y\_1\_7\_3\_1.branch\_company for y\_1\_6\_0\_1.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的station表，实现位置透明  create synonym y\_1\_7\_3\_1.station for y\_1\_6\_0\_1.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的depart表，实现位置透明  create synonym y\_1\_7\_3\_1.depart for y\_1\_6\_0\_1.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的post表，实现位置透明  create synonym y\_1\_7\_3\_1.post for y\_1\_6\_0\_1.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的employee表，实现位置透明  create synonym y\_1\_7\_3\_1.employee for y\_1\_6\_0\_1.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的train表，实现位置透明  create synonym y\_1\_7\_3\_1.train for y\_1\_6\_0\_1.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的carriage表，实现位置透明  create synonym y\_1\_7\_3\_1.carriage for y\_1\_6\_0\_1.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的passenger表，实现位置透明  create synonym y\_1\_7\_3\_1.passenger for y\_1\_6\_0\_1.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的terminal表，实现位置透明  create synonym y\_1\_7\_3\_1.terminal for y\_1\_6\_0\_1.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的include表，实现位置透明  create synonym y\_1\_7\_3\_1.include for y\_1\_6\_0\_1.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的work\_on表，实现位置透明  create synonym y\_1\_7\_3\_1.work\_on for y\_1\_6\_0\_1.work\_on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的pass\_by表，实现位置透明  create synonym y\_1\_7\_3\_1.pass\_by for y\_1\_6\_0\_1.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的ticket\_business表，实现位置透明  create synonym y\_1\_7\_3\_1.ticket\_business for y\_1\_6\_0\_1.ticket\_business;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的belong\_to表，实现位置透明  create synonym y\_1\_7\_3\_1.belong\_to for y\_1\_6\_0\_1.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的self\_service表，实现位置透明  create synonym y\_1\_7\_3\_1.self\_service for y\_1\_6\_0\_1.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的superior表，实现位置透明  create synonym y\_1\_7\_3\_1.superior for y\_1\_6\_0\_1.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_branch\_company\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_branch\_company\_mes for y\_1\_6\_0\_1.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_station\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_station\_mes for y\_1\_6\_0\_1.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_depart\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_depart\_mes for y\_1\_6\_0\_1.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_post\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_post\_mes for y\_1\_6\_0\_1.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_employee\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_employee\_mes for y\_1\_6\_0\_1.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_train\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_train\_mes for y\_1\_6\_0\_1.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_carriage\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_carriage\_mes for y\_1\_6\_0\_1.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_terminal\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_terminal\_mes for y\_1\_6\_0\_1.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_include\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_include\_mes for y\_1\_6\_0\_1.v\_include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_work\_on\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_work\_on\_mes for y\_1\_6\_0\_1.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_pass\_by\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_pass\_by\_mes for y\_1\_6\_0\_1.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_ticket\_business\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_ticket\_business\_mes for y\_1\_6\_0\_1.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_belong\_to\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_belong\_to\_mes for y\_1\_6\_0\_1.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_self\_service\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_self\_service\_mes for y\_1\_6\_0\_1.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_1的v\_superior\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_1.v\_superior\_mes for y\_1\_6\_0\_1.v\_superior\_mes; |

#### 视图

表11.3.1‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 车次信息 | train\_info | 单据 |  |
| 2 | 车次其他信息 | train\_other\_info | 单据 |  |
| 3 | 车站信息 | station\_info | 单据 |  |
| 4 | 车厢信息 | compartment\_info | 单据 |  |
| 5 | 用户信息 | administer\_info | 报表 |  |

##### 视图车次信息

表11.3.1.2‑1视图车次信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train | train\_id |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | pass\_by | pass\_id |  |  |
| 3 | 运行时间 | train\_runtime | train | train\_runtime |  |  |
| 4 | 全程里程数 | train\_runmile | pass\_by | mileage |  |  |
| 5 | 票价上浮比率 | fare\_rate | pass\_by | up\_rate |  |  |

执行脚本（Oracle，y\_1\_7\_3\_1）

|  |
| --- |
| -- 创建视图：视图车次信息  create view y\_1\_7\_3\_1.车次信息(train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate)  as  select a.train\_id, b.pass\_id, a.train\_runtime, b.mileage, b.up\_rate  from train a, pass\_by b  ;  comment on table y\_1\_7\_3\_1.车次信息 is '视图车次信息';  comment on column y\_1\_7\_3\_1.车次信息.train\_id is '车次号';  comment on column y\_1\_7\_3\_1.车次信息.train\_passstatin\_num is '经过站点数';  comment on column y\_1\_7\_3\_1.车次信息.train\_runtime is '运行时间';  comment on column y\_1\_7\_3\_1.车次信息.train\_runmile is '全程里程数';  comment on column y\_1\_7\_3\_1.车次信息.fare\_rate is '票价上浮比率'; |

##### 视图车次其他信息

表11.3.1.2‑1视图车次其他信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_other\_info\_id | pass\_by | pass\_id |  |  |
| 2 | 站次 | train\_station\_order | pass\_by | station\_order |  |  |
| 3 | 车次号 | train\_num | train | train\_id |  |  |
| 4 | 站点名 | station\_name | station | name |  |  |
| 5 | 停车时间 | train\_stoptime | pass\_by | stoptime |  |  |
| 6 | 发车时间 | train\_starttime | pass\_by | start\_time |  |  |
| 7 | 里程数 | train\_station\_runmile | pass\_by | mileage |  |  |
| 8 | 前序站点 | station\_p\_id | pass\_by | station\_order |  |  |
| 9 | 后继站点 | station\_n\_id | pass\_by | station\_order |  |  |
| 10 | 站点区间基础票价 | station\_base\_fare | pass\_by | base\_price |  |  |

执行脚本（Oracle，y\_1\_7\_3\_1）

|  |
| --- |
| -- 创建视图：视图车次其他信息  create view y\_1\_7\_3\_1.车次其他信息(train\_other\_info\_id, train\_station\_order, train\_num, station\_name, train\_stoptime, train\_starttime, train\_station\_runmile, station\_p\_id, station\_n\_id, station\_base\_fare)  as  select a.pass\_id, a.station\_order, b.train\_id, c.name, a.stoptime, a.start\_time, a.mileage, a.station\_order, a.station\_order, a.base\_price  from pass\_by a, train b, station c  ;  comment on table y\_1\_7\_3\_1.车次其他信息 is '视图车次其他信息';  comment on column y\_1\_7\_3\_1.车次其他信息.train\_other\_info\_id is '编号';  comment on column y\_1\_7\_3\_1.车次其他信息.train\_station\_order is '站次';  comment on column y\_1\_7\_3\_1.车次其他信息.train\_num is '车次号';  comment on column y\_1\_7\_3\_1.车次其他信息.station\_name is '站点名';  comment on column y\_1\_7\_3\_1.车次其他信息.train\_stoptime is '停车时间';  comment on column y\_1\_7\_3\_1.车次其他信息.train\_starttime is '发车时间';  comment on column y\_1\_7\_3\_1.车次其他信息.train\_station\_runmile is '里程数';  comment on column y\_1\_7\_3\_1.车次其他信息.station\_p\_id is '前序站点';  comment on column y\_1\_7\_3\_1.车次其他信息.station\_n\_id is '后继站点';  comment on column y\_1\_7\_3\_1.车次其他信息.station\_base\_fare is '站点区间基础票价'; |

##### 视图车站信息

表11.3.1.2‑1视图车站信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车站名 | station\_name | station | name |  |  |
| 2 | 所属铁路局 | station\_railwayadmin | depart | name |  |  |
| 3 | 所属车务段 | station\_railwaymaster | depart | name |  |  |
| 4 | 车站等级 | station\_level | station | station\_level |  |  |
| 5 | 车站次序 | station\_order | station | station\_order |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | station | station\_provide\_flag |  |  |

执行脚本（Oracle，y\_1\_7\_3\_1）

|  |
| --- |
| -- 创建视图：视图车站信息  create view y\_1\_7\_3\_1.车站信息(station\_name, station\_railwayadmin, station\_railwaymaster, station\_level, station\_order, statin\_provide\_flag)  as  select a.name, b.name, b.name, a.station\_level, a.station\_order, a.station\_provide\_flag  from station a, depart b  ;  comment on table y\_1\_7\_3\_1.车站信息 is '视图车站信息';  comment on column y\_1\_7\_3\_1.车站信息.station\_name is '车站名';  comment on column y\_1\_7\_3\_1.车站信息.station\_railwayadmin is '所属铁路局';  comment on column y\_1\_7\_3\_1.车站信息.station\_railwaymaster is '所属车务段';  comment on column y\_1\_7\_3\_1.车站信息.station\_level is '车站等级';  comment on column y\_1\_7\_3\_1.车站信息.station\_order is '车站次序';  comment on column y\_1\_7\_3\_1.车站信息.statin\_provide\_flag is '供给站标志'; |

##### 视图车厢信息

表11.3.1.2‑1视图车厢信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | compart\_info\_id | carriage | carriage\_no |  |  |
| 2 | 车次号 | train\_num | train | train\_id |  |  |
| 3 | 车厢号 | compart\_num | carriage | carriage\_no |  |  |
| 4 | 车厢类型 | compart\_type | carriage | carriage\_type |  |  |
| 5 | 座位总数 | compart\_siteamount | train | seat\_total |  |  |

执行脚本（Oracle，y\_1\_7\_3\_1）

|  |
| --- |
| -- 创建视图：视图车厢信息  create view y\_1\_7\_3\_1.车厢信息(compart\_info\_id, train\_num, compart\_num, compart\_type, compart\_siteamount)  as  select a.carriage\_no, b.train\_id, a.carriage\_no, a.carriage\_type, b.seat\_total  from carriage a, train b  ;  comment on table y\_1\_7\_3\_1.车厢信息 is '视图车厢信息';  comment on column y\_1\_7\_3\_1.车厢信息.compart\_info\_id is '编号';  comment on column y\_1\_7\_3\_1.车厢信息.train\_num is '车次号';  comment on column y\_1\_7\_3\_1.车厢信息.compart\_num is '车厢号';  comment on column y\_1\_7\_3\_1.车厢信息.compart\_type is '车厢类型';  comment on column y\_1\_7\_3\_1.车厢信息.compart\_siteamount is '座位总数'; |

##### 视图用户信息

表11.3.1.2‑1视图用户信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 用户名 | user\_name | employee | name |  |  |
| 2 | 密码 | user\_pw | employee | administer\_pw |  |  |
| 3 | 用户类型 | user\_name | employee | employee\_type |  |  |

执行脚本（Oracle，y\_1\_7\_3\_1）

|  |
| --- |
| -- 创建视图：视图用户信息  create view y\_1\_7\_3\_1.用户信息(user\_name, user\_pw, user\_name)  as  select name, administer\_pw, employee\_type  from employee  ;  comment on table y\_1\_7\_3\_1.用户信息 is '视图用户信息';  comment on column y\_1\_7\_3\_1.用户信息.user\_name is '用户名';  comment on column y\_1\_7\_3\_1.用户信息.user\_pw is '密码';  comment on column y\_1\_7\_3\_1.用户信息.user\_name is '用户类型'; |

#### 函数

表11.3.1‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表11.3.1‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表11.3.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点2（SQL Server）

#### 同义词

表11.3.2‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_2.area | 指向集中式数据库第6类用户y\_1\_6\_0\_2的area表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_2.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_2的branch\_company表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_2.station | 指向集中式数据库第6类用户y\_1\_6\_0\_2的station表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_2.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_2的depart表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_2.post | 指向集中式数据库第6类用户y\_1\_6\_0\_2的post表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_2.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_2的employee表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_2.train | 指向集中式数据库第6类用户y\_1\_6\_0\_2的train表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_2.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_2的carriage表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_2.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_2的passenger表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_2.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_2的terminal表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_2.include | 指向集中式数据库第6类用户y\_1\_6\_0\_2的include表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_2.work\_on | 指向集中式数据库第6类用户y\_1\_6\_0\_2的work\_on表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_2.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_2的pass\_by表，实现位置透明 |  |
| 14 | ticket\_business | y\_1\_6\_0\_2.ticket\_business | 指向集中式数据库第6类用户y\_1\_6\_0\_2的ticket\_business表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_2.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_2的belong\_to表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_2.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_2的self\_service表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_2.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_2的superior表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_2.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_branch\_company\_mes视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_2.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_station\_mes视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_2.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_depart\_mes视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_2.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_post\_mes视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_2.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_employee\_mes视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_2.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_train\_mes视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_2.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_carriage\_mes视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_2.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_terminal\_mes视图，实现位置透明 |  |
| 26 | v\_include\_mes | y\_1\_6\_0\_2.v\_include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_include\_mes视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_2.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_work\_on\_mes视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_2.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_pass\_by\_mes视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_2.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_ticket\_business\_mes视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_2.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_belong\_to\_mes视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_2.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_self\_service\_mes视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_2.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_superior\_mes视图，实现位置透明 |  |

执行脚本（SQL Server，y\_1\_7\_3\_2）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的area表，实现位置透明  create synonym y\_1\_7\_3\_2.area for y\_1\_6\_0\_2.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的branch\_company表，实现位置透明  create synonym y\_1\_7\_3\_2.branch\_company for y\_1\_6\_0\_2.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的station表，实现位置透明  create synonym y\_1\_7\_3\_2.station for y\_1\_6\_0\_2.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的depart表，实现位置透明  create synonym y\_1\_7\_3\_2.depart for y\_1\_6\_0\_2.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的post表，实现位置透明  create synonym y\_1\_7\_3\_2.post for y\_1\_6\_0\_2.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的employee表，实现位置透明  create synonym y\_1\_7\_3\_2.employee for y\_1\_6\_0\_2.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的train表，实现位置透明  create synonym y\_1\_7\_3\_2.train for y\_1\_6\_0\_2.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的carriage表，实现位置透明  create synonym y\_1\_7\_3\_2.carriage for y\_1\_6\_0\_2.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的passenger表，实现位置透明  create synonym y\_1\_7\_3\_2.passenger for y\_1\_6\_0\_2.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的terminal表，实现位置透明  create synonym y\_1\_7\_3\_2.terminal for y\_1\_6\_0\_2.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的include表，实现位置透明  create synonym y\_1\_7\_3\_2.include for y\_1\_6\_0\_2.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的work\_on表，实现位置透明  create synonym y\_1\_7\_3\_2.work\_on for y\_1\_6\_0\_2.work\_on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的pass\_by表，实现位置透明  create synonym y\_1\_7\_3\_2.pass\_by for y\_1\_6\_0\_2.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的ticket\_business表，实现位置透明  create synonym y\_1\_7\_3\_2.ticket\_business for y\_1\_6\_0\_2.ticket\_business;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的belong\_to表，实现位置透明  create synonym y\_1\_7\_3\_2.belong\_to for y\_1\_6\_0\_2.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的self\_service表，实现位置透明  create synonym y\_1\_7\_3\_2.self\_service for y\_1\_6\_0\_2.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的superior表，实现位置透明  create synonym y\_1\_7\_3\_2.superior for y\_1\_6\_0\_2.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_branch\_company\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_branch\_company\_mes for y\_1\_6\_0\_2.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_station\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_station\_mes for y\_1\_6\_0\_2.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_depart\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_depart\_mes for y\_1\_6\_0\_2.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_post\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_post\_mes for y\_1\_6\_0\_2.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_employee\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_employee\_mes for y\_1\_6\_0\_2.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_train\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_train\_mes for y\_1\_6\_0\_2.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_carriage\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_carriage\_mes for y\_1\_6\_0\_2.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_terminal\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_terminal\_mes for y\_1\_6\_0\_2.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_include\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_include\_mes for y\_1\_6\_0\_2.v\_include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_work\_on\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_work\_on\_mes for y\_1\_6\_0\_2.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_pass\_by\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_pass\_by\_mes for y\_1\_6\_0\_2.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_ticket\_business\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_ticket\_business\_mes for y\_1\_6\_0\_2.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_belong\_to\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_belong\_to\_mes for y\_1\_6\_0\_2.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_self\_service\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_self\_service\_mes for y\_1\_6\_0\_2.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_superior\_mes视图，实现位置透明  create synonym y\_1\_7\_3\_2.v\_superior\_mes for y\_1\_6\_0\_2.v\_superior\_mes;  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的area表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','area'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的branch\_company表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','branch\_company'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的station表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','station'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的depart表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','depart'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的post表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','post'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的employee表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','employee'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的train表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','train'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的carriage表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','carriage'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的passenger表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','passenger'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的terminal表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','terminal'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的include表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','include'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的work\_on表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','work\_on'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的pass\_by表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','pass\_by'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的ticket\_business表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','ticket\_business'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的belong\_to表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','belong\_to'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的self\_service表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','self\_service'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的superior表，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','superior'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_branch\_company\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_branch\_company\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_station\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_station\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_depart\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_depart\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_post\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_post\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_employee\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_employee\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_train\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_train\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_carriage\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_carriage\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_terminal\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_terminal\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_include\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_include\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_work\_on\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_work\_on\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_pass\_by\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_pass\_by\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_ticket\_business\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_ticket\_business\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_belong\_to\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_belong\_to\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_self\_service\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_self\_service\_mes'  exec sp\_addextendedproperty 'MS\_Description','指向集中式数据库第6类用户y\_1\_6\_0\_2的v\_superior\_mes视图，实现位置透明','SCHEMA','y\_1\_7\_3\_2','SYNONYM','v\_superior\_mes' |

#### 视图

表11.3.2‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 车次信息 | train\_info | 单据 |  |
| 2 | 车次其他信息 | train\_other\_info | 单据 |  |
| 3 | 车站信息 | station\_info | 单据 |  |
| 4 | 车厢信息 | carriage\_info | 单据 |  |
| 5 | 用户信息 | user\_info | 报表 |  |

##### 视图车次信息

表11.3.1.2‑1视图车次信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | y\_1\_6\_0\_2.train | train\_id |  |  |
| 2 | 经过站点数 | station\_order | y\_1\_6\_0\_2.pass\_by | station\_order |  |  |
| 3 | 运行时间 | train\_runtime | y\_1\_6\_0\_2.train | train\_type |  |  |
| 4 | 全程里程数 | mileage | y\_1\_6\_0\_2.pass\_by | mileage |  |  |
| 5 | 票价上浮比率 | up\_rate | y\_1\_6\_0\_2.pass\_by | up\_rate |  |  |

执行脚本（SQL Server，y\_1\_7\_3\_2）

|  |
| --- |
|  |

##### 视图车次其他信息

表11.3.1.2‑1视图车次其他信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | y\_1\_6\_0\_2.station | station\_no |  |  |
| 2 | 站次 | station\_order | y\_1\_6\_0\_2.station | station\_order |  |  |
| 3 | 车次号 | train\_id | y\_1\_6\_0\_2.train | train\_id |  |  |
| 4 | 站点名 | name | y\_1\_6\_0\_2.station | name |  |  |
| 5 | 停车时间 | stoptime | y\_1\_6\_0\_2.pass\_by | stoptime |  |  |
| 6 | 发车时间 | start\_time | y\_1\_6\_0\_2.pass\_by | start\_time |  |  |
| 7 | 里程数 | mileage | y\_1\_6\_0\_2.pass\_by | mileage |  |  |
| 8 | 前序站点 |  |  |  |  |  |
| 9 | 后继站点 |  |  |  |  |  |
| 10 | 站点区间基础票价 | base\_price | y\_1\_6\_0\_2.pass\_by | base\_price |  |  |

执行脚本（SQL Server，y\_1\_7\_3\_2）

|  |
| --- |
|  |

##### 视图车站信息

表11.3.1.2‑1视图车站信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车站名 | name | y\_1\_6\_0\_2.station | name |  |  |
| 2 | 所属铁路局 |  |  |  |  |  |
| 3 | 所属车务段 |  |  |  |  |  |
| 4 | 车站等级 | station\_level | y\_1\_6\_0\_2.station | station\_level |  |  |
| 5 | 车站次序 | station\_order | y\_1\_6\_0\_2.station | station\_order |  |  |
| 6 | 供给站标志 | station\_provide\_flag\_name | y\_1\_6\_0\_2.user\_dict c2 | content |  |  |

执行脚本（SQL Server，y\_1\_7\_3\_2）

|  |
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##### 视图车厢信息

表11.3.1.2‑1视图车厢信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | y\_1\_6\_0\_2.carriage | carriage\_no |  |  |
| 2 | 车次号 | train\_id | y\_1\_6\_0\_2.train | train\_id |  |  |
| 3 | 车厢号 | carriage\_range | y\_1\_6\_0\_2.include | carriage\_range |  |  |
| 4 | 车厢类型 | carriage\_type\_name | y\_1\_6\_0\_2.user\_dict c1 | content | c1.category='405'  and c1.code= carriage\_type |  |
| 5 | 座位总数 | seat\_total | y\_1\_6\_0\_2.carriage | seat\_total |  |  |

执行脚本（SQL Server，y\_1\_7\_3\_2）

|  |
| --- |
|  |

##### 视图用户信息

表11.3.1.2‑1视图用户信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 用户名 | administer\_id | y\_1\_6\_0\_2.employee | administer\_id |  |  |
| 2 | 密码 | administer\_pw | y\_1\_6\_0\_2.employee | administer\_pw |  |  |
| 3 | 用户类型 | employee\_type | y\_1\_6\_0\_2.employee | employee\_type |  |  |

执行脚本（SQL Server，y\_1\_7\_3\_2）

|  |
| --- |
|  |

#### 函数

表11.3.2‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表11.3.2‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表11.3.2‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点3（PostgreSQL）

#### 同义词

表11.3.3‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | area | y\_1\_6\_0\_3.area | 指向集中式数据库第6类用户y\_1\_6\_0\_3的area表，实现位置透明 |  |
| 2 | branch\_company | y\_1\_6\_0\_3.branch\_company | 指向集中式数据库第6类用户y\_1\_6\_0\_3的branch\_company表，实现位置透明 |  |
| 3 | station | y\_1\_6\_0\_3.station | 指向集中式数据库第6类用户y\_1\_6\_0\_3的station表，实现位置透明 |  |
| 4 | depart | y\_1\_6\_0\_3.depart | 指向集中式数据库第6类用户y\_1\_6\_0\_3的depart表，实现位置透明 |  |
| 5 | post | y\_1\_6\_0\_3.post | 指向集中式数据库第6类用户y\_1\_6\_0\_3的post表，实现位置透明 |  |
| 6 | employee | y\_1\_6\_0\_3.employee | 指向集中式数据库第6类用户y\_1\_6\_0\_3的employee表，实现位置透明 |  |
| 7 | train | y\_1\_6\_0\_3.train | 指向集中式数据库第6类用户y\_1\_6\_0\_3的train表，实现位置透明 |  |
| 8 | carriage | y\_1\_6\_0\_3.carriage | 指向集中式数据库第6类用户y\_1\_6\_0\_3的carriage表，实现位置透明 |  |
| 9 | passenger | y\_1\_6\_0\_3.passenger | 指向集中式数据库第6类用户y\_1\_6\_0\_3的passenger表，实现位置透明 |  |
| 10 | terminal | y\_1\_6\_0\_3.terminal | 指向集中式数据库第6类用户y\_1\_6\_0\_3的terminal表，实现位置透明 |  |
| 11 | include | y\_1\_6\_0\_3.include | 指向集中式数据库第6类用户y\_1\_6\_0\_3的include表，实现位置透明 |  |
| 12 | work\_on | y\_1\_6\_0\_3.work\_on | 指向集中式数据库第6类用户y\_1\_6\_0\_3的work\_on表，实现位置透明 |  |
| 13 | pass\_by | y\_1\_6\_0\_3.pass\_by | 指向集中式数据库第6类用户y\_1\_6\_0\_3的pass\_by表，实现位置透明 |  |
| 14 | ticket\_business | y\_1\_6\_0\_3.ticket\_business | 指向集中式数据库第6类用户y\_1\_6\_0\_3的ticket\_business表，实现位置透明 |  |
| 15 | belong\_to | y\_1\_6\_0\_3.belong\_to | 指向集中式数据库第6类用户y\_1\_6\_0\_3的belong\_to表，实现位置透明 |  |
| 16 | self\_service | y\_1\_6\_0\_3.self\_service | 指向集中式数据库第6类用户y\_1\_6\_0\_3的self\_service表，实现位置透明 |  |
| 17 | superior | y\_1\_6\_0\_3.superior | 指向集中式数据库第6类用户y\_1\_6\_0\_3的superior表，实现位置透明 |  |
| 18 | v\_branch\_company\_mes | y\_1\_6\_0\_3.v\_branch\_company\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_branch\_company\_mes视图，实现位置透明 |  |
| 19 | v\_station\_mes | y\_1\_6\_0\_3.v\_station\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_station\_mes视图，实现位置透明 |  |
| 20 | v\_depart\_mes | y\_1\_6\_0\_3.v\_depart\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_depart\_mes视图，实现位置透明 |  |
| 21 | v\_post\_mes | y\_1\_6\_0\_3.v\_post\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_post\_mes视图，实现位置透明 |  |
| 22 | v\_employee\_mes | y\_1\_6\_0\_3.v\_employee\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_employee\_mes视图，实现位置透明 |  |
| 23 | v\_train\_mes | y\_1\_6\_0\_3.v\_train\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_train\_mes视图，实现位置透明 |  |
| 24 | v\_carriage\_mes | y\_1\_6\_0\_3.v\_carriage\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_carriage\_mes视图，实现位置透明 |  |
| 25 | v\_terminal\_mes | y\_1\_6\_0\_3.v\_terminal\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_terminal\_mes视图，实现位置透明 |  |
| 26 | v\_ include\_mes | y\_1\_6\_0\_3.v\_ include\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ include\_mes视图，实现位置透明 |  |
| 27 | v\_work\_on\_mes | y\_1\_6\_0\_3.v\_work\_on\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_work\_on\_mes视图，实现位置透明 |  |
| 28 | v\_pass\_by\_mes | y\_1\_6\_0\_3.v\_pass\_by\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_pass\_by\_mes视图，实现位置透明 |  |
| 29 | v\_ticket\_business\_mes | y\_1\_6\_0\_3.v\_ticket\_business\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ticket\_business\_mes视图，实现位置透明 |  |
| 30 | v\_belong\_to\_mes | y\_1\_6\_0\_3.v\_belong\_to\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_belong\_to\_mes视图，实现位置透明 |  |
| 31 | v\_self\_service\_mes | y\_1\_6\_0\_3.v\_self\_service\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_self\_service\_mes视图，实现位置透明 |  |
| 32 | v\_superior\_mes | y\_1\_6\_0\_3.v\_superior\_mes | 指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_superior\_mes视图，实现位置透明 |  |

执行脚本（PostgreSQL，y\_1\_7\_3\_3）

|  |
| --- |
| --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的area表，实现位置透明  create view y\_1\_7\_3\_3.area as select \* from y\_1\_6\_0\_3.area;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的branch\_company表，实现位置透明  create view y\_1\_7\_3\_3.branch\_company as select \* from y\_1\_6\_0\_3.branch\_company;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的station表，实现位置透明  create view y\_1\_7\_3\_3.station as select \* from y\_1\_6\_0\_3.station;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的depart表，实现位置透明  create view y\_1\_7\_3\_3.depart as select \* from y\_1\_6\_0\_3.depart;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的post表，实现位置透明  create view y\_1\_7\_3\_3.post as select \* from y\_1\_6\_0\_3.post;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的employee表，实现位置透明  create view y\_1\_7\_3\_3.employee as select \* from y\_1\_6\_0\_3.employee;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的train表，实现位置透明  create view y\_1\_7\_3\_3.train as select \* from y\_1\_6\_0\_3.train;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的carriage表，实现位置透明  create view y\_1\_7\_3\_3.carriage as select \* from y\_1\_6\_0\_3.carriage;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的passenger表，实现位置透明  create view y\_1\_7\_3\_3.passenger as select \* from y\_1\_6\_0\_3.passenger;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的terminal表，实现位置透明  create view y\_1\_7\_3\_3.terminal as select \* from y\_1\_6\_0\_3.terminal;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的include表，实现位置透明  create view y\_1\_7\_3\_3.include as select \* from y\_1\_6\_0\_3.include;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的work\_on表，实现位置透明  create view y\_1\_7\_3\_3.work\_on as select \* from y\_1\_6\_0\_3.work\_on;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的pass\_by表，实现位置透明  create view y\_1\_7\_3\_3.pass\_by as select \* from y\_1\_6\_0\_3.pass\_by;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的ticket\_business表，实现位置透明  create view y\_1\_7\_3\_3.ticket\_business as select \* from y\_1\_6\_0\_3.ticket\_business;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的belong\_to表，实现位置透明  create view y\_1\_7\_3\_3.belong\_to as select \* from y\_1\_6\_0\_3.belong\_to;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的self\_service表，实现位置透明  create view y\_1\_7\_3\_3.self\_service as select \* from y\_1\_6\_0\_3.self\_service;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的superior表，实现位置透明  create view y\_1\_7\_3\_3.superior as select \* from y\_1\_6\_0\_3.superior;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_branch\_company\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_branch\_company\_mes as select \* from y\_1\_6\_0\_3.v\_branch\_company\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_station\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_station\_mes as select \* from y\_1\_6\_0\_3.v\_station\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_depart\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_depart\_mes as select \* from y\_1\_6\_0\_3.v\_depart\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_post\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_post\_mes as select \* from y\_1\_6\_0\_3.v\_post\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_employee\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_employee\_mes as select \* from y\_1\_6\_0\_3.v\_employee\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_train\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_train\_mes as select \* from y\_1\_6\_0\_3.v\_train\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_carriage\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_carriage\_mes as select \* from y\_1\_6\_0\_3.v\_carriage\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_terminal\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_terminal\_mes as select \* from y\_1\_6\_0\_3.v\_terminal\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ include\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_ include\_mes as select \* from y\_1\_6\_0\_3.v\_ include\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_work\_on\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_work\_on\_mes as select \* from y\_1\_6\_0\_3.v\_work\_on\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_pass\_by\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_pass\_by\_mes as select \* from y\_1\_6\_0\_3.v\_pass\_by\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ticket\_business\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_ticket\_business\_mes as select \* from y\_1\_6\_0\_3.v\_ticket\_business\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_belong\_to\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_belong\_to\_mes as select \* from y\_1\_6\_0\_3.v\_belong\_to\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_self\_service\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_self\_service\_mes as select \* from y\_1\_6\_0\_3.v\_self\_service\_mes;  --创建同义词：指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_superior\_mes视图，实现位置透明  create view y\_1\_7\_3\_3.v\_superior\_mes as select \* from y\_1\_6\_0\_3.v\_superior\_mes;  comment on view y\_1\_7\_3\_3.area is '指向集中式数据库第6类用户y\_1\_6\_0\_3的area表，实现位置透明';  comment on view y\_1\_7\_3\_3.branch\_company is '指向集中式数据库第6类用户y\_1\_6\_0\_3的branch\_company表，实现位置透明';  comment on view y\_1\_7\_3\_3.station is '指向集中式数据库第6类用户y\_1\_6\_0\_3的station表，实现位置透明';  comment on view y\_1\_7\_3\_3.depart is '指向集中式数据库第6类用户y\_1\_6\_0\_3的depart表，实现位置透明';  comment on view y\_1\_7\_3\_3.post is '指向集中式数据库第6类用户y\_1\_6\_0\_3的post表，实现位置透明';  comment on view y\_1\_7\_3\_3.employee is '指向集中式数据库第6类用户y\_1\_6\_0\_3的employee表，实现位置透明';  comment on view y\_1\_7\_3\_3.train is '指向集中式数据库第6类用户y\_1\_6\_0\_3的train表，实现位置透明';  comment on view y\_1\_7\_3\_3.carriage is '指向集中式数据库第6类用户y\_1\_6\_0\_3的carriage表，实现位置透明';  comment on view y\_1\_7\_3\_3.passenger is '指向集中式数据库第6类用户y\_1\_6\_0\_3的passenger表，实现位置透明';  comment on view y\_1\_7\_3\_3.terminal is '指向集中式数据库第6类用户y\_1\_6\_0\_3的terminal表，实现位置透明';  comment on view y\_1\_7\_3\_3.include is '指向集中式数据库第6类用户y\_1\_6\_0\_3的include表，实现位置透明';  comment on view y\_1\_7\_3\_3.work\_on is '指向集中式数据库第6类用户y\_1\_6\_0\_3的work\_on表，实现位置透明';  comment on view y\_1\_7\_3\_3.pass\_by is '指向集中式数据库第6类用户y\_1\_6\_0\_3的pass\_by表，实现位置透明';  comment on view y\_1\_7\_3\_3.ticket\_business is '指向集中式数据库第6类用户y\_1\_6\_0\_3的ticket\_business表，实现位置透明';  comment on view y\_1\_7\_3\_3.belong\_to is '指向集中式数据库第6类用户y\_1\_6\_0\_3的belong\_to表，实现位置透明';  comment on view y\_1\_7\_3\_3.self\_service is '指向集中式数据库第6类用户y\_1\_6\_0\_3的self\_service表，实现位置透明';  comment on view y\_1\_7\_3\_3.superior is '指向集中式数据库第6类用户y\_1\_6\_0\_3的superior表，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_branch\_company\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_branch\_company\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_station\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_station\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_depart\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_depart\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_post\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_post\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_employee\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_employee\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_train\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_train\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_carriage\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_carriage\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_terminal\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_terminal\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_ include\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ include\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_work\_on\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_work\_on\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_pass\_by\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_pass\_by\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_ticket\_business\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_ticket\_business\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_belong\_to\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_belong\_to\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_self\_service\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_self\_service\_mes视图，实现位置透明';  comment on view y\_1\_7\_3\_3.v\_superior\_mes is '指向集中式数据库第6类用户y\_1\_6\_0\_3的v\_superior\_mes视图，实现位置透明'; |

#### 视图

表11.3.3‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 车次信息 | train\_info | 单据 |  |
| 2 | 车次其他信息 | train\_other\_info | 单据 |  |
| 3 | 车站信息 | station\_info | 单据 |  |
| 4 | 车厢信息 | carriage\_info | 单据 |  |
| 5 | 用户信息 | user\_info | 报表 |  |

##### 视图车次信息

表11.3.1.2‑1视图车次信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | y\_1\_6\_0\_3.train | train\_id |  |  |
| 2 | 经过站点数 | station\_order | y\_1\_6\_0\_3.pass\_by | station\_order |  |  |
| 3 | 运行时间 | train\_runtime | y\_1\_6\_0\_3.train | train\_type |  |  |
| 4 | 全程里程数 | mileage | y\_1\_6\_0\_3.pass\_by | mileage |  |  |
| 5 | 票价上浮比率 | up\_rate | y\_1\_6\_0\_3.pass\_by | up\_rate |  |  |

执行脚本（PostgreSQL，y\_1\_7\_3\_3）

|  |
| --- |
|  |

##### 视图车次其他信息

表11.3.1.2‑1视图车次其他信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | station\_no | y\_1\_6\_0\_3.station | station\_no |  |  |
| 2 | 站次 | station\_order | y\_1\_6\_0\_3.station | station\_order |  |  |
| 3 | 车次号 | train\_id | y\_1\_6\_0\_3.train | train\_id |  |  |
| 4 | 站点名 | name | y\_1\_6\_0\_3.station | name |  |  |
| 5 | 停车时间 | stoptime | y\_1\_6\_0\_3.pass\_by | stoptime |  |  |
| 6 | 发车时间 | start\_time | y\_1\_6\_0\_3.pass\_by | start\_time |  |  |
| 7 | 里程数 | mileage | y\_1\_6\_0\_3.pass\_by | mileage |  |  |
| 8 | 前序站点 |  |  |  |  |  |
| 9 | 后继站点 |  |  |  |  |  |
| 10 | 站点区间基础票价 | base\_price | y\_1\_6\_0\_3.pass\_by | base\_price |  |  |

执行脚本（PostgreSQL，y\_1\_7\_3\_3）

|  |
| --- |
|  |

##### 视图车站信息

表11.3.1.2‑1视图车站信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车站名 | name | y\_1\_6\_0\_3.station | name |  |  |
| 2 | 所属铁路局 |  |  |  |  |  |
| 3 | 所属车务段 |  |  |  |  |  |
| 4 | 车站等级 | station\_level | y\_1\_6\_0\_3.station | station\_level |  |  |
| 5 | 车站次序 | station\_order | y\_1\_6\_0\_3.station | station\_order |  |  |
| 6 | 供给站标志 | station\_provide\_flag\_name | y\_1\_6\_0\_3.user\_dict c2 | content |  |  |

执行脚本（PostgreSQL，y\_1\_7\_3\_3）

|  |
| --- |
|  |

##### 视图车厢信息

表11.3.1.2‑1视图车厢信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | carriage\_no | y\_1\_6\_0\_3.carriage | carriage\_no |  |  |
| 2 | 车次号 | train\_id | y\_1\_6\_0\_3.train | train\_id |  |  |
| 3 | 车厢号 | carriage\_range | y\_1\_6\_0\_3.include | carriage\_range |  |  |
| 4 | 车厢类型 | carriage\_type\_name | y\_1\_6\_0\_3.user\_dict c1 | content | c1.category='405'  and c1.code= carriage\_type |  |
| 5 | 座位总数 | seat\_total | y\_1\_6\_0\_3.carriage | seat\_total |  |  |

执行脚本（PostgreSQL，y\_1\_7\_3\_3）

|  |
| --- |
|  |

##### 视图用户信息

表11.3.1.2‑1视图用户信息的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 用户名 | administer\_id | y\_1\_6\_0\_3.employee | administer\_id |  |  |
| 2 | 密码 | administer\_pw | y\_1\_6\_0\_3.employee | administer\_pw |  |  |
| 3 | 用户类型 | employee\_type | y\_1\_6\_0\_3.employee | employee\_type |  |  |

执行脚本（PostgreSQL，y\_1\_7\_3\_3）

|  |
| --- |
|  |

#### 函数

表11.3.3‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表11.3.3‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表11.3.3‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

# 全局分布设计

## 水平分片

### 关系划分表

#### 区域

表12.1‑1划分表

|  |  |  |
| --- | --- | --- |
| 编号 | 谓词 | 谓词选择率 |
| 1 | 所属区域=区域1 | 40 |
| 2 | 所属区域=区域2 | 30 |
| 3 | 所属区域=区域3 | 30 |

### 分片统计信息

表12.1‑2关系的水平分片信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 关系名 | 水平分片类型 | 片段数 | 分片逻辑 |
| 1 | 区域 | 不分片 | 1 | 无 |
| 2 | 分公司 | 自主式水平 | 3 | 所属区域 |
| 3 | 火车站 | 诱导式水平 | 3 | 所属分公司所属区域 |
| 4 | 部门 | 诱导式水平 | 3 | 所属分公司所属区域 |
| 5 | 岗位 | 诱导式水平 | 3 | 所属部门所属分公司所属区域 |
| 6 | 员工 | 诱导式水平 | 3 | 所属火车站所属分公司所属区域 |
| 7 | 列车 | 诱导式水平 | 7 | 列车经过火车站所属分公司所属区域 |
| 8 | 车厢 | 不分片 | 1 | 无 |
| 9 | 乘客 | 诱导式水平 | 6 | 乘坐火车的始发站所属分公司所属区域与终点站所属分公司所属区域的组合 |
| 10 | 网络售票终端 | 不分片 | 1 | 无 |
| 11 | 包含 | 诱导式水平 | 7 | 列车经过火车站所属分公司所属区域 |
| 12 | 从事 | 诱导式水平 | 3 | 员工所属火车站的所属分公司所属区域 |
| 13 | 经过 | 诱导式水平 | 7 | 列车经过火车站所属分公司所属区域 |
| 14 | 车票业务 | 诱导式水平 | 7 | 员工所属火车站所属分公司所属区域与(出发)火车站所属分公司所属区域与(到达)火车站所属分公司所属区域的组合 |
| 15 | 隶属 | 诱导式水平 | 3 | 部门所属分公司所属区域 |
| 16 | 自助操作 | 诱导式水平 | 6 | (出发)火车站所属分公司所属区域与(到达)火车站所属分公司所属区域的组合 |
| 17 | 上级 | 诱导式水平 | 3 | 部门所属分公司所属区域 |
| 18 | 字典 | 不分片 | 1 | 无 |
|  | 合计 | | 68 |  |

### 分片明细信息

表12.1‑3水平分片明细信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 水平片段名 | 分片类别 | 选择谓词 | 来自关系 |
| 1 | 区域 | 不分片 | 无 | 区域 |
| 2 | 分公司1 | 自主式水平分片 | 所属区域=区域1 | 分公司 |
| 3 | 分公司2 | 自主式水平分片 | 所属区域=区域2 | 分公司 |
| 4 | 分公司3 | 自主式水平分片 | 所属区域=区域3 | 分公司 |
| 5 | 火车站1 | 诱导式水平分片 | 所属分公司所属区域=区域1 | 火车站 |
| 6 | 火车站2 | 诱导式水平分片 | 所属分公司所属区域=区域2 | 火车站 |
| 7 | 火车站3 | 诱导式水平分片 | 所属分公司所属区域=区域3 | 火车站 |
| 8 | 部门1 | 诱导式水平分片 | 所属分公司所属区域=区域1 | 部门 |
| 9 | 部门2 | 诱导式水平分片 | 所属分公司所属区域=区域2 | 部门 |
| 10 | 部门3 | 诱导式水平分片 | 所属分公司所属区域=区域3 | 部门 |
| 11 | 岗位1 | 诱导式水平分片 | 所属部门所属分公司所属区域=区域1 | 岗位 |
| 12 | 岗位2 | 诱导式水平分片 | 所属部门所属分公司所属区域=区域2 | 岗位 |
| 13 | 岗位3 | 诱导式水平分片 | 所属部门所属分公司所属区域=区域3 | 岗位 |
| 14 | 员工1 | 诱导式水平分片 | 所属火车站所属分公司所属区域=区域1 | 员工 |
| 15 | 员工2 | 诱导式水平分片 | 所属火车站所属分公司所属区域=区域2 | 员工 |
| 16 | 员工3 | 诱导式水平分片 | 所属火车站所属分公司所属区域=区域3 | 员工 |
| 17 | 列车1 | 诱导式水平分片 | 经过的火车站所属分公司所属区域=区域1 | 列车 |
| 18 | 列车2 | 诱导式水平分片 | 经过的火车站所属分公司所属区域=区域2 | 列车 |
| 19 | 列车3 | 诱导式水平分片 | 经过的火车站所属分公司所属区域=区域3 | 列车 |
| 20 | 列车12 | 诱导式水平分片 | 经过的火车站所属分公司所属区域1，2 | 列车 |
| 21 | 列车13 | 诱导式水平分片 | 经过的火车站所属分公司所属区域1，3 | 列车 |
| 22 | 列车23 | 诱导式水平分片 | 经过的火车站所属分公司所属区域2，3 | 列车 |
| 23 | 列车123 | 诱导式水平分片 | 经过的火车站所属分公司所属区域1，2，3 | 列车 |
| 24 | 车厢 | 不分片 | 无 | 车厢 |
| 25 | 乘客11 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域=区域1 | 乘客 |
| 26 | 乘客22 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域=区域2 | 乘客 |
| 27 | 乘客33 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域=区域3 | 乘客 |
| 28 | 乘客12 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域1，2 | 乘客 |
| 29 | 乘客13 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域1，3 | 乘客 |
| 30 | 乘客23 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域2，3 | 乘客 |
| 31 | 网络售票终端 | 不分片 | 无 | 网络售票终端 |
| 32 | 包含1 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域=区域1 | 包含 |
| 33 | 包含2 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域=区域2 | 包含 |
| 34 | 包含3 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域=区域3 | 包含 |
| 35 | 包含12 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域1，2 | 包含 |
| 36 | 包含13 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域1，3 | 包含 |
| 37 | 包含23 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域2，3 | 包含 |
| 38 | 包含123 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域1，2，3 | 包含 |
| 39 | 从事1 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域=区域1 | 从事 |
| 40 | 从事2 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域=区域2 | 从事 |
| 41 | 从事3 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域=区域3 | 从事 |
| 42 | 经过1 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域=区域1 | 经过 |
| 43 | 经过2 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域=区域2 | 经过 |
| 44 | 经过3 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域=区域3 | 经过 |
| 45 | 经过12 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域1，2 | 经过 |
| 46 | 经过13 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域1，3 | 经过 |
| 47 | 经过23 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域2，3 | 经过 |
| 48 | 经过123 | 诱导式水平分片 | 列车经过的火车站所属分公司所属区域1，2，3 | 经过 |
| 49 | 车票业务111 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域1；出发、到达火车站所属分公司所属区域1 | 车票业务 |
| 50 | 车票业务222 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域2；出发、到达火车站所属分公司所属区域2 | 车票业务 |
| 51 | 车票业务333 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域3；出发、到达火车站所属分公司所属区域3 | 车票业务 |
| 52 | 车票业务122 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域1，2；出发、到达火车站所属分公司所属区域1，2 | 车票业务 |
| 53 | 车票业务133 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域1，3；出发、到达火车站所属分公司所属区域1，3 | 车票业务 |
| 54 | 车票业务233 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域2，3；出发、到达火车站所属分公司所属区域2，3 | 车票业务 |
| 55 | 车票业务123 | 诱导式水平分片 | 员工所属火车站所属分公司所属区域1，2，3；出发、到达火车站所属分公司所属区域1，2，3 | 车票业务 |
| 56 | 隶属1 | 诱导式水平分片 | 部门所属分公司所属区域=区域1 | 隶属 |
| 57 | 隶属2 | 诱导式水平分片 | 部门所属分公司所属区域=区域2 | 隶属 |
| 58 | 隶属3 | 诱导式水平分片 | 部门所属分公司所属区域=区域3 | 隶属 |
| 59 | 自助操作11 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域=区域1 | 自助操作 |
| 60 | 自助操作22 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域=区域2 | 自助操作 |
| 61 | 自助操作33 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域=区域3 | 自助操作 |
| 62 | 自助操作12 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域1，2 | 自助操作 |
| 63 | 自助操作13 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域1，3 | 自助操作 |
| 64 | 自助操作23 | 诱导式水平分片 | 出发、到达火车站所属分公司所属区域2，3 | 自助操作 |
| 65 | 上级1 | 诱导式水平分片 | 部门所属分公司所属区域=区域1 | 上级 |
| 66 | 上级2 | 诱导式水平分片 | 部门所属分公司所属区域=区域2 | 上级 |
| 67 | 上级3 | 诱导式水平分片 | 部门所属分公司所属区域=区域3 | 上级 |
| 68 | 字典 | 不分片 | 无 | 字典 |

## 垂直分片

### 经过

#### 属性使用值

表12.2‑1属性使用值信息

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 功能名称 | 列车编号 | 火车站编号 | 停车时间 | 发车时间 | 里程数 | 站点序 | 区间基础票价 | 票价上浮比率 |
| 1 | 员工销售车票 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 2 | 员工退订车票 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 3 | 员工改签车票 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 4 | 乘客购买车票 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 5 | 乘客退订车票 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 6 | 乘客改签车票 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 7 | 管理员增加车次 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 管理员修改车次 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 管理员增加车站 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

#### 访问概率表

表12.2‑2片段访问概率表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 名称 | 站点1 | 站点2 | 站点3 |
| 1 | 员工销售车票 | 50 | 30 | 20 |
| 2 | 员工退订车票 | 40 | 30 | 30 |
| 3 | 员工改签车票 | 45 | 30 | 25 |
| 4 | 乘客购买车票 | 40 | 35 | 25 |
| 5 | 乘客退订车票 | 40 | 40 | 20 |
| 6 | 乘客改签车票 | 35 | 35 | 30 |
| 7 | 管理员增加车次 | 25 | 35 | 40 |
| 8 | 管理员修改车次 | 30 | 25 | 45 |
| 9 | 管理员增加车站 | 45 | 30 | 25 |

#### 原始亲和度矩阵

表12.2‑3属性的亲和度矩阵信息

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 列车编号 | 火车站编号 | 停车时间 | 发车时间 | 里程数 | 站点序 | 区间基础票价 | 票价上浮比率 |
| 列车编号 | 800 | 800 | 800 | 800 | 200 | 800 | 500 | 500 |
| 火车站编号 | 800 | 800 | 800 | 800 | 200 | 800 | 500 | 500 |
| 停车时间 | 800 | 800 | 800 | 800 | 200 | 800 | 500 | 500 |
| 发车时间 | 800 | 800 | 800 | 800 | 200 | 800 | 500 | 500 |
| 里程数 | 200 | 100 | 200 | 200 | 200 | 200 | 200 | 200 |
| 站点序 | 800 | 800 | 800 | 800 | 200 | 800 | 500 | 500 |
| 区间基础票价 | 500 | 500 | 500 | 500 | 200 | 500 | 500 | 500 |
| 票价上浮比率 | 500 | 500 | 500 | 500 | 200 | 500 | 500 | 500 |

#### 聚类后亲和度矩阵

表12.2‑4经过的亲和度矩阵聚类后的信息

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 里程数 | 列车编号 | 火车站编号 | 停车时间 | 发车时间 | 站点序 | 区间基础票价 | 票价上浮比率 |
| 里程数 | 200 | 200 | 100 | 200 | 200 | 200 | 200 | 200 |
| 列车编号 | 200 | 800 | 800 | 800 | 800 | 800 | 500 | 500 |
| 火车站编号 | 200 | 800 | 800 | 800 | 800 | 800 | 500 | 500 |
| 停车时间 | 200 | 800 | 800 | 800 | 800 | 800 | 500 | 500 |
| 发车时间 | 200 | 800 | 800 | 800 | 800 | 800 | 500 | 500 |
| 站点序 | 200 | 800 | 800 | 800 | 800 | 800 | 500 | 500 |
| 区间基础票价 | 200 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| 票价上浮比率 | 200 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |

#### 分片结果

表12.2‑5垂直分片基本信息

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 垂直片段名 | 字段列表 | 分布站点 | 来自关系 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

## 全部片段信息

表12.3‑1分片明细信息

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 片段名 | 分片类别 | 属性列表 | 选择谓词 | 来自关系 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

## 分配信息

表12‑2分片明细及分布信息

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 关系名 | 片段名 | 冗余度 | 站点1 | 站点2 | 站点3 |
| 1 | 区域 | 区域 | 3 | 存放 | 存放 | 存放 |
| 2 | 分公司 | 分公司1 | 1 | 存放 |  |  |
| 3 | 分公司 | 分公司2 | 1 |  | 存放 |  |
| 4 | 分公司 | 分公司3 | 1 |  |  | 存放 |
| 5 | 火车站 | 火车站1 | 1 | 存放 |  |  |
| 6 | 火车站 | 火车站2 | 1 |  | 存放 |  |
| 7 | 火车站 | 火车站3 | 1 |  |  | 存放 |
| 8 | 部门 | 部门1 | 1 | 存放 |  |  |
| 9 | 部门 | 部门2 | 1 |  | 存放 |  |
| 10 | 部门 | 部门3 | 1 |  |  | 存放 |
| 11 | 岗位 | 岗位1 | 1 | 存放 |  |  |
| 12 | 岗位 | 岗位2 | 1 |  | 存放 |  |
| 13 | 岗位 | 岗位3 | 1 |  |  | 存放 |
| 14 | 员工 | 员工1 | 1 | 存放 |  |  |
| 15 | 员工 | 员工2 | 1 |  | 存放 |  |
| 16 | 员工 | 员工3 | 1 |  |  | 存放 |
| 17 | 列车 | 列车1 | 1 | 存放 |  |  |
| 18 | 列车 | 列车2 | 1 |  | 存放 |  |
| 19 | 列车 | 列车3 | 1 |  |  | 存放 |
| 20 | 列车 | 列车12 | 2 | 存放 | 存放 |  |
| 21 | 列车 | 列车13 | 2 | 存放 |  | 存放 |
| 22 | 列车 | 列车23 | 2 |  | 存放 | 存放 |
| 23 | 列车 | 列车123 | 3 | 存放 | 存放 | 存放 |
| 24 | 车厢 | 车厢 | 3 | 存放 | 存放 | 存放 |
| 25 | 乘客 | 乘客11 | 1 | 存放 |  |  |
| 26 | 乘客 | 乘客22 | 1 |  | 存放 |  |
| 27 | 乘客 | 乘客33 | 1 |  |  | 存放 |
| 28 | 乘客 | 乘客12 | 2 | 存放 | 存放 |  |
| 29 | 乘客 | 乘客13 | 2 | 存放 |  | 存放 |
| 30 | 乘客 | 乘客23 | 2 |  | 存放 | 存放 |
| 31 | 网络售票终端 | 网络售票终端 | 3 | 存放 | 存放 | 存放 |
| 32 | 包含 | 包含1 | 1 | 存放 |  |  |
| 33 | 包含 | 包含2 | 1 |  | 存放 |  |
| 34 | 包含 | 包含3 | 1 |  |  | 存放 |
| 35 | 包含 | 包含12 | 2 | 存放 | 存放 |  |
| 36 | 包含 | 包含13 | 2 | 存放 |  | 存放 |
| 37 | 包含 | 包含23 | 2 |  | 存放 | 存放 |
| 38 | 包含 | 包含123 | 3 | 存放 | 存放 | 存放 |
| 39 | 从事 | 从事1 | 1 | 存放 |  |  |
| 40 | 从事 | 从事2 | 1 |  | 存放 |  |
| 41 | 从事 | 从事3 | 1 |  |  | 存放 |
| 42 | 经过 | 经过1 | 1 | 存放 |  |  |
| 43 | 经过 | 经过2 | 1 |  | 存放 |  |
| 44 | 经过 | 经过3 | 1 |  |  | 存放 |
| 45 | 经过 | 经过12 | 2 | 存放 | 存放 |  |
| 46 | 经过 | 经过13 | 2 | 存放 |  | 存放 |
| 47 | 经过 | 经过23 | 2 |  | 存放 | 存放 |
| 48 | 经过 | 经过123 | 3 | 存放 | 存放 | 存放 |
| 49 | 车票业务 | 车票业务111 | 1 | 存放 |  |  |
| 50 | 车票业务 | 车票业务222 | 1 |  | 存放 |  |
| 51 | 车票业务 | 车票业务333 | 1 |  |  | 存放 |
| 52 | 车票业务 | 车票业务122 | 2 | 存放 | 存放 |  |
| 53 | 车票业务 | 车票业务133 | 2 | 存放 |  | 存放 |
| 54 | 车票业务 | 车票业务233 | 2 |  | 存放 | 存放 |
| 55 | 车票业务 | 车票业务123 | 3 | 存放 | 存放 | 存放 |
| 56 | 隶属 | 隶属1 | 1 | 存放 |  |  |
| 57 | 隶属 | 隶属2 | 1 |  | 存放 |  |
| 58 | 隶属 | 隶属3 | 1 |  |  | 存放 |
| 59 | 自助操作 | 自助操作11 | 1 | 存放 |  |  |
| 60 | 自助操作 | 自助操作22 | 1 |  | 存放 |  |
| 61 | 自助操作 | 自助操作33 | 1 |  |  | 存放 |
| 62 | 自助操作 | 自助操作12 | 2 | 存放 | 存放 |  |
| 63 | 自助操作 | 自助操作13 | 2 | 存放 |  | 存放 |
| 64 | 自助操作 | 自助操作23 | 2 |  | 存放 | 存放 |
| 65 | 上级 | 上级1 | 1 | 存放 |  |  |
| 66 | 上级 | 上级2 | 1 |  | 存放 |  |
| 67 | 上级 | 上级3 | 1 |  |  | 存放 |
| 68 | 字典 | 字典 | 3 | 存放 | 存放 | 存放 |

# 分布数据实现

## 站点1

### 数据库链接

表13.1‑1数据库链接列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 链接名 | 目标服务器IP | 数据库 | 端口 | 连接名 | 用户 | 用途 | 备注 |
| 1 | dl\_master12 | 192.168.182.102 | master12 | 1521 | master12 | y\_1\_2\_0\_2 | 链接站点2 |  |
| 2 | dl\_master13 | 192.168.182.103 | master13 | 1521 | master13 | y\_1\_2\_0\_3 | 链接站点3 |  |

执行脚本（Oracle，y\_1\_2\_0\_1）

|  |
| --- |
| --创建数据库链接，用于：链接站点2  --目标数据库：192.168.182.102:1521/master12  create database link y\_1\_2\_0\_1.dl\_master12 connect to y\_1\_2\_0\_2 identified by "" using 'master12';  --创建数据库链接，用于：链接站点3  --目标数据库：192.168.182.103:1521/master13  create database link y\_1\_2\_0\_1.dl\_master13 connect to y\_1\_2\_0\_3 identified by "" using 'master13'; |

### 序列

表13.1‑2序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 7 | 1000000 | 1 | 1000000 | 1999999 | 区域编号 |  |
| 2 | seq\_branch\_company\_no | 9 | 100000000 | 1 | 100000000 | 199999999 | 分公司编号 |  |
| 3 | seq\_station\_no | 5 | 10000 | 1 | 10000 | 19999 | 火车站编号 |  |
| 4 | seq\_depart\_no | 3 | 100 | 1 | 100 | 199 | 部门编号 |  |
| 5 | seq\_post\_no | 3 | 100 | 1 | 100 | 199 | 岗位编号 |  |
| 6 | seq\_administer\_id | 13 | 1000000000000 | 1 | 1000000000000 | 1999999999999 | 员工账号 |  |
| 7 | seq\_carriage\_no | 3 | 100 | 1 | 100 | 199 | 车厢编号 |  |
| 8 | seq\_terminal\_no | 9 | 100000000 | 1 | 100000000 | 199999999 | 网售终端编号 |  |
| 9 | seq\_pass\_id | 13 | 1000000000000 | 1 | 1000000000000 | 1999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_id | 13 | 1000000000000 | 1 | 1000000000000 | 1999999999999 | 车票业务编号 |  |
| 11 | seq\_self\_service\_id | 13 | 1000000000000 | 1 | 1000000000000 | 1999999999999 | 自助操作编号 |  |

执行脚本（Oracle，y\_1\_2\_0\_1）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_2\_0\_1.seq\_area\_no start with 1000000 increment by 1 minvalue 1000000 maxvalue 1999999 nocache;  --创建序列，用于：分公司编号  create sequence y\_1\_2\_0\_1.seq\_branch\_company\_no start with 100000000 increment by 1 minvalue 100000000 maxvalue 199999999 nocache;  --创建序列，用于：火车站编号  create sequence y\_1\_2\_0\_1.seq\_station\_no start with 10000 increment by 1 minvalue 10000 maxvalue 19999 nocache;  --创建序列，用于：部门编号  create sequence y\_1\_2\_0\_1.seq\_depart\_no start with 100 increment by 1 minvalue 100 maxvalue 199 nocache;  --创建序列，用于：岗位编号  create sequence y\_1\_2\_0\_1.seq\_post\_no start with 100 increment by 1 minvalue 100 maxvalue 199 nocache;  --创建序列，用于：员工账号  create sequence y\_1\_2\_0\_1.seq\_administer\_id start with 1000000000000 increment by 1 minvalue 1000000000000 maxvalue 1999999999999 nocache;  --创建序列，用于：车厢编号  create sequence y\_1\_2\_0\_1.seq\_carriage\_no start with 100 increment by 1 minvalue 100 maxvalue 199 nocache;  --创建序列，用于：网售终端编号  create sequence y\_1\_2\_0\_1.seq\_terminal\_no start with 100000000 increment by 1 minvalue 100000000 maxvalue 199999999 nocache;  --创建序列，用于：经过编号  create sequence y\_1\_2\_0\_1.seq\_pass\_id start with 1000000000000 increment by 1 minvalue 1000000000000 maxvalue 1999999999999 nocache;  --创建序列，用于：车票业务编号  create sequence y\_1\_2\_0\_1.seq\_ticket\_business\_id start with 1000000000000 increment by 1 minvalue 1000000000000 maxvalue 1999999999999 nocache;  --创建序列，用于：自助操作编号  create sequence y\_1\_2\_0\_1.seq\_self\_service\_id start with 1000000000000 increment by 1 minvalue 1000000000000 maxvalue 1999999999999 nocache; |

### 表

#### 创建基本表

表13.1‑3表名列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 片段列表 | 备注 |
| 1 | 区域 | area | 区域 |  |
| 2 | 分公司\_1 | branch\_company\_1 | 分公司1 |  |
| 3 | 火车站\_1 | station\_1 | 火车站1 |  |
| 4 | 部门\_1 | depart\_1 | 部门1 |  |
| 5 | 岗位\_1 | post\_1 | 岗位1 |  |
| 6 | 员工\_1 | employee\_1 | 员工1 |  |
| 7 | 列车\_1 | train\_1 | 列车1 |  |
| 8 | 列车\_12 | train\_12 | 列车12 |  |
| 9 | 列车\_13 | train\_13 | 列车13 |  |
| 10 | 列车\_123 | train\_123 | 列车123 |  |
| 11 | 车厢 | carriage | 车厢 |  |
| 12 | 乘客\_11 | passenger\_11 | 乘客11 |  |
| 13 | 乘客\_12 | passenger\_12 | 乘客12 |  |
| 14 | 乘客\_13 | passenger\_13 | 乘客13 |  |
| 15 | 网络售票终端 | terminal | 网络售票终端 |  |
| 16 | 包含\_1 | include\_1 | 包含1 |  |
| 17 | 包含\_12 | include\_12 | 包含12 |  |
| 18 | 包含\_13 | include\_13 | 包含13 |  |
| 19 | 包含\_123 | include\_123 | 包含123 |  |
| 20 | 从事\_1 | work\_on\_1 | 从事1 |  |
| 21 | 经过\_1 | passby\_1 | 经过1 |  |
| 22 | 经过\_12 | passby\_12 | 经过12 |  |
| 23 | 经过\_13 | passby\_13 | 经过13 |  |
| 24 | 经过\_123 | passby\_123 | 经过123 |  |
| 25 | 车票业务\_111 | ticket\_business\_111 | 车票业务111 |  |
| 26 | 车票业务\_122 | ticket\_business\_122 | 车票业务122 |  |
| 27 | 车票业务\_133 | ticket\_business\_133 | 车票业务133 |  |
| 28 | 车票业务\_123 | ticket\_business\_123 | 车票业务123 |  |
| 29 | 隶属\_1 | belong\_to\_1 | 隶属1 |  |
| 30 | 自助服务\_11 | self\_service\_11 | 自助服务11 |  |
| 31 | 自助服务\_12 | self\_service\_12 | 自助服务12 |  |
| 32 | 自助服务\_13 | self\_service\_13 | 自助服务13 |  |
| 33 | 上级\_1 | superior\_1 | 上级1 |  |
| 34 | 字典 | user\_dict | 字典 |  |

##### 区域

表13.1‑4 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(8) | n |  |  | 来自序列seq\_area\_no |
| 2 | 名称 | name | varchar2(300) | n |  | y |  |

执行脚本（Oracle，y\_1\_2\_0\_1）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_2\_0\_1.area  (  no char(8) default (to\_char(seq\_area\_no.nextval,'0999999')) not null ,  name varchar2(300) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_2\_0\_1.area is '区域';  comment on column y\_1\_2\_0\_1.area.no is '编号';  comment on column y\_1\_2\_0\_1.area.name is '名称'; |

#### 删除不合理的外键

表13.1‑5不合理外键列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 属性名 | 字段名 | 参照 | 备注 |
| 1 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 同义词

#### 本站点

表13.1‑10同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 站点2

表13.1‑11同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 站点3

表13.1‑12同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 视图

#### 本站点

表13.1‑6视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

##### 视图1的说明

表13.1‑7 视图xxxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文说明 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 全局

表13.1‑8视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

##### 视图2的说明

表13.1‑9 视图xxxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文说明 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 函数

表13.1‑13函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

#### 函数中文名

函数代码

|  |
| --- |
|  |

### 过程

表13.1‑14过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表13.1‑15触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 中文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 触发器中文名

触发器代码

|  |
| --- |
|  |

### 赋对象权限

表13.1‑16语句

|  |
| --- |
|  |

* 1. **站点2**
     1. **数据库链接**

表13.2‑1数据库链接列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 链接名 | 目标服务器IP | 数据库 | 端口 | 连接名 | 用户 | 用途 | 备注 |
| 1 | dl\_master11 | 192.168.182.101 | master11 | 1521 | master11 | y\_1\_2\_0\_1 | 访问站点1的通道 |  |
| 2 | dl\_master13 | 192.168.182.103 | master13 | 1521 | master13 | y\_1\_2\_0\_3 | 访问站点3的通道 |  |

执行脚本（Oracle，Y\_1\_2\_0\_2）

|  |
| --- |
| --创建数据库链接，用于：访问站点1的通道  --目标数据库：192.168.182.101:1521/master11  create database link Y\_1\_2\_0\_2.dl\_master11 connect to y\_1\_2\_0\_1 identified by "J8d46," using 'master11';  --创建数据库链接，用于：访问站点3的通道  --目标数据库：192.168.182.103:1521/master13  create database link Y\_1\_2\_0\_2.dl\_master13 connect to y\_1\_2\_0\_3 identified by "M2n46)" using 'master13'; |

* + 1. **序列**

表13.2‑2序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 7 | 2000000 | 1 | 2000000 | 2999999 | 区域编号 |  |
| 2 | seq\_comp\_no | 8 | 20000000 | 1 | 20000000 | 29999999 | 分公司编号 |  |
| 3 | seq\_station\_no | 5 | 20000 | 1 | 20000 | 29999 | 火车站编号 |  |
| 4 | seq\_dept\_no | 3 | 200 | 1 | 200 | 299 | 部门编号 |  |
| 5 | seq\_post\_no | 3 | 200 | 1 | 200 | 299 | 岗位编号 |  |
| 6 | seq\_administer\_id | 13 | 2000000000000 | 1 | 2000000000000 | 2999999999999 | 员工账号 |  |
| 7 | seq\_carriage\_no | 3 | 200 | 1 | 200 | 299 | 车厢编号 |  |
| 8 | seq\_terminal\_no | 9 | 200000000 | 1 | 200000000 | 299999999 | 终端编号 |  |
| 9 | seq\_pass\_id | 13 | 2000000000000 | 1 | 2000000000000 | 2999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_no | 13 | 2000000000000 | 1 | 2000000000000 | 2999999999999 | 车票业务编号 |  |
| 11 | seq\_self\_service\_no | 13 | 2000000000000 | 1 | 2000000000000 | 2999999999999 | 自助操作编号 |  |

执行脚本（Oracle，Y\_1\_2\_0\_2）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence Y\_1\_2\_0\_2.seq\_area\_no start with 2000000 increment by 1 minvalue 2000000 maxvalue 2999999 nocache;  --创建序列，用于：分公司编号  create sequence Y\_1\_2\_0\_2.seq\_comp\_no start with 20000000 increment by 1 minvalue 20000000 maxvalue 29999999 nocache;  --创建序列，用于：火车站编号  create sequence Y\_1\_2\_0\_2.seq\_station\_no start with 20000 increment by 1 minvalue 20000 maxvalue 29999 nocache;  --创建序列，用于：部门编号  create sequence Y\_1\_2\_0\_2.seq\_dept\_no start with 200 increment by 1 minvalue 200 maxvalue 299 nocache;  --创建序列，用于：岗位编号  create sequence Y\_1\_2\_0\_2.seq\_post\_no start with 200 increment by 1 minvalue 200 maxvalue 299 nocache;  --创建序列，用于：员工账号  create sequence Y\_1\_2\_0\_2.seq\_administer\_id start with 2000000000000 increment by 1 minvalue 2000000000000 maxvalue 2999999999999 nocache;  --创建序列，用于：车厢编号  create sequence Y\_1\_2\_0\_2.seq\_carriage\_no start with 200 increment by 1 minvalue 200 maxvalue 299 nocache;  --创建序列，用于：终端编号  create sequence Y\_1\_2\_0\_2.seq\_terminal\_no start with 200000000 increment by 1 minvalue 200000000 maxvalue 299999999 nocache;  --创建序列，用于：经过编号  create sequence Y\_1\_2\_0\_2.seq\_pass\_id start with 2000000000000 increment by 1 minvalue 2000000000000 maxvalue 2999999999999 nocache;  --创建序列，用于：车票业务编号  create sequence Y\_1\_2\_0\_2.seq\_ticket\_business\_no start with 2000000000000 increment by 1 minvalue 2000000000000 maxvalue 2999999999999 nocache;  --创建序列，用于：自助操作编号  create sequence Y\_1\_2\_0\_2.seq\_self\_service\_no start with 2000000000000 increment by 1 minvalue 2000000000000 maxvalue 2999999999999 nocache; |

* + 1. **表**
       1. **创建基本表**

表13.2‑3表名列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 片段列表 | 备注 |
| 1 | 区域 | area | 区域 |  |
| 2 | 分公司\_2 | branch\_company\_2 | 分公司2 |  |
| 3 | 火车站\_2 | station\_2 | 火车站2 |  |
| 4 | 部门\_2 | depart\_2 | 部门2 |  |
| 5 | 岗位\_2 | post\_2 | 岗位2 |  |
| 6 | 员工\_2 | employee\_2 | 员工2 |  |
| 7 | 列车\_2 | train\_2 | 列车2 |  |
| 8 | 列车\_12 | train\_12 | 列车12 |  |
| 9 | 列车\_23 | train\_23 | 列车23 |  |
| 10 | 列车\_123 | train\_123 | 列车123 |  |
| 11 | 车厢 | carriage | 车厢 |  |
| 12 | 乘客\_22 | passenger\_22 | 乘客22 |  |
| 13 | 乘客\_12 | passenger\_12 | 乘客12 |  |
| 14 | 乘客\_23 | passenger\_23 | 乘客23 |  |
| 15 | 网络售票终端 | terminal | 网络售票终端 |  |
| 16 | 包含\_2 | include\_2 | 包含2 |  |
| 17 | 包含\_12 | include\_12 | 包含12 |  |
| 18 | 包含\_23 | include\_23 | 包含23 |  |
| 19 | 包含\_123 | include\_123 | 包含123 |  |
| 20 | 从事\_2 | work\_on\_2 | 从事2 |  |
| 21 | 经过\_2 | pass\_by\_2 | 经过2 |  |
| 22 | 经过\_12 | pass\_by\_12 | 经过12 |  |
| 23 | 经过\_23 | pass\_by\_23 | 经过23 |  |
| 24 | 经过\_123 | pass\_by\_123 | 经过123 |  |
| 25 | 车票业务\_222 | ticket\_business\_222 | 车票业务222 |  |
| 26 | 车票业务\_122 | ticket\_business\_122 | 车票业务122 |  |
| 27 | 车票业务\_233 | ticket\_business\_233 | 车票业务233 |  |
| 28 | 车票业务\_123 | ticket\_business\_123 | 车票业务123 |  |
| 29 | 隶属\_2 | belong\_to\_2 | 隶属2 |  |
| 30 | 自助操作\_22 | self\_service\_22 | 自助操作22 |  |
| 31 | 自助操作\_22 | self\_service\_22 | 自助操作22 |  |
| 32 | 自助操作\_23 | self\_service\_23 | 自助操作23 |  |
| 33 | 上级\_2 | superior\_2 | 上级2 |  |
| 34 | 字典 | user\_dict | 字典 |  |

* + - * 1. **区域**

表13.2‑4 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(6) | n |  | y |  |
| 2 | 名称 | name | varchar2(300) | n |  | y |  |

执行脚本（Oracle，Y\_1\_2\_0\_2）

|  |
| --- |
| -- 创建表：区域  create table Y\_1\_2\_0\_2.area  (  no char(6) unique not null ,  name varchar2(300) unique not null ,  primary key(no)  )  ;  comment on table Y\_1\_2\_0\_2.area is '区域';  comment on column Y\_1\_2\_0\_2.area.no is '编号';  comment on column Y\_1\_2\_0\_2.area.name is '名称'; |

* + - * 1. **分公司2**

表13.2‑5 branch\_company\_2（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(8) | n |  | y |  |
| 2 | 名称 | name | varchar(300) | n |  | y |  |
| 3 | 地址 | address | varchar(300) | n |  | y |  |
| 4 | 联系电话 | phone | varchar(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | char(6) | n |  | y |  |

执行脚本（Oracle，Y\_1\_2\_0\_2）

|  |
| --- |
| -- 创建表：分公司2  create table Y\_1\_2\_0\_2.branch\_company\_2  (  no char(8) unique not null ,  name varchar(300) unique not null ,  address varchar(300) unique not null ,  phone varchar(20) not null ,  area\_no char(6) unique not null ,  primary key(no)  )  ;  comment on table Y\_1\_2\_0\_2.branch\_company\_2 is '分公司2';  comment on column Y\_1\_2\_0\_2.branch\_company\_2.no is '编号';  comment on column Y\_1\_2\_0\_2.branch\_company\_2.name is '名称';  comment on column Y\_1\_2\_0\_2.branch\_company\_2.address is '地址';  comment on column Y\_1\_2\_0\_2.branch\_company\_2.phone is '联系电话';  comment on column Y\_1\_2\_0\_2.branch\_company\_2.area\_no is '区域编号'; |

* + - * 1. **火车站 2**

表13.2‑6 station\_2（station\_no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | station\_no | char(4) | n |  | y | 流水号 |
| 2 | 站点名 | name | varchar(30) |  |  |  | 中文站点名，拼音  如：呼和浩特，huhhot  汉字和英文字符用半角逗号隔开 |
| 3 | 英文名 | english\_name | varchar(60) |  |  |  |  |
| 4 | 等级 | station\_level | char(1) | n |  |  | 401 |
| 5 | 次序 | station\_order | int(4) | n |  |  |  |
| 6 | 供给站标志 | station\_provide\_flag | char(1) |  |  |  | 402 |
| 7 | 分公司编号 | comp\_no | char(8) |  |  |  |  |

执行脚本（Oracle，Y\_1\_2\_0\_2）

|  |
| --- |
| -- 创建表：火车站 2  create table Y\_1\_2\_0\_2.station\_2  (  station\_no char(4) unique not null ,  name varchar(30) ,  english\_name varchar(60) ,  station\_level char(1) not null ,  station\_order int(4) not null ,  station\_provide\_flag char(1) ,  comp\_no char(8) ,  primary key(station\_no)  )  ;  comment on table Y\_1\_2\_0\_2.station\_2 is '火车站 2';  comment on column Y\_1\_2\_0\_2.station\_2.station\_no is '编号';  comment on column Y\_1\_2\_0\_2.station\_2.name is '站点名';  comment on column Y\_1\_2\_0\_2.station\_2.english\_name is '英文名';  comment on column Y\_1\_2\_0\_2.station\_2.station\_level is '等级';  comment on column Y\_1\_2\_0\_2.station\_2.station\_order is '次序';  comment on column Y\_1\_2\_0\_2.station\_2.station\_provide\_flag is '供给站标志';  comment on column Y\_1\_2\_0\_2.station\_2.comp\_no is '分公司编号'; |

* + - * 1. **部门 2**

表13.2‑7 depart\_2（主键）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

* + - 1. **删除不合理的外键**

表13.2‑5不合理外键列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 属性名 | 字段名 | 参照 | 备注 |
| 1 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 同义词

* + - 1. **本站点**

表13.2‑10同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

* + - 1. **站点2**

表13.2‑11同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

* + - 1. **站点3**

表13.2‑12同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

* + 1. **视图**
       1. **本站点**

表13.2‑6视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

* + - * 1. **视图1的说明**

表13.2‑7 视图xxxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文说明 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

* + - 1. **全局**

表13.2‑8视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

* + - * 1. **视图2的说明**

表13.2‑9 视图xxxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文说明 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

* + 1. **函数**

表13.2‑13函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

* + - 1. **函数中文名**

函数代码

|  |
| --- |
|  |

* + 1. **过程**

表13.2‑14过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

* + - 1. **过程中文名**

过程代码

|  |
| --- |
|  |

* + 1. **触发器**

表13.2‑15触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 中文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

* + - 1. **触发器中文名**

触发器代码

|  |
| --- |
|  |

* + 1. **赋对象权限**

表13.2‑16语句

|  |
| --- |
|  |

## 站点3

### 数据库链接

表13.3‑1数据库链接列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 链接名 | 目标服务器IP | 数据库 | 端口 | 连接名 | 用户 | 用途 | 备注 |
| 1 | dl\_master11 | 192.168.182.101 | master11 | 1521 | master11 | y\_1\_2\_0\_1 | 访问站点１的通道 |  |
| 2 | dl\_master12 | 192.168.182.102 | master12 | 1521 | master12 | y\_1\_2\_0\_2 | 访问站点２的通道 |  |

执行脚本（Oracle，y\_1\_2\_0\_3）

|  |
| --- |
| --创建数据库链接，用于：访问站点１的通道  --目标数据库：192.168.182.101:1521/master11  create database link dl\_master11 connect to y\_1\_2\_0\_1 identified by "" using 'master11';  --创建数据库链接，用于：访问站点２的通道  --目标数据库：192.168.182.102:1521/master12  create database link dl\_master12 connect to y\_1\_2\_0\_2 identified by "" using 'master12'; |

### 序列

表13.3‑2序列列表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 英文名 | 长度 | 起始值 | 步长 | 最小值 | 最大值 | 应用场合 | 备注 |
| 1 | seq\_area\_no | 7 | 3000000 | 1 | 3000000 | 3999999 | 区域编号 |  |
| 2 | seq\_branch\_company\_no | 9 | 300000000 | 1 | 300000000 | 399999999 | 分公司编号 |  |
| 3 | seq\_station\_no | 5 | 30000 | 1 | 30000 | 39999 | 火车站编号 |  |
| 4 | seq\_depart\_no | 3 | 300 | 1 | 300 | 399 | 部门编号 |  |
| 5 | seq\_post\_no | 3 | 300 | 1 | 300 | 399 | 岗位编号 |  |
| 6 | seq\_employee\_administer\_id | 13 | 3000000000000 | 1 | 3000000000000 | 3999999999999 | 员工账号 |  |
| 7 | seq\_carriage\_no | 3 | 300 | 1 | 300 | 399 | 车厢编号 |  |
| 8 | seq\_terminal\_no | 9 | 300000000 | 1 | 300000000 | 399999999 | 网络售票终端编号 |  |
| 9 | seq\_pass\_by\_pass\_id | 13 | 3000000000000 | 1 | 3000000000000 | 3999999999999 | 经过编号 |  |
| 10 | seq\_ticket\_business\_no | 13 | 3000000000000 | 1 | 3000000000000 | 3999999999999 | 车票业务编号 |  |
| 11 | seq\_self\_service\_no | 13 | 3000000000000 | 1 | 3000000000000 | 3999999999999 | 自助操作编号 |  |

执行脚本（Oracle，y\_1\_2\_0\_3）

|  |
| --- |
| --创建序列，用于：区域编号  create sequence y\_1\_2\_0\_3.seq\_area\_no start with 3000000 increment by 1 minvalue 3000000 maxvalue 3999999 nocache;  --创建序列，用于：分公司编号  create sequence y\_1\_2\_0\_3.seq\_branch\_company\_no start with 300000000 increment by 1 minvalue 300000000 maxvalue 399999999 nocache;  --创建序列，用于：火车站编号  create sequence y\_1\_2\_0\_3.seq\_station\_no start with 30000 increment by 1 minvalue 30000 maxvalue 39999 nocache;  --创建序列，用于：部门编号  create sequence y\_1\_2\_0\_3.seq\_depart\_no start with 30 increment by 1 minvalue 300 maxvalue 399 nocache;  --创建序列，用于：岗位编号  create sequence y\_1\_2\_0\_3.seq\_post\_no start with 300 increment by 1 minvalue 300 maxvalue 399 nocache;  --创建序列，用于：员工账号  create sequence y\_1\_2\_0\_3.seq\_employee\_administer\_id start with 3000000000000 increment by 1 minvalue 3000000000000 maxvalue 3999999999999 nocache;  --创建序列，用于：车厢编号  create sequence y\_1\_2\_0\_3.seq\_carriage\_no start with 30 increment by 1 minvalue 300 maxvalue 399 nocache;  --创建序列，用于：网络售票终端编号  create sequence y\_1\_2\_0\_3.seq\_terminal\_no start with 30 increment by 1 minvalue 300000000 maxvalue 399999999 nocache;  --创建序列，用于：经过编号  create sequence y\_1\_2\_0\_3.seq\_pass\_by\_pass\_id start with 3000000000000 increment by 1 minvalue 3000000000000 maxvalue 999999999999 nocache;  --创建序列，用于：车票业务编号  create sequence y\_1\_2\_0\_3.seq\_ticket\_business\_no start with 3000000000000 increment by 1 minvalue 3000000000000 maxvalue 3999999999999 nocache;  --创建序列，用于：自助操作编号  create sequence y\_1\_2\_0\_3.seq\_self\_service\_no start with 3000000000000 increment by 1 minvalue 3000000000000 maxvalue 3999999999999 nocache; |

### 表

#### 创建基本表

表13.3‑3表名列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 片段列表 | 备注 |
| 1 | 区域 | area | 区域 |  |
| 2 | 分公司\_3 | branch\_company\_3 | 分公司3 |  |
| 3 | 火车站\_3 | station\_3 | 火车站3 |  |
| 4 | 部门\_3 | depart\_3 | 部门3 |  |
| 5 | 岗位\_3 | post\_3 | 岗位3 |  |
| 6 | 员工\_3 | employee\_3 | 员工3 |  |
| 7 | 列车\_3 | train\_3 | 列车3 |  |
| 8 | 列车\_13 | train\_13 | 列车13 |  |
| 9 | 列车\_23 | train\_23 | 列车23 |  |
| 10 | 列车\_123 | train\_123 | 列车123 |  |
| 11 | 车厢 | carriage | 车厢 |  |
| 12 | 乘客\_33 | passenger\_33 | 乘客33 |  |
| 13 | 乘客\_13 | passenger\_13 | 乘客13 |  |
| 14 | 乘客\_23 | passenger\_23 | 乘客23 |  |
| 15 | 网络售票终端 | terminal | 网络售票终端 |  |
| 16 | 包含\_3 | include\_3 | 包含3 |  |
| 17 | 包含\_13 | include\_13 | 包含13 |  |
| 18 | 包含\_23 | include\_23 | 包含23 |  |
| 19 | 包含\_123 | include\_123 | 包含123 |  |
| 20 | 从事\_3 | work\_on\_3 | 从事3 |  |
| 21 | 经过\_3 | pass\_by\_3 | 经过3 |  |
| 22 | 经过\_13 | pass\_by\_13 | 经过13 |  |
| 23 | 经过\_23 | pass\_by\_23 | 经过23 |  |
| 24 | 经过\_123 | pass\_by\_123 | 经过123 |  |
| 25 | 车票业务\_333 | ticket\_business\_333 | 车票业务333 |  |
| 26 | 车票业务\_333 | ticket\_business\_133 | 车票业务133 |  |
| 27 | 车票业务\_333 | ticket\_business\_233 | 车票业务233 |  |
| 28 | 车票业务\_333 | ticket\_business\_123 | 车票业务123 |  |
| 29 | 隶属\_3 | belong\_to\_3 | 隶属3 |  |
| 30 | 自助操作\_33 | self\_service\_33 | 自助操作33 |  |
| 31 | 自助操作\_13 | self\_service\_13 | 自助操作13 |  |
| 32 | 自助操作\_23 | self\_service\_23 | 自助操作23 |  |
| 33 | 上级\_3 | superior\_3 | 上级3 |  |
| 34 | 字典 | user\_dict | 字典 |  |

##### 区域

表1.3‑4 area（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(8) | n |  |  | 来自序列seq\_area\_no |
| 2 | 名称 | name | varchar(100) | n |  | y |  |

执行脚本（Oracle，y\_1\_2\_0\_3）

|  |
| --- |
| -- 创建表：区域  create table y\_1\_2\_0\_3.area  (  no char(8) default (to\_char(seq\_area\_no.nextval,'0999999')) not null ,  name varchar(100) unique not null ,  primary key(no)  )  ;  comment on table y\_1\_2\_0\_3.area is '区域';  comment on column y\_1\_2\_0\_3.area.no is '编号';  comment on column y\_1\_2\_0\_3.area.name is '名称'; |

##### 分公司\_3

表1.3‑5 branch\_company\_3（no）

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 类型(宽度)/参照 | 空否 | 缺省值 | 唯一 | 备注 |
| 1 | 编号 | no | char(10) | n |  |  | 来自序列seq\_branch\_company\_no |
| 2 | 名称 | name | varchar2(300) | n |  | y |  |
| 3 | 地址 | address | varchar2(300) | n |  | y |  |
| 4 | 联系电话 | phone | varchar2(20) | n |  |  |  |
| 5 | 区域编号 | area\_no | area(no) | n |  |  |  |

执行脚本（Oracle，y\_1\_2\_0\_3）

|  |
| --- |
| -- 创建表：分公司\_3  create table y\_1\_2\_0\_3.branch\_company\_3  (  no char(10) default (to\_char(seq\_branch\_company\_no.nextval,'099999999')) not null ,  name varchar2(300) unique not null ,  address varchar2(300) unique not null ,  phone varchar2(20) not null ,  area\_no references y\_1\_2\_0\_3.area(no) not null ,  primary key(no)  )  ;  comment on table y\_1\_2\_0\_3.branch\_company\_3 is '分公司\_3';  comment on column y\_1\_2\_0\_3.branch\_company\_3.no is '编号';  comment on column y\_1\_2\_0\_3.branch\_company\_3.name is '名称';  comment on column y\_1\_2\_0\_3.branch\_company\_3.address is '地址';  comment on column y\_1\_2\_0\_3.branch\_company\_3.phone is '联系电话';  comment on column y\_1\_2\_0\_3.branch\_company\_3.area\_no is '区域编号'; |

#### 删除不合理的外键

表13.3‑5不合理外键列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 表中文名 | 表英文名 | 属性名 | 字段名 | 参照 | 备注 |
| 1 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 同义词

#### 本站点

表13.3‑6同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 站点1

表13.3‑7同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 站点2

表13.3‑8同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 视图

#### 本站点

表13.3‑9视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

##### 视图1的说明

表13.3‑10 视图xxxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 全局

表13.3‑11视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 用途 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

##### 视图2的说明

表13.3‑12 视图xxxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

### 函数

表13.3‑13函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

#### 函数中文名

函数代码

|  |
| --- |
|  |

### 过程

表13.3‑14过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

#### 过程中文名

过程代码

|  |
| --- |
|  |

### 触发器

表13.3‑15触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 中文名 | 功能 | 备注 |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

#### 触发器中文名

触发器代码

|  |
| --- |
|  |

### 赋对象权限

表13.3‑16语句

|  |
| --- |
|  |

# 分布外模式的实现

## 售票员业务

### 站点1

#### 同义词

表14.1.1‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_1.g\_area | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的区域关系，实现位置透明 |  |
| 2 | g\_branch\_company | y\_1\_2\_0\_1.g\_branch\_company | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的分公司关系，实现位置透明 |  |
| 3 | g\_station | y\_1\_2\_0\_1.g\_station | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_1.g\_depart | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_1.g\_post | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_1.g\_employee | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_1.g\_train | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_1.g\_carriage | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_1.g\_passenger | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_1.g\_terminal | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_1.g\_include | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_1.g\_work\_on | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_1.g\_pass\_by | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_1.g\_ticket\_business | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_1.g\_belong\_to | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_1.g\_self\_service | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_1.g\_superior | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_1\_1）

|  |
| --- |
| --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的区域关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_area for y\_1\_2\_0\_1.g\_area;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的分公司关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_branch\_company for y\_1\_2\_0\_1.g\_branch\_company;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的火车站关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_station for y\_1\_2\_0\_1.g\_station;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的部门关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_depart for y\_1\_2\_0\_1.g\_depart;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的岗位关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_post for y\_1\_2\_0\_1.g\_post;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的员工关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_employee for y\_1\_2\_0\_1.g\_employee;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的列车关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_train for y\_1\_2\_0\_1.g\_train;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车厢关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_carriage for y\_1\_2\_0\_1.g\_carriage;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的乘客关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_passenger for y\_1\_2\_0\_1.g\_passenger;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_terminal for y\_1\_2\_0\_1.g\_terminal;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的包含关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_include for y\_1\_2\_0\_1.g\_include;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的从事关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_work\_on for y\_1\_2\_0\_1.g\_work\_on;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的经过关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_pass\_by for y\_1\_2\_0\_1.g\_pass\_by;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车票业务关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_ticket\_business for y\_1\_2\_0\_1.g\_ticket\_business;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的隶属关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_belong\_to for y\_1\_2\_0\_1.g\_belong\_to;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的自助操作关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_self\_service for y\_1\_2\_0\_1.g\_self\_service;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的上级关系，实现位置透明  create synonym y\_1\_3\_1\_1.g\_superior for y\_1\_2\_0\_1.g\_superior; |

#### 视图

表14.1.1‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 乘客车票订单 | order\_info | 单据 |  |
| 2 | 退票详细信息 | refund\_info | 单据 |  |
| 3 | 改签详细信息 | rebook\_info | 单据 |  |
| 4 | 余票信息 | ticketleft\_info | 单据 |  |
| 5 | 乘客信息 | passenger\_info | 报表 |  |
| 6 | 车次信息 | train\_info | 报表 |  |
| 7 | 票价信息 | price\_info | 报表 |  |
| 8 | 售票员信息 | conductor\_info | 报表 |  |

##### 视图1

表14.1.1.2‑1视图xxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 函数

表14.1.1‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表14.1.1‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表14.1.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点2

#### 同义词

表14.1.2‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_2.g\_area | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的区域关系，实现位置透明 |  |
| 2 | g\_rail\_company | y\_1\_2\_0\_2.g\_rail\_company | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的分公司关系，实现位置透明 |  |
| 3 | g\_rail\_station | y\_1\_2\_0\_2.g\_rail\_station | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_2.g\_depart | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_2.g\_post | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_2.g\_employee | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_2.g\_train | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_2.g\_carriage | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_2.g\_passenger | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_2.g\_terminal | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_2.g\_include | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_2.g\_work\_on | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_2.g\_pass\_by | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_2.g\_ticket\_business | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_2.g\_belong\_to | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_2.g\_self\_service | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_2.g\_superior | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_1\_2）

|  |
| --- |
| --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的区域关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_area for y\_1\_2\_0\_2.g\_area;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的分公司关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_rail\_company for y\_1\_2\_0\_2.g\_rail\_company;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的火车站关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_rail\_station for y\_1\_2\_0\_2.g\_rail\_station;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的部门关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_depart for y\_1\_2\_0\_2.g\_depart;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2岗位关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_post for y\_1\_2\_0\_2.g\_post;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的员工关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_employee for y\_1\_2\_0\_2.g\_employee;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的列车关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_train for y\_1\_2\_0\_2.g\_train;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车厢关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_carriage for y\_1\_2\_0\_2.g\_carriage;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的乘客关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_passenger for y\_1\_2\_0\_2.g\_passenger;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_terminal for y\_1\_2\_0\_2.g\_terminal;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的包含关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_include for y\_1\_2\_0\_2.g\_include;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的从事关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_work\_on for y\_1\_2\_0\_2.g\_work\_on;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的经过关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_pass\_by for y\_1\_2\_0\_2.g\_pass\_by;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车票业务关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_ticket\_business for y\_1\_2\_0\_2.g\_ticket\_business;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的隶属关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_belong\_to for y\_1\_2\_0\_2.g\_belong\_to;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的自助操作关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_self\_service for y\_1\_2\_0\_2.g\_self\_service;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的上级关系，实现位置透明  create synonym y\_1\_3\_1\_2.g\_superior for y\_1\_2\_0\_2.g\_superior; |

#### 视图

表14.1.2‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 乘客车票订单 | order\_info | 单据 |  |
| 2 | 退票详细信息 | refund\_info | 单据 |  |
| 3 | 改签详细信息 | rebook\_info | 单据 |  |
| 4 | 余票信息 | ticketleft\_info | 单据 |  |
| 5 | 乘客信息 | passenger\_info | 报表 |  |
| 6 | 车次信息 | train\_info | 报表 |  |
| 7 | 票价信息 | price\_info | 报表 |  |
| 8 | 售票员信息 | conductor\_info | 报表 |  |

##### 视图1

表14.1.2.2‑1视图xxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 函数

表14.1.2‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表14.1.2‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表14.1.2‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点3

#### 同义词

表14.1.3‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_3.g\_area | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的区域关系，实现位置透明 |  |
| 2 | g\_rail\_company | y\_1\_2\_0\_3.g\_rail\_company | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的分公司关系，实现位置透明 |  |
| 3 | g\_rail\_station | y\_1\_2\_0\_3.g\_rail\_station | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_3.g\_depart | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_3.g\_post | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_3.g\_employee | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_3.g\_train | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_3.g\_carriage | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_3.g\_passenger | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_3.g\_terminal | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_3.g\_include | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_3.g\_work\_on | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_3.g\_pass\_by | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_3.g\_ticket\_business | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_3.g\_belong\_to | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_3.g\_self\_service | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_3.g\_superior | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_1\_3）

|  |
| --- |
| --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的区域关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_area for y\_1\_2\_0\_3.g\_area;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的分公司关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_rail\_company for y\_1\_2\_0\_3.g\_rail\_company;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的火车站关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_rail\_station for y\_1\_2\_0\_3.g\_rail\_station;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的部门关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_depart for y\_1\_2\_0\_3.g\_depart;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的岗位关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_post for y\_1\_2\_0\_3.g\_post;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的员工关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_employee for y\_1\_2\_0\_3.g\_employee;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的列车关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_train for y\_1\_2\_0\_3.g\_train;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车厢关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_carriage for y\_1\_2\_0\_3.g\_carriage;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的乘客关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_passenger for y\_1\_2\_0\_3.g\_passenger;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_terminal for y\_1\_2\_0\_3.g\_terminal;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的包含关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_include for y\_1\_2\_0\_3.g\_include;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的从事关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_work\_on for y\_1\_2\_0\_3.g\_work\_on;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的经过关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_pass\_by for y\_1\_2\_0\_3.g\_pass\_by;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车票业务关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_ticket\_business for y\_1\_2\_0\_3.g\_ticket\_business;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的隶属关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_belong\_to for y\_1\_2\_0\_3.g\_belong\_to;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的自助操作关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_self\_service for y\_1\_2\_0\_3.g\_self\_service;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的上级关系，实现位置透明  create synonym y\_1\_3\_1\_3.g\_superior for y\_1\_2\_0\_3.g\_superior; |

#### 视图

表14.1.3‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 乘客车票订单 | order\_info | 单据 |  |
| 2 | 退票详细信息 | refund\_info | 单据 |  |
| 3 | 改签详细信息 | rebook\_info | 单据 |  |
| 4 | 余票信息 | ticketleft\_info | 单据 |  |
| 5 | 乘客信息 | passenger\_info | 报表 |  |
| 6 | 车次信息 | train\_info | 报表 |  |
| 7 | 票价信息 | price\_info | 报表 |  |
| 8 | 售票员信息 | conductor\_info | 报表 |  |

##### 视图1

表14.1.3.2‑1视图xxxx的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

执行脚本（Oracle，用户名）

|  |
| --- |
|  |

#### 函数

表14.1.3‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表14.1.3‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表14.1.3‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

* 1. **乘客业务**
     1. **站点1**
        1. **同义词**

表14.2.1‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_1.g\_area | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的区域关系，实现位置透明 |  |
| 2 | g\_branch\_company | y\_1\_2\_0\_1.g\_branch\_company | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的分公司关系，实现位置透明 |  |
| 3 | g\_station | y\_1\_2\_0\_1.g\_station | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_1.g\_depart | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_1.g\_post | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_1.g\_employee | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_1.g\_train | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_1.g\_carriage | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_1.g\_passenger | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_1.g\_terminal | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_1.g\_include | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_1.g\_work\_on | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_1.g\_pass\_by | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_1.g\_ticket\_business | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_1.g\_belong\_to | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_1.g\_self\_service | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_1.g\_superior | 指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_2\_1）

|  |
| --- |
| --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的区域关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_area for y\_1\_2\_0\_1.g\_area;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的分公司关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_branch\_company for y\_1\_2\_0\_1.g\_branch\_company;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的火车站关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_station for y\_1\_2\_0\_1.g\_station;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的部门关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_depart for y\_1\_2\_0\_1.g\_depart;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的岗位关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_post for y\_1\_2\_0\_1.g\_post;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的员工关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_employee for y\_1\_2\_0\_1.g\_employee;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的列车关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_train for y\_1\_2\_0\_1.g\_train;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的车厢关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_carriage for y\_1\_2\_0\_1.g\_carriage;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的乘客关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_passenger for y\_1\_2\_0\_1.g\_passenger;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_terminal for y\_1\_2\_0\_1.g\_terminal;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的包含关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_include for y\_1\_2\_0\_1.g\_include;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的从事关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_work\_on for y\_1\_2\_0\_1.g\_work\_on;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的经过关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_pass\_by for y\_1\_2\_0\_1.g\_pass\_by;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的车票业务关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_ticket\_business for y\_1\_2\_0\_1.g\_ticket\_business;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的隶属关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_belong\_to for y\_1\_2\_0\_1.g\_belong\_to;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的自助操作关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_self\_service for y\_1\_2\_0\_1.g\_self\_service;  --创建同义词：指向分布式数据库站点1第二类用户y\_1\_2\_0\_1的上级关系，实现位置透明  create synonym y\_1\_3\_2\_1.g\_superior for y\_1\_2\_0\_1.g\_superior; |

* + - 1. **视图**

表14.2.1‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 订单信息 | order\_mes | 单据 | 订单信息 |
| 2 | 余票信息 | surplus\_ticket\_mes | 单据 | 余票信息 |
| 3 | 乘客信息 | passenger\_mes | 报表 | 乘客信息 |
| 4 | 车次信息 | train\_num\_mes | 报表 | 车次信息 |
| 5 | 票价信息 | ticket\_price\_mes | 报表 | 票价信息 |

* + - * 1. **视图订单信息**

表14.2.1.2‑1视图order\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | y\_1\_2\_0\_1.order\_mes | order\_number |  |  |
| 2 | 车次编号 | train\_number | y\_1\_2\_0\_1.order\_mes | train\_number |  |  |
| 3 | 车号 | train\_id\_num | y\_1\_2\_0\_1.order\_mes | train\_id\_num |  |  |
| 4 | 乘客出发站 | pa\_start\_sta | y\_1\_2\_0\_1.order\_mes | pa\_start\_sta |  |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | y\_1\_2\_0\_1.order\_mes | pa\_arrive\_sta |  |  |
| 6 | 身份证号 | pa\_id | y\_1\_2\_0\_1.order\_mes | pa\_id |  |  |
| 7 | 乘客姓名 | pa\_name | y\_1\_2\_0\_1.order\_mes | pa\_name |  |  |
| 8 | 票价 | ticket\_price | y\_1\_2\_0\_1.order\_mes | ticket\_price |  |  |
| 9 | 车厢号 | carr\_num | y\_1\_2\_0\_1.order\_mes | carr\_num |  |  |
| 10 | 车座种类 | seat\_type | y\_1\_2\_0\_1.order\_mes | seat\_type |  |  |
| 11 | 座位号 | seat\_number | y\_1\_2\_0\_1.order\_mes | seat\_number |  |  |
| 12 | 订票日期 | reser\_date | y\_1\_2\_0\_1.order\_mes | reser\_date |  |  |
| 13 | 到达时间 | arri\_time | y\_1\_2\_0\_1.order\_mes | arri\_time |  |  |
| 14 | 发车时间 | str\_time | y\_1\_2\_0\_1.order\_mes | str\_time |  |  |
| 15 | 订单状态 | order\_status | y\_1\_2\_0\_1.order\_mes | order\_status |  |  |
| 16 | 出票状态 | ticket\_out\_if | y\_1\_2\_0\_1.order\_mes | ticket\_out\_if |  |  |
| 17 | 变更到站状态 | change\_sta\_if | y\_1\_2\_0\_1.order\_mes | change\_sta\_if |  |  |

执行脚本（Oracle，y\_1\_3\_2\_1）

|  |
| --- |
| -- 创建视图：视图订单信息  create view y\_1\_3\_2\_1.order\_mes(order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if  from y\_1\_2\_0\_1.order\_mes  ;  comment on table y\_1\_3\_2\_1.order\_mes is '视图订单信息';  comment on column y\_1\_3\_2\_1.order\_mes.order\_number is '订单号';  comment on column y\_1\_3\_2\_1.order\_mes.train\_number is '车次编号';  comment on column y\_1\_3\_2\_1.order\_mes.train\_id\_num is '车号';  comment on column y\_1\_3\_2\_1.order\_mes.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_3\_2\_1.order\_mes.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_3\_2\_1.order\_mes.pa\_id is '身份证号';  comment on column y\_1\_3\_2\_1.order\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_3\_2\_1.order\_mes.ticket\_price is '票价';  comment on column y\_1\_3\_2\_1.order\_mes.carr\_num is '车厢号';  comment on column y\_1\_3\_2\_1.order\_mes.seat\_type is '车座种类';  comment on column y\_1\_3\_2\_1.order\_mes.seat\_number is '座位号';  comment on column y\_1\_3\_2\_1.order\_mes.reser\_date is '订票日期';  comment on column y\_1\_3\_2\_1.order\_mes.arri\_time is '到达时间 ';  comment on column y\_1\_3\_2\_1.order\_mes.str\_time is '发车时间';  comment on column y\_1\_3\_2\_1.order\_mes.order\_status is '订单状态';  comment on column y\_1\_3\_2\_1.order\_mes.ticket\_out\_if is '出票状态';  comment on column y\_1\_3\_2\_1.order\_mes.change\_sta\_if is '变更到站状态'; |

* + - * 1. **视图余票信息**

表14.2.1.2‑2视图surplus\_ticket\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 余票编号 | surplus\_ticket\_id | y\_1\_2\_0\_1.surplus\_ticket\_mes | surplus\_ticket\_id |  |  |
| 2 | 编号 | train\_id\_num | y\_1\_2\_0\_1.surplus\_ticket\_mes | train\_id\_num |  |  |
| 3 | 车次编号 | train\_num | y\_1\_2\_0\_1.surplus\_ticket\_mes | train\_num |  |  |
| 4 | 站点名 | station\_name | y\_1\_2\_0\_1.surplus\_ticket\_mes | station\_name |  |  |
| 5 | 车厢号 | carr\_num | y\_1\_2\_0\_1.surplus\_ticket\_mes | carr\_num |  |  |
| 6 | 车厢类别 | carr\_type | y\_1\_2\_0\_1.surplus\_ticket\_mes | carr\_type |  |  |
| 7 | 座位总数 | total\_seats | y\_1\_2\_0\_1.surplus\_ticket\_mes | total\_seats |  |  |
| 8 | 当前正售座位号 | cur\_seat\_num | y\_1\_2\_0\_1.surplus\_ticket\_mes | cur\_seat\_num |  |  |
| 9 | 余票 | sur\_tick\_num | y\_1\_2\_0\_1.surplus\_ticket\_mes | sur\_tick\_num |  |  |

执行脚本（Oracle，y\_1\_3\_2\_1）

|  |
| --- |
| -- 创建视图：视图余票信息  create view y\_1\_3\_2\_1.surplus\_ticket\_mes(surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num)  as  select surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num  from y\_1\_2\_0\_1.surplus\_ticket\_mes  ;  comment on table y\_1\_3\_2\_1.surplus\_ticket\_mes is '视图余票信息';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.surplus\_ticket\_id is '余票编号';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.train\_id\_num is '编号';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.train\_num is '车次编号';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.station\_name is '站点名';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.carr\_num is '车厢号';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.carr\_type is '车厢类别';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.total\_seats is '座位总数';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.cur\_seat\_num is '当前正售座位号';  comment on column y\_1\_3\_2\_1.surplus\_ticket\_mes.sur\_tick\_num is '余票'; |

* + - * 1. **视图乘客信息**

表14.2.1.2‑3视图passenger\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 身份证号 | pa\_id | y\_1\_2\_0\_1.passenger\_mes | pa\_id |  |  |
| 2 | 乘客姓名 | pa\_name | y\_1\_2\_0\_1.passenger\_mes | pa\_name |  |  |
| 3 | 性别 | pa\_sex | y\_1\_2\_0\_1.passenger\_mes | pa\_sex |  |  |
| 4 | 手机号码 | phone\_num | y\_1\_2\_0\_1.passenger\_mes | phone\_num |  |  |
| 5 | 登录密码 | password | y\_1\_2\_0\_1.passenger\_mes | password |  |  |

执行脚本（Oracle，y\_1\_3\_2\_1）

|  |
| --- |
| -- 创建视图：视图乘客信息  create view y\_1\_3\_2\_1.passenger\_mes(pa\_id, pa\_name, pa\_sex, phone\_num, password)  as  select pa\_id, pa\_name, pa\_sex, phone\_num, password  from y\_1\_2\_0\_1.passenger\_mes  ;  comment on table y\_1\_3\_2\_1.passenger\_mes is '视图乘客信息';  comment on column y\_1\_3\_2\_1.passenger\_mes.pa\_id is '身份证号';  comment on column y\_1\_3\_2\_1.passenger\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_3\_2\_1.passenger\_mes.pa\_sex is '性别';  comment on column y\_1\_3\_2\_1.passenger\_mes.phone\_num is '手机号码';  comment on column y\_1\_3\_2\_1.passenger\_mes.password is '登录密码'; |

* + - * 1. **视图车次信息**

表14.2.1.2‑4视图train\_num\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_id\_num | y\_1\_2\_0\_1.train\_num\_mes | train\_id\_num |  |  |
| 2 | 站点名 | train\_name | y\_1\_2\_0\_1.train\_num\_mes | train\_name |  |  |
| 3 | 站点次序 | train\_sequ | y\_1\_2\_0\_1.train\_num\_mes | train\_sequ |  |  |
| 4 | 车次编号 | train\_num | y\_1\_2\_0\_1.train\_num\_mes | train\_num |  |  |
| 5 | 车厢数 | carr\_sum | y\_1\_2\_0\_1.train\_num\_mes | carr\_sum |  |  |
| 6 | 发车时间 | depart\_time | y\_1\_2\_0\_1.train\_num\_mes | depart\_time |  |  |
| 7 | 到达时间 | arri\_time | y\_1\_2\_0\_1.train\_num\_mes | arri\_time |  |  |
| 8 | 车次始发站 | depart\_stat | y\_1\_2\_0\_1.train\_num\_mes | depart\_stat |  |  |
| 9 | 车次终点站 | arri\_stat | y\_1\_2\_0\_1.train\_num\_mes | arri\_stat |  |  |
| 10 | 经过站点数 | pass\_stat\_sum | y\_1\_2\_0\_1.train\_num\_mes | pass\_stat\_sum |  |  |
| 11 | 票价比率 | price\_ratio | y\_1\_2\_0\_1.train\_num\_mes | price\_ratio |  |  |

执行脚本（Oracle，y\_1\_3\_2\_1）

|  |
| --- |
| -- 创建视图：视图车次信息  create view y\_1\_3\_2\_1.train\_num\_mes(train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio)  as  select train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio  from y\_1\_2\_0\_1.train\_num\_mes  ;  comment on table y\_1\_3\_2\_1.train\_num\_mes is '视图车次信息';  comment on column y\_1\_3\_2\_1.train\_num\_mes.train\_id\_num is '编号';  comment on column y\_1\_3\_2\_1.train\_num\_mes.train\_name is '站点名';  comment on column y\_1\_3\_2\_1.train\_num\_mes.train\_sequ is '站点次序';  comment on column y\_1\_3\_2\_1.train\_num\_mes.train\_num is '车次编号';  comment on column y\_1\_3\_2\_1.train\_num\_mes.carr\_sum is '车厢数';  comment on column y\_1\_3\_2\_1.train\_num\_mes.depart\_time is '发车时间';  comment on column y\_1\_3\_2\_1.train\_num\_mes.arri\_time is '到达时间';  comment on column y\_1\_3\_2\_1.train\_num\_mes.depart\_stat is '车次始发站';  comment on column y\_1\_3\_2\_1.train\_num\_mes.arri\_stat is '车次终点站';  comment on column y\_1\_3\_2\_1.train\_num\_mes.pass\_stat\_sum is '经过站点数';  comment on column y\_1\_3\_2\_1.train\_num\_mes.price\_ratio is '票价比率'; |

* + - * 1. **视图票价信息**

表14.2.1.2‑5视图ticket\_price\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 票价编号 | ticket\_id | y\_1\_2\_0\_1.ticket\_price\_mes | ticket\_id |  |  |
| 2 | 站点名 | stat\_name | y\_1\_2\_0\_1.ticket\_price\_mes | stat\_name |  |  |
| 3 | 车厢类别 | carr\_type | y\_1\_2\_0\_1.ticket\_price\_mes | carr\_type |  |  |
| 4 | 铺位类别 | seat\_type | y\_1\_2\_0\_1.ticket\_price\_mes | seat\_type |  |  |
| 5 | 站点区间基础票价 | basic\_price | y\_1\_2\_0\_1.ticket\_price\_mes | basic\_price |  |  |
| 6 | 票价上浮比率 | price\_ratio | y\_1\_2\_0\_1.ticket\_price\_mes | price\_ratio |  |  |
| 7 | 站点区间总票价 | ticket\_price | y\_1\_2\_0\_1.ticket\_price\_mes | ticket\_price |  |  |
| 8 | 车次号 | train\_id\_num | y\_1\_2\_0\_1.ticket\_price\_mes | train\_id\_num |  |  |
| 9 | 站点序号 | stat\_sequ | y\_1\_2\_0\_1.ticket\_price\_mes | stat\_sequ |  |  |

执行脚本（Oracle，y\_1\_3\_2\_1）

|  |
| --- |
| -- 创建视图：视图票价信息  create view y\_1\_3\_2\_1.ticket\_price\_mes(ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ)  as  select ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ  from y\_1\_2\_0\_1.ticket\_price\_mes  ;  comment on table y\_1\_3\_2\_1.ticket\_price\_mes is '视图票价信息';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.ticket\_id is '票价编号';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.stat\_name is '站点名';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.carr\_type is '车厢类别';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.seat\_type is '铺位类别';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.basic\_price is '站点区间基础票价';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.price\_ratio is '票价上浮比率';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.ticket\_price is '站点区间总票价';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.train\_id\_num is '车次号';  comment on column y\_1\_3\_2\_1.ticket\_price\_mes.stat\_sequ is '站点序号'; |

* + - 1. **函数**

表14.2.1‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

* + - * 1. **函数1**

函数代码

|  |
| --- |
|  |

* + - 1. **过程**

表14.2.1‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

* + - * 1. **过程中文名**

过程代码

|  |
| --- |
|  |

* + - 1. **触发器**

表14.2.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

* + - * 1. **触发器1**

触发器代码

|  |
| --- |
|  |

* + 1. **站点2**
       1. **同义词**

表14.2.2‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_2.g\_area | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的区域关系，实现位置透明 |  |
| 2 | g\_branch\_company | y\_1\_2\_0\_2.g\_branch\_company | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的分公司关系，实现位置透明 |  |
| 3 | g\_station | y\_1\_2\_0\_2.g\_station | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_2.g\_depart | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_2.g\_post | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_2.g\_employee | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_2.g\_train | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_2.g\_carriage | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_2.g\_passenger | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_2.g\_terminal | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_2.g\_include | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_2.g\_work\_on | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_2.g\_pass\_by | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_2.g\_ticket\_business | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_2.g\_belong\_to | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_2.g\_self\_service | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_2.g\_superior | 指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_2\_2）

|  |
| --- |
| --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的区域关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_area for y\_1\_2\_0\_2.g\_area;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的分公司关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_branch\_company for y\_1\_2\_0\_2.g\_branch\_company;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的火车站关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_station for y\_1\_2\_0\_2.g\_station;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的部门关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_depart for y\_1\_2\_0\_2.g\_depart;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的岗位关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_post for y\_1\_2\_0\_2.g\_post;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的员工关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_employee for y\_1\_2\_0\_2.g\_employee;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的列车关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_train for y\_1\_2\_0\_2.g\_train;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的车厢关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_carriage for y\_1\_2\_0\_2.g\_carriage;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的乘客关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_passenger for y\_1\_2\_0\_2.g\_passenger;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_terminal for y\_1\_2\_0\_2.g\_terminal;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的包含关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_include for y\_1\_2\_0\_2.g\_include;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的从事关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_work\_on for y\_1\_2\_0\_2.g\_work\_on;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的经过关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_pass\_by for y\_1\_2\_0\_2.g\_pass\_by;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的车票业务关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_ticket\_business for y\_1\_2\_0\_2.g\_ticket\_business;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的隶属关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_belong\_to for y\_1\_2\_0\_2.g\_belong\_to;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的自助操作关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_self\_service for y\_1\_2\_0\_2.g\_self\_service;  --创建同义词：指向分布式数据库站点2第二类用户y\_1\_2\_0\_2的上级关系，实现位置透明  create synonym y\_1\_3\_2\_2.g\_superior for y\_1\_2\_0\_2.g\_superior; |

* + - 1. **视图**

表14.2.2‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 订单信息 | order\_mes | 单据 | 订单信息 |
| 2 | 余票信息 | surplus\_ticket\_mes | 单据 | 余票信息 |
| 3 | 乘客信息 | passenger\_mes | 报表 | 乘客信息 |
| 4 | 车次信息 | train\_num\_mes | 报表 | 车次信息 |
| 5 | 票价信息 | ticket\_price\_mes | 报表 | 票价信息 |

* + - * 1. **视图订单信息**

表14.2.2.2‑1视图order\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | y\_1\_2\_0\_2.order\_mes | order\_number |  |  |
| 2 | 车次编号 | train\_number | y\_1\_2\_0\_2.order\_mes | train\_number |  |  |
| 3 | 车号 | train\_id\_num | y\_1\_2\_0\_2.order\_mes | train\_id\_num |  |  |
| 4 | 乘客出发站 | pa\_start\_sta | y\_1\_2\_0\_2.order\_mes | pa\_start\_sta |  |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | y\_1\_2\_0\_2.order\_mes | pa\_arrive\_sta |  |  |
| 6 | 身份证号 | pa\_id | y\_1\_2\_0\_2.order\_mes | pa\_id |  |  |
| 7 | 乘客姓名 | pa\_name | y\_1\_2\_0\_2.order\_mes | pa\_name |  |  |
| 8 | 票价 | ticket\_price | y\_1\_2\_0\_2.order\_mes | ticket\_price |  |  |
| 9 | 车厢号 | carr\_num | y\_1\_2\_0\_2.order\_mes | carr\_num |  |  |
| 10 | 车座种类 | seat\_type | y\_1\_2\_0\_2.order\_mes | seat\_type |  |  |
| 11 | 座位号 | seat\_number | y\_1\_2\_0\_2.order\_mes | seat\_number |  |  |
| 12 | 订票日期 | reser\_date | y\_1\_2\_0\_2.order\_mes | reser\_date |  |  |
| 13 | 到达时间 | arri\_time | y\_1\_2\_0\_2.order\_mes | arri\_time |  |  |
| 14 | 发车时间 | str\_time | y\_1\_2\_0\_2.order\_mes | str\_time |  |  |
| 15 | 订单状态 | order\_status | y\_1\_2\_0\_2.order\_mes | order\_status |  |  |
| 16 | 出票状态 | ticket\_out\_if | y\_1\_2\_0\_2.order\_mes | ticket\_out\_if |  |  |
| 17 | 变更到站状态 | change\_sta\_if | y\_1\_2\_0\_2.order\_mes | change\_sta\_if |  |  |

执行脚本（Oracle，y\_1\_3\_2\_2）

|  |
| --- |
| -- 创建视图：视图订单信息  create view y\_1\_3\_2\_2.order\_mes(order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if  from y\_1\_2\_0\_2.order\_mes  ;  comment on table y\_1\_3\_2\_2.order\_mes is '视图订单信息';  comment on column y\_1\_3\_2\_2.order\_mes.order\_number is '订单号';  comment on column y\_1\_3\_2\_2.order\_mes.train\_number is '车次编号';  comment on column y\_1\_3\_2\_2.order\_mes.train\_id\_num is '车号';  comment on column y\_1\_3\_2\_2.order\_mes.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_3\_2\_2.order\_mes.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_3\_2\_2.order\_mes.pa\_id is '身份证号';  comment on column y\_1\_3\_2\_2.order\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_3\_2\_2.order\_mes.ticket\_price is '票价';  comment on column y\_1\_3\_2\_2.order\_mes.carr\_num is '车厢号';  comment on column y\_1\_3\_2\_2.order\_mes.seat\_type is '车座种类';  comment on column y\_1\_3\_2\_2.order\_mes.seat\_number is '座位号';  comment on column y\_1\_3\_2\_2.order\_mes.reser\_date is '订票日期';  comment on column y\_1\_3\_2\_2.order\_mes.arri\_time is '到达时间 ';  comment on column y\_1\_3\_2\_2.order\_mes.str\_time is '发车时间';  comment on column y\_1\_3\_2\_2.order\_mes.order\_status is '订单状态';  comment on column y\_1\_3\_2\_2.order\_mes.ticket\_out\_if is '出票状态';  comment on column y\_1\_3\_2\_2.order\_mes.change\_sta\_if is '变更到站状态'; |

* + - * 1. **视图余票信息**

表14.2.2.2‑2视图surplus\_ticket\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 余票编号 | surplus\_ticket\_id | y\_1\_2\_0\_2.surplus\_ticket\_mes | surplus\_ticket\_id |  |  |
| 2 | 编号 | train\_id\_num | y\_1\_2\_0\_2.surplus\_ticket\_mes | train\_id\_num |  |  |
| 3 | 车次编号 | train\_num | y\_1\_2\_0\_2.surplus\_ticket\_mes | train\_num |  |  |
| 4 | 站点名 | station\_name | y\_1\_2\_0\_2.surplus\_ticket\_mes | station\_name |  |  |
| 5 | 车厢号 | carr\_num | y\_1\_2\_0\_2.surplus\_ticket\_mes | carr\_num |  |  |
| 6 | 车厢类别 | carr\_type | y\_1\_2\_0\_2.surplus\_ticket\_mes | carr\_type |  |  |
| 7 | 座位总数 | total\_seats | y\_1\_2\_0\_2.surplus\_ticket\_mes | total\_seats |  |  |
| 8 | 当前正售座位号 | cur\_seat\_num | y\_1\_2\_0\_2.surplus\_ticket\_mes | cur\_seat\_num |  |  |
| 9 | 余票 | sur\_tick\_num | y\_1\_2\_0\_2.surplus\_ticket\_mes | sur\_tick\_num |  |  |

执行脚本（Oracle，y\_1\_3\_2\_2）

|  |
| --- |
| -- 创建视图：视图余票信息  create view y\_1\_3\_2\_2.surplus\_ticket\_mes(surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num)  as  select surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num  from y\_1\_2\_0\_2.surplus\_ticket\_mes  ;  comment on table y\_1\_3\_2\_2.surplus\_ticket\_mes is '视图余票信息';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.surplus\_ticket\_id is '余票编号';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.train\_id\_num is '编号';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.train\_num is '车次编号';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.station\_name is '站点名';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.carr\_num is '车厢号';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.carr\_type is '车厢类别';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.total\_seats is '座位总数';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.cur\_seat\_num is '当前正售座位号';  comment on column y\_1\_3\_2\_2.surplus\_ticket\_mes.sur\_tick\_num is '余票'; |

* + - * 1. **视图乘客信息**

表14.2.2.2‑3视图passenger\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 身份证号 | pa\_id | y\_1\_2\_0\_2.passenger\_mes | pa\_id |  |  |
| 2 | 乘客姓名 | pa\_name | y\_1\_2\_0\_2.passenger\_mes | pa\_name |  |  |
| 3 | 性别 | pa\_sex | y\_1\_2\_0\_2.passenger\_mes | pa\_sex |  |  |
| 4 | 手机号码 | phone\_num | y\_1\_2\_0\_2.passenger\_mes | phone\_num |  |  |
| 5 | 登录密码 | password | y\_1\_2\_0\_2.passenger\_mes | password |  |  |

执行脚本（Oracle，y\_1\_3\_2\_2）

|  |
| --- |
| -- 创建视图：视图乘客信息  create view y\_1\_3\_2\_2.passenger\_mes(pa\_id, pa\_name, pa\_sex, phone\_num, password)  as  select pa\_id, pa\_name, pa\_sex, phone\_num, password  from y\_1\_2\_0\_2.passenger\_mes  ;  comment on table y\_1\_3\_2\_2.passenger\_mes is '视图乘客信息';  comment on column y\_1\_3\_2\_2.passenger\_mes.pa\_id is '身份证号';  comment on column y\_1\_3\_2\_2.passenger\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_3\_2\_2.passenger\_mes.pa\_sex is '性别';  comment on column y\_1\_3\_2\_2.passenger\_mes.phone\_num is '手机号码';  comment on column y\_1\_3\_2\_2.passenger\_mes.password is '登录密码'; |

* + - * 1. **视图车次信息**

表14.2.2.2‑4视图train\_num\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_id\_num | y\_1\_2\_0\_2.train\_num\_mes | train\_id\_num |  |  |
| 2 | 站点名 | train\_name | y\_1\_2\_0\_2.train\_num\_mes | train\_name |  |  |
| 3 | 站点次序 | train\_sequ | y\_1\_2\_0\_2.train\_num\_mes | train\_sequ |  |  |
| 4 | 车次编号 | train\_num | y\_1\_2\_0\_2.train\_num\_mes | train\_num |  |  |
| 5 | 车厢数 | carr\_sum | y\_1\_2\_0\_2.train\_num\_mes | carr\_sum |  |  |
| 6 | 发车时间 | depart\_time | y\_1\_2\_0\_2.train\_num\_mes | depart\_time |  |  |
| 7 | 到达时间 | arri\_time | y\_1\_2\_0\_2.train\_num\_mes | arri\_time |  |  |
| 8 | 车次始发站 | depart\_stat | y\_1\_2\_0\_2.train\_num\_mes | depart\_stat |  |  |
| 9 | 车次终点站 | arri\_stat | y\_1\_2\_0\_2.train\_num\_mes | arri\_stat |  |  |
| 10 | 经过站点数 | pass\_stat\_sum | y\_1\_2\_0\_2.train\_num\_mes | pass\_stat\_sum |  |  |
| 11 | 票价比率 | price\_ratio | y\_1\_2\_0\_2.train\_num\_mes | price\_ratio |  |  |

执行脚本（Oracle，y\_1\_3\_2\_2）

|  |
| --- |
| -- 创建视图：视图车次信息  create view y\_1\_3\_2\_2.train\_num\_mes(train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio)  as  select train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio  from y\_1\_2\_0\_2.train\_num\_mes  ;  comment on table y\_1\_3\_2\_2.train\_num\_mes is '视图车次信息';  comment on column y\_1\_3\_2\_2.train\_num\_mes.train\_id\_num is '编号';  comment on column y\_1\_3\_2\_2.train\_num\_mes.train\_name is '站点名';  comment on column y\_1\_3\_2\_2.train\_num\_mes.train\_sequ is '站点次序';  comment on column y\_1\_3\_2\_2.train\_num\_mes.train\_num is '车次编号';  comment on column y\_1\_3\_2\_2.train\_num\_mes.carr\_sum is '车厢数';  comment on column y\_1\_3\_2\_2.train\_num\_mes.depart\_time is '发车时间';  comment on column y\_1\_3\_2\_2.train\_num\_mes.arri\_time is '到达时间';  comment on column y\_1\_3\_2\_2.train\_num\_mes.depart\_stat is '车次始发站';  comment on column y\_1\_3\_2\_2.train\_num\_mes.arri\_stat is '车次终点站';  comment on column y\_1\_3\_2\_2.train\_num\_mes.pass\_stat\_sum is '经过站点数';  comment on column y\_1\_3\_2\_2.train\_num\_mes.price\_ratio is '票价比率'; |

* + - * 1. **视图票价信息**

表14.2.2.2‑5视图ticket\_price\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 票价编号 | ticket\_id | y\_1\_2\_0\_2.ticket\_price\_mes | ticket\_id |  |  |
| 2 | 站点名 | stat\_name | y\_1\_2\_0\_2.ticket\_price\_mes | stat\_name |  |  |
| 3 | 车厢类别 | carr\_type | y\_1\_2\_0\_2.ticket\_price\_mes | carr\_type |  |  |
| 4 | 铺位类别 | seat\_type | y\_1\_2\_0\_2.ticket\_price\_mes | seat\_type |  |  |
| 5 | 站点区间基础票价 | basic\_price | y\_1\_2\_0\_2.ticket\_price\_mes | basic\_price |  |  |
| 6 | 票价上浮比率 | price\_ratio | y\_1\_2\_0\_2.ticket\_price\_mes | price\_ratio |  |  |
| 7 | 站点区间总票价 | ticket\_price | y\_1\_2\_0\_2.ticket\_price\_mes | ticket\_price |  |  |
| 8 | 车次号 | train\_id\_num | y\_1\_2\_0\_2.ticket\_price\_mes | train\_id\_num |  |  |
| 9 | 站点序号 | stat\_sequ | y\_1\_2\_0\_2.ticket\_price\_mes | stat\_sequ |  |  |

执行脚本（Oracle，y\_1\_3\_2\_2）

|  |
| --- |
| -- 创建视图：视图票价信息  create view y\_1\_3\_2\_2.ticket\_price\_mes(ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ)  as  select ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ  from y\_1\_2\_0\_2.ticket\_price\_mes  ;  comment on table y\_1\_3\_2\_2.ticket\_price\_mes is '视图票价信息';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.ticket\_id is '票价编号';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.stat\_name is '站点名';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.carr\_type is '车厢类别';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.seat\_type is '铺位类别';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.basic\_price is '站点区间基础票价';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.price\_ratio is '票价上浮比率';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.ticket\_price is '站点区间总票价';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.train\_id\_num is '车次号';  comment on column y\_1\_3\_2\_2.ticket\_price\_mes.stat\_sequ is '站点序号'; |

* + - 1. **函数**

表14.2.2‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

* + - * 1. **函数1**

函数代码

|  |
| --- |
|  |

* + - 1. **过程**

表14.2.2‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

* + - * 1. **过程中文名**

过程代码

|  |
| --- |
|  |

* + - 1. **触发器**

表14.2.2‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

* + - * 1. **触发器1**

触发器代码

|  |
| --- |
|  |

* + 1. **站点3**
       1. **同义词**

表14.2.3‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_3.g\_area | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的区域关系，实现位置透明 |  |
| 2 | g\_branch\_company | y\_1\_2\_0\_3.g\_branch\_company | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的分公司关系，实现位置透明 |  |
| 3 | g\_station | y\_1\_2\_0\_3.g\_station | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_3.g\_depart | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_3.g\_post | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_3.g\_employee | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_3.g\_train | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_3.g\_carriage | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_3.g\_passenger | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_3.g\_terminal | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_3.g\_include | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_3.g\_work\_on | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_3.g\_pass\_by | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_3.g\_ticket\_business | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_3.g\_belong\_to | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_3.g\_self\_service | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_3.g\_superior | 指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_2\_3）

|  |
| --- |
| --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的区域关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_area for y\_1\_2\_0\_3.g\_area;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的分公司关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_branch\_company for y\_1\_2\_0\_3.g\_branch\_company;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的火车站关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_station for y\_1\_2\_0\_3.g\_station;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的部门关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_depart for y\_1\_2\_0\_3.g\_depart;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的岗位关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_post for y\_1\_2\_0\_3.g\_post;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的员工关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_employee for y\_1\_2\_0\_3.g\_employee;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的列车关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_train for y\_1\_2\_0\_3.g\_train;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的车厢关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_carriage for y\_1\_2\_0\_3.g\_carriage;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的乘客关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_passenger for y\_1\_2\_0\_3.g\_passenger;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_terminal for y\_1\_2\_0\_3.g\_terminal;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的包含关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_include for y\_1\_2\_0\_3.g\_include;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的从事关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_work\_on for y\_1\_2\_0\_3.g\_work\_on;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的经过关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_pass\_by for y\_1\_2\_0\_3.g\_pass\_by;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的车票业务关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_ticket\_business for y\_1\_2\_0\_3.g\_ticket\_business;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的隶属关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_belong\_to for y\_1\_2\_0\_3.g\_belong\_to;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的自助操作关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_self\_service for y\_1\_2\_0\_3.g\_self\_service;  --创建同义词：指向分布式数据库站点3第二类用户y\_1\_2\_0\_3的上级关系，实现位置透明  create synonym y\_1\_3\_2\_3.g\_superior for y\_1\_2\_0\_3.g\_superior; |

* + - 1. **视图**

表14.2.3‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 订单信息 | order\_mes | 单据 | 订单信息 |
| 2 | 余票信息 | surplus\_ticket\_mes | 单据 | 余票信息 |
| 3 | 乘客信息 | passenger\_mes | 报表 | 乘客信息 |
| 4 | 车次信息 | train\_num\_mes | 报表 | 车次信息 |
| 5 | 票价信息 | ticket\_price\_mes | 报表 | 票价信息 |

* + - * 1. **视图订单信息**

表14.2.3.2‑1视图order\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 订单号 | order\_number | y\_1\_2\_0\_3.order\_mes | order\_number |  |  |
| 2 | 车次编号 | train\_number | y\_1\_2\_0\_3.order\_mes | train\_number |  |  |
| 3 | 车号 | train\_id\_num | y\_1\_2\_0\_3.order\_mes | train\_id\_num |  |  |
| 4 | 乘客出发站 | pa\_start\_sta | y\_1\_2\_0\_3.order\_mes | pa\_start\_sta |  |  |
| 5 | 乘客到达站 | pa\_arrive\_sta | y\_1\_2\_0\_3.order\_mes | pa\_arrive\_sta |  |  |
| 6 | 身份证号 | pa\_id | y\_1\_2\_0\_3.order\_mes | pa\_id |  |  |
| 7 | 乘客姓名 | pa\_name | y\_1\_2\_0\_3.order\_mes | pa\_name |  |  |
| 8 | 票价 | ticket\_price | y\_1\_2\_0\_3.order\_mes | ticket\_price |  |  |
| 9 | 车厢号 | carr\_num | y\_1\_2\_0\_3.order\_mes | carr\_num |  |  |
| 10 | 车座种类 | seat\_type | y\_1\_2\_0\_3.order\_mes | seat\_type |  |  |
| 11 | 座位号 | seat\_number | y\_1\_2\_0\_3.order\_mes | seat\_number |  |  |
| 12 | 订票日期 | reser\_date | y\_1\_2\_0\_3.order\_mes | reser\_date |  |  |
| 13 | 到达时间 | arri\_time | y\_1\_2\_0\_3.order\_mes | arri\_time |  |  |
| 14 | 发车时间 | str\_time | y\_1\_2\_0\_3.order\_mes | str\_time |  |  |
| 15 | 订单状态 | order\_status | y\_1\_2\_0\_3.order\_mes | order\_status |  |  |
| 16 | 出票状态 | ticket\_out\_if | y\_1\_2\_0\_3.order\_mes | ticket\_out\_if |  |  |
| 17 | 变更到站状态 | change\_sta\_if | y\_1\_2\_0\_3.order\_mes | change\_sta\_if |  |  |

执行脚本（Oracle，y\_1\_3\_2\_3）

|  |
| --- |
| -- 创建视图：视图订单信息  create view y\_1\_3\_2\_3.order\_mes(order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if)  as  select order\_number, train\_number, train\_id\_num, pa\_start\_sta, pa\_arrive\_sta, pa\_id, pa\_name, ticket\_price, carr\_num, seat\_type, seat\_number, reser\_date, arri\_time, str\_time, order\_status, ticket\_out\_if, change\_sta\_if  from y\_1\_2\_0\_3.order\_mes  ;  comment on table y\_1\_3\_2\_3.order\_mes is '视图订单信息';  comment on column y\_1\_3\_2\_3.order\_mes.order\_number is '订单号';  comment on column y\_1\_3\_2\_3.order\_mes.train\_number is '车次编号';  comment on column y\_1\_3\_2\_3.order\_mes.train\_id\_num is '车号';  comment on column y\_1\_3\_2\_3.order\_mes.pa\_start\_sta is '乘客出发站';  comment on column y\_1\_3\_2\_3.order\_mes.pa\_arrive\_sta is '乘客到达站';  comment on column y\_1\_3\_2\_3.order\_mes.pa\_id is '身份证号';  comment on column y\_1\_3\_2\_3.order\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_3\_2\_3.order\_mes.ticket\_price is '票价';  comment on column y\_1\_3\_2\_3.order\_mes.carr\_num is '车厢号';  comment on column y\_1\_3\_2\_3.order\_mes.seat\_type is '车座种类';  comment on column y\_1\_3\_2\_3.order\_mes.seat\_number is '座位号';  comment on column y\_1\_3\_2\_3.order\_mes.reser\_date is '订票日期';  comment on column y\_1\_3\_2\_3.order\_mes.arri\_time is '到达时间 ';  comment on column y\_1\_3\_2\_3.order\_mes.str\_time is '发车时间';  comment on column y\_1\_3\_2\_3.order\_mes.order\_status is '订单状态';  comment on column y\_1\_3\_2\_3.order\_mes.ticket\_out\_if is '出票状态';  comment on column y\_1\_3\_2\_3.order\_mes.change\_sta\_if is '变更到站状态'; |

* + - * 1. **视图余票信息**

表14.2.3.2‑2视图surplus\_ticket\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 余票编号 | surplus\_ticket\_id | y\_1\_2\_0\_3.surplus\_ticket\_mes | surplus\_ticket\_id |  |  |
| 2 | 编号 | train\_id\_num | y\_1\_2\_0\_3.surplus\_ticket\_mes | train\_id\_num |  |  |
| 3 | 车次编号 | train\_num | y\_1\_2\_0\_3.surplus\_ticket\_mes | train\_num |  |  |
| 4 | 站点名 | station\_name | y\_1\_2\_0\_3.surplus\_ticket\_mes | station\_name |  |  |
| 5 | 车厢号 | carr\_num | y\_1\_2\_0\_3.surplus\_ticket\_mes | carr\_num |  |  |
| 6 | 车厢类别 | carr\_type | y\_1\_2\_0\_3.surplus\_ticket\_mes | carr\_type |  |  |
| 7 | 座位总数 | total\_seats | y\_1\_2\_0\_3.surplus\_ticket\_mes | total\_seats |  |  |
| 8 | 当前正售座位号 | cur\_seat\_num | y\_1\_2\_0\_3.surplus\_ticket\_mes | cur\_seat\_num |  |  |
| 9 | 余票 | sur\_tick\_num | y\_1\_2\_0\_3.surplus\_ticket\_mes | sur\_tick\_num |  |  |

执行脚本（Oracle，y\_1\_3\_2\_3）

|  |
| --- |
| -- 创建视图：视图余票信息  create view y\_1\_3\_2\_3.surplus\_ticket\_mes(surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num)  as  select surplus\_ticket\_id, train\_id\_num, train\_num, station\_name, carr\_num, carr\_type, total\_seats, cur\_seat\_num, sur\_tick\_num  from y\_1\_2\_0\_3.surplus\_ticket\_mes  ;  comment on table y\_1\_3\_2\_3.surplus\_ticket\_mes is '视图余票信息';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.surplus\_ticket\_id is '余票编号';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.train\_id\_num is '编号';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.train\_num is '车次编号';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.station\_name is '站点名';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.carr\_num is '车厢号';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.carr\_type is '车厢类别';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.total\_seats is '座位总数';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.cur\_seat\_num is '当前正售座位号';  comment on column y\_1\_3\_2\_3.surplus\_ticket\_mes.sur\_tick\_num is '余票'; |

* + - * 1. **视图乘客信息**

表14.2.3.2‑3视图passenger\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 身份证号 | pa\_id | y\_1\_2\_0\_3.passenger\_mes | pa\_id |  |  |
| 2 | 乘客姓名 | pa\_name | y\_1\_2\_0\_3.passenger\_mes | pa\_name |  |  |
| 3 | 性别 | pa\_sex | y\_1\_2\_0\_3.passenger\_mes | pa\_sex |  | 1-男，2-女. ‘-’为半角符号。 |
| 4 | 手机号码 | phone\_num | y\_1\_2\_0\_3.passenger\_mes | phone\_num |  |  |
| 5 | 登录密码 | password | y\_1\_2\_0\_3.passenger\_mes | password |  | 不能少于6位字符；  必须且只能包含字母，数字，下划线中的两种或两种以上。 |

执行脚本（Oracle，y\_1\_3\_2\_3）

|  |
| --- |
| -- 创建视图：视图乘客信息  create view y\_1\_3\_2\_3.passenger\_mes(pa\_id, pa\_name, pa\_sex, phone\_num, password)  as  select pa\_id, pa\_name, pa\_sex, phone\_num, password  from y\_1\_2\_0\_3.passenger\_mes  ;  comment on table y\_1\_3\_2\_3.passenger\_mes is '视图乘客信息';  comment on column y\_1\_3\_2\_3.passenger\_mes.pa\_id is '身份证号';  comment on column y\_1\_3\_2\_3.passenger\_mes.pa\_name is '乘客姓名';  comment on column y\_1\_3\_2\_3.passenger\_mes.pa\_sex is '性别';  comment on column y\_1\_3\_2\_3.passenger\_mes.phone\_num is '手机号码';  comment on column y\_1\_3\_2\_3.passenger\_mes.password is '登录密码'; |

* + - * 1. **视图车次信息**

表14.2.3.2‑4视图train\_num\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_id\_num | y\_1\_2\_0\_3.train\_num\_mes | train\_id\_num |  |  |
| 2 | 站点名 | train\_name | y\_1\_2\_0\_3.train\_num\_mes | train\_name |  |  |
| 3 | 站点次序 | train\_sequ | y\_1\_2\_0\_3.train\_num\_mes | train\_sequ |  |  |
| 4 | 车次编号 | train\_num | y\_1\_2\_0\_3.train\_num\_mes | train\_num |  |  |
| 5 | 车厢数 | carr\_sum | y\_1\_2\_0\_3.train\_num\_mes | carr\_sum |  |  |
| 6 | 发车时间 | depart\_time | y\_1\_2\_0\_3.train\_num\_mes | depart\_time |  |  |
| 7 | 到达时间 | arri\_time | y\_1\_2\_0\_3.train\_num\_mes | arri\_time |  |  |
| 8 | 车次始发站 | depart\_stat | y\_1\_2\_0\_3.train\_num\_mes | depart\_stat |  |  |
| 9 | 车次终点站 | arri\_stat | y\_1\_2\_0\_3.train\_num\_mes | arri\_stat |  |  |
| 10 | 经过站点数 | pass\_stat\_sum | y\_1\_2\_0\_3.train\_num\_mes | pass\_stat\_sum |  |  |
| 11 | 票价比率 | price\_ratio | y\_1\_2\_0\_3.train\_num\_mes | price\_ratio |  |  |

执行脚本（Oracle，y\_1\_3\_2\_3）

|  |
| --- |
| -- 创建视图：视图车次信息  create view y\_1\_3\_2\_3.train\_num\_mes(train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio)  as  select train\_id\_num, train\_name, train\_sequ, train\_num, carr\_sum, depart\_time, arri\_time, depart\_stat, arri\_stat, pass\_stat\_sum, price\_ratio  from y\_1\_2\_0\_3.train\_num\_mes  ;  comment on table y\_1\_3\_2\_3.train\_num\_mes is '视图车次信息';  comment on column y\_1\_3\_2\_3.train\_num\_mes.train\_id\_num is '编号';  comment on column y\_1\_3\_2\_3.train\_num\_mes.train\_name is '站点名';  comment on column y\_1\_3\_2\_3.train\_num\_mes.train\_sequ is '站点次序';  comment on column y\_1\_3\_2\_3.train\_num\_mes.train\_num is '车次编号';  comment on column y\_1\_3\_2\_3.train\_num\_mes.carr\_sum is '车厢数';  comment on column y\_1\_3\_2\_3.train\_num\_mes.depart\_time is '发车时间';  comment on column y\_1\_3\_2\_3.train\_num\_mes.arri\_time is '到达时间';  comment on column y\_1\_3\_2\_3.train\_num\_mes.depart\_stat is '车次始发站';  comment on column y\_1\_3\_2\_3.train\_num\_mes.arri\_stat is '车次终点站';  comment on column y\_1\_3\_2\_3.train\_num\_mes.pass\_stat\_sum is '经过站点数';  comment on column y\_1\_3\_2\_3.train\_num\_mes.price\_ratio is '票价比率'; |

* + - * 1. **视图票价信息**

表14.2.3.2‑5视图ticket\_price\_mes的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 票价编号 | ticket\_id | y\_1\_2\_0\_3. ticket\_price\_mes | ticket\_id |  |  |
| 2 | 站点名 | stat\_name | y\_1\_2\_0\_3. ticket\_price\_mes | stat\_name |  |  |
| 3 | 车厢类别 | carr\_type | y\_1\_2\_0\_3. ticket\_price\_mes | carr\_type |  |  |
| 4 | 铺位类别 | seat\_type | y\_1\_2\_0\_3. ticket\_price\_mes | seat\_type |  |  |
| 5 | 站点区间基础票价 | basic\_price | y\_1\_2\_0\_3. ticket\_price\_mes | basic\_price |  |  |
| 6 | 票价上浮比率 | price\_ratio | y\_1\_2\_0\_3. ticket\_price\_mes | price\_ratio |  |  |
| 7 | 站点区间总票价 | ticket\_price | y\_1\_2\_0\_3. ticket\_price\_mes | ticket\_price |  |  |
| 8 | 车次号 | train\_id\_num | y\_1\_2\_0\_3. ticket\_price\_mes | train\_id\_num |  |  |
| 9 | 站点序号 | stat\_sequ | y\_1\_2\_0\_3. ticket\_price\_mes | stat\_sequ |  |  |

执行脚本（Oracle，y\_1\_3\_2\_3）

|  |
| --- |
| -- 创建视图：视图票价信息  create view y\_1\_3\_2\_3.ticket\_price\_mes(ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ)  as  select ticket\_id, stat\_name, carr\_type, seat\_type, basic\_price, price\_ratio, ticket\_price, train\_id\_num, stat\_sequ  from y\_1\_2\_0\_3. ticket\_price\_mes  ;  comment on table y\_1\_3\_2\_3.ticket\_price\_mes is '视图票价信息';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.ticket\_id is '票价编号';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.stat\_name is '站点名';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.carr\_type is '车厢类别';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.seat\_type is '铺位类别';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.basic\_price is '站点区间基础票价';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.price\_ratio is '票价上浮比率';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.ticket\_price is '站点区间总票价';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.train\_id\_num is '车次号';  comment on column y\_1\_3\_2\_3.ticket\_price\_mes.stat\_sequ is '站点序号'; |

* + - 1. **函数**

表14.2.3‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

* + - * 1. **函数1**

函数代码

|  |
| --- |
|  |

* + - 1. **过程**

表14.2.3‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

* + - * 1. **过程中文名**

过程代码

|  |
| --- |
|  |

* + - 1. **触发器**

表14.2.3‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

* + - * 1. **触发器1**

触发器代码

|  |
| --- |
|  |

## 管理员业务

### 站点1

#### 同义词

表14.3.1‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_1.g\_area | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的区域关系，实现位置透明 |  |
| 2 | g\_branch\_company | y\_1\_2\_0\_1.g\_branch\_company | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的分公司关系，实现位置透明 |  |
| 3 | g\_station | y\_1\_2\_0\_1.g\_station | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_1.g\_depart | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_1.g\_post | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_1.g\_employee | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_1.g\_train | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_1.g\_carriage | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_1.g\_passenger | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_1.g\_terminal | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_1.g\_include | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_1.g\_work\_on | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_1.g\_pass\_by | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_1.g\_ticket\_business | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_1.g\_belong\_to | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_1.g\_self\_service | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_1.g\_superior | 指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_3\_1）

|  |
| --- |
| --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的区域关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_area for y\_1\_2\_0\_1.g\_area;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的分公司关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_branch\_company for y\_1\_2\_0\_1.g\_branch\_company;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的火车站关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_station for y\_1\_2\_0\_1.g\_station;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的部门关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_depart for y\_1\_2\_0\_1.g\_depart;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的岗位关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_post for y\_1\_2\_0\_1.g\_post;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的员工关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_employee for y\_1\_2\_0\_1.g\_employee;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的列车关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_train for y\_1\_2\_0\_1.g\_train;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车厢关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_carriage for y\_1\_2\_0\_1.g\_carriage;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的乘客关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_passenger for y\_1\_2\_0\_1.g\_passenger;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_terminal for y\_1\_2\_0\_1.g\_terminal;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的包含关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_include for y\_1\_2\_0\_1.g\_include;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的从事关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_work\_on for y\_1\_2\_0\_1.g\_work\_on;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的经过关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_pass\_by for y\_1\_2\_0\_1.g\_pass\_by;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的车票业务关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_ticket\_business for y\_1\_2\_0\_1.g\_ticket\_business;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的隶属关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_belong\_to for y\_1\_2\_0\_1.g\_belong\_to;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的自助操作关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_self\_service for y\_1\_2\_0\_1.g\_self\_service;  --创建同义词：指向分布式数据库站点1第2类用户y\_1\_2\_0\_1的上级关系，实现位置透明  create synonym y\_1\_3\_3\_1.g\_superior for y\_1\_2\_0\_1.g\_superior; |

#### 视图

表14.3.1‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 车次信息 | train\_info | 单据 |  |
| 2 | 站点信息 | train\_other\_info | 单据 |  |
| 3 | 车站信息 | station\_info | 单据 |  |
| 4 | 车厢信息 | compartment\_info | 单据 |  |
| 5 | 管理员信息 | administer\_info | 报表 |  |

##### 车次信息

表14.3.1.2‑1视图train\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train\_info | train\_id |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | train\_info | train\_passstatin\_num |  |  |
| 3 | 运行时间 | train\_runtime | train\_info | train\_runtime |  |  |
| 4 | 全程里程数 | train\_runmile | train\_info | train\_runmile |  |  |
| 5 | 票价上浮比率 | fare\_rate | train\_info | fare\_rate |  |  |

执行脚本（Oracle，y\_1\_3\_3\_1）

|  |
| --- |
| -- 创建视图：车次信息  create view y\_1\_3\_3\_1.train\_info(train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate)  as  select train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate  from train\_info  ;  comment on table y\_1\_3\_3\_1.train\_info is '车次信息';  comment on column y\_1\_3\_3\_1.train\_info.train\_id is '车次号';  comment on column y\_1\_3\_3\_1.train\_info.train\_passstatin\_num is '经过站点数';  comment on column y\_1\_3\_3\_1.train\_info.train\_runtime is '运行时间';  comment on column y\_1\_3\_3\_1.train\_info.train\_runmile is '全程里程数';  comment on column y\_1\_3\_3\_1.train\_info.fare\_rate is '票价上浮比率'; |

##### 站点信息

表14.3.1.2‑2视图train\_other\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_other\_info\_id | train\_other\_info | train\_other\_info\_id |  |  |
| 2 | 站次 | train\_station\_order | train\_other\_info | train\_station\_order |  |  |
| 3 | 车次号 | train\_num | train\_other\_info | train\_num |  |  |
| 4 | 站点名 | station\_name | train\_other\_info | station\_name |  |  |
| 5 | 停车时间 | train\_stoptime | train\_other\_info | train\_stoptime |  |  |
| 6 | 发车时间 | train\_starttime | train\_other\_info | train\_starttime |  |  |
| 7 | 里程数 | train\_station\_runmile | train\_other\_info | train\_station\_runmile |  |  |
| 8 | 前序站点 | station\_p\_id | train\_other\_info | station\_p\_id |  |  |
| 9 | 后继站点 | station\_n\_id | train\_other\_info | station\_n\_id |  |  |
| 10 | 站点区间基础票价 | station\_base\_fare | train\_other\_info | station\_base\_fare |  |  |

执行脚本（Oracle，y\_1\_3\_3\_1）

|  |
| --- |
| -- 创建视图：站点信息  create view y\_1\_3\_3\_1.train\_other\_info(train\_other\_info\_id, train\_station\_order, train\_num, station\_name, train\_stoptime, train\_starttime, train\_station\_runmile, station\_p\_id, station\_n\_id, station\_base\_fare)  as  select train\_other\_info\_id, train\_station\_order, train\_num, station\_name, train\_stoptime, train\_starttime, train\_station\_runmile, station\_p\_id, station\_n\_id, station\_base\_fare  from train\_other\_info  ;  comment on table y\_1\_3\_3\_1.train\_other\_info is '站点信息';  comment on column y\_1\_3\_3\_1.train\_other\_info.train\_other\_info\_id is '编号';  comment on column y\_1\_3\_3\_1.train\_other\_info.train\_station\_order is '站次';  comment on column y\_1\_3\_3\_1.train\_other\_info.train\_num is '车次号';  comment on column y\_1\_3\_3\_1.train\_other\_info.station\_name is '站点名';  comment on column y\_1\_3\_3\_1.train\_other\_info.train\_stoptime is '停车时间';  comment on column y\_1\_3\_3\_1.train\_other\_info.train\_starttime is '发车时间';  comment on column y\_1\_3\_3\_1.train\_other\_info.train\_station\_runmile is '里程数';  comment on column y\_1\_3\_3\_1.train\_other\_info.station\_p\_id is '前序站点';  comment on column y\_1\_3\_3\_1.train\_other\_info.station\_n\_id is '后继站点';  comment on column y\_1\_3\_3\_1.train\_other\_info.station\_base\_fare is '站点区间基础票价'; |

##### 车站信息

表14.3.1.2‑3视图station\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车站名 | station\_name | station\_info | station\_name |  |  |
| 2 | 所属铁路局 | station\_railwayadmin | station\_info | station\_railwayadmin |  |  |
| 3 | 所属车务段 | station\_railwaymaster | station\_info | station\_railwaymaster |  |  |
| 4 | 车站等级 | station\_level | station\_info | station\_level |  |  |
| 5 | 车站次序 | station\_order | station\_info | station\_order |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | station\_info | statin\_provide\_flag |  |  |

执行脚本（Oracle，y\_1\_3\_3\_1）

|  |
| --- |
| -- 创建视图：车站信息  create view y\_1\_3\_3\_1.station\_info(station\_name, station\_railwayadmin, station\_railwaymaster, station\_level, station\_order, statin\_provide\_flag)  as  select station\_name, station\_railwayadmin, station\_railwaymaster, station\_level, station\_order, statin\_provide\_flag  from station\_info  ;  comment on table y\_1\_3\_3\_1.station\_info is '车站信息';  comment on column y\_1\_3\_3\_1.station\_info.station\_name is '车站名';  comment on column y\_1\_3\_3\_1.station\_info.station\_railwayadmin is '所属铁路局';  comment on column y\_1\_3\_3\_1.station\_info.station\_railwaymaster is '所属车务段';  comment on column y\_1\_3\_3\_1.station\_info.station\_level is '车站等级';  comment on column y\_1\_3\_3\_1.station\_info.station\_order is '车站次序';  comment on column y\_1\_3\_3\_1.station\_info.statin\_provide\_flag is '供给站标志'; |

##### 车厢信息

表14.3.1.2‑4视图compart\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | compart\_info\_id | compart\_info | compart\_info\_id |  |  |
| 2 | 车次号 | train\_num | compart\_info | train\_num |  |  |
| 3 | 车厢号 | compart\_num | compart\_info | compart\_num |  |  |
| 4 | 车厢类型 | compart\_type | compart\_info | compart\_type |  |  |
| 5 | 座位总数 | compart\_siteamount | compart\_info | compart\_siteamount |  |  |

执行脚本（Oracle，y\_1\_3\_3\_1）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_3\_3\_1.compart\_info(compart\_info\_id, train\_num, compart\_num, compart\_type, compart\_siteamount)  as  select compart\_info\_id, train\_num, compart\_num, compart\_type, compart\_siteamount  from compart\_info  ;  comment on table y\_1\_3\_3\_1.compart\_info is '车厢信息';  comment on column y\_1\_3\_3\_1.compart\_info.compart\_info\_id is '编号';  comment on column y\_1\_3\_3\_1.compart\_info.train\_num is '车次号';  comment on column y\_1\_3\_3\_1.compart\_info.compart\_num is '车厢号';  comment on column y\_1\_3\_3\_1.compart\_info.compart\_type is '车厢类型';  comment on column y\_1\_3\_3\_1.compart\_info.compart\_siteamount is '座位总数'; |

##### 用户信息

表14.3.1.2‑5视图user\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 用户名 | user\_name | user\_info | user\_name |  |  |
| 2 | 密码 | user\_pw | user\_info | user\_pw |  |  |
| 3 | 用户类型 | user\_name | user\_info | user\_name |  |  |

执行脚本（Oracle，y\_1\_3\_3\_1）

|  |
| --- |
| -- 创建视图：用户信息  create view y\_1\_3\_3\_1.user\_info(user\_name, user\_pw, user\_name)  as  select user\_name, user\_pw, user\_name  from user\_info  ;  comment on table y\_1\_3\_3\_1.user\_info is '用户信息';  comment on column y\_1\_3\_3\_1.user\_info.user\_name is '用户名';  comment on column y\_1\_3\_3\_1.user\_info.user\_pw is '密码';  comment on column y\_1\_3\_3\_1.user\_info.user\_name is '用户类型'; |

#### 函数

表14.3.1‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表14.3.1‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表14.3.1‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点2

#### 同义词

表14.3.2‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_2.g\_area | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的区域关系，实现位置透明 |  |
| 2 | g\_rail\_company | y\_1\_2\_0\_2.g\_rail\_company | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的分公司关系，实现位置透明 |  |
| 3 | g\_rail\_station | y\_1\_2\_0\_2.g\_rail\_station | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_2.g\_depart | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_2.g\_post | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_2.g\_employee | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_2.g\_train | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_2.g\_carriage | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_2.g\_passenger | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_2.g\_terminal | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_2.g\_include | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_2.g\_work\_on | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_2.g\_pass\_by | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_2.g\_ticket\_business | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_2.g\_belong\_to | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_2.g\_self\_service | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_2.g\_superior | 指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_3\_2）

|  |
| --- |
| --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的区域关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_area for y\_1\_2\_0\_2.g\_area;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的分公司关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_rail\_company for y\_1\_2\_0\_2.g\_rail\_company;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的火车站关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_rail\_station for y\_1\_2\_0\_2.g\_rail\_station;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的部门关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_depart for y\_1\_2\_0\_2.g\_depart;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2岗位关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_post for y\_1\_2\_0\_2.g\_post;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的员工关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_employee for y\_1\_2\_0\_2.g\_employee;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的列车关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_train for y\_1\_2\_0\_2.g\_train;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车厢关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_carriage for y\_1\_2\_0\_2.g\_carriage;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的乘客关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_passenger for y\_1\_2\_0\_2.g\_passenger;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_terminal for y\_1\_2\_0\_2.g\_terminal;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的包含关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_include for y\_1\_2\_0\_2.g\_include;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的从事关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_work\_on for y\_1\_2\_0\_2.g\_work\_on;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的经过关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_pass\_by for y\_1\_2\_0\_2.g\_pass\_by;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的车票业务关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_ticket\_business for y\_1\_2\_0\_2.g\_ticket\_business;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的隶属关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_belong\_to for y\_1\_2\_0\_2.g\_belong\_to;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的自助操作关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_self\_service for y\_1\_2\_0\_2.g\_self\_service;  --创建同义词：指向分布式数据库站点2第2类用户y\_1\_2\_0\_2的上级关系，实现位置透明  create synonym y\_1\_3\_3\_2.g\_superior for y\_1\_2\_0\_2.g\_superior; |

#### 视图

表14.3.2‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 车次信息 | train\_info | 单据 |  |
| 2 | 站点信息 | train\_other\_info | 单据 |  |
| 3 | 车站信息 | station\_info | 单据 |  |
| 4 | 车厢信息 | compartment\_info | 单据 |  |
| 5 | 管理员信息 | administer\_info | 报表 |  |

##### 车次信息

表14.3.2.2‑1视图train\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train\_info | train\_id |  |  |
|  | 经过站点数 | train\_passstatin\_num | train\_info | train\_passstatin\_num |  |  |
|  | 运行时间 | train\_runtime | train\_info | train\_runtime |  |  |
|  | 全程里程数 | train\_runmile | train\_info | train\_runmile |  |  |
| 2 | 票价上浮比率 | fare\_rate | train\_info | fare\_rate |  |  |

执行脚本（Oracle，y\_1\_3\_3\_2）

|  |
| --- |
| -- 创建视图：车次信息  create view y\_1\_3\_3\_2.train\_info(train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate)  as  select train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate  from train\_info  ;  comment on table y\_1\_3\_3\_2.train\_info is '车次信息';  comment on column y\_1\_3\_3\_2.train\_info.train\_id is '车次号';  comment on column y\_1\_3\_3\_2.train\_info.train\_passstatin\_num is '经过站点数';  comment on column y\_1\_3\_3\_2.train\_info.train\_runtime is '运行时间';  comment on column y\_1\_3\_3\_2.train\_info.train\_runmile is '全程里程数';  comment on column y\_1\_3\_3\_2.train\_info.fare\_rate is '票价上浮比率'; |

##### 站点信息

表14.3.2.2‑2视图train\_other\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | train\_other\_info\_id | train\_other\_info | train\_other\_info\_id |  |  |
| 2 | 站次 | train\_station\_order | train\_other\_info | train\_station\_order |  |  |
| 3 | 车次号 | train\_num | train\_other\_info | train\_num |  |  |
| 4 | 站点名 | station\_name | train\_other\_info | station\_name |  |  |
| 5 | 停车时间 | train\_stoptime | train\_other\_info | train\_stoptime |  |  |
| 6 | 发车时间 | train\_starttime | train\_other\_info | train\_starttime |  |  |
| 7 | 里程数 | train\_station\_runmile | train\_other\_info | train\_station\_runmile |  |  |
| 8 | 前序站点 | station\_p\_id | train\_other\_info | station\_p\_id |  |  |
| 9 | 后继站点 | station\_n\_id | train\_other\_info | station\_n\_id |  |  |
| 10 | 站点区间基础票价 | station\_base\_fare | train\_other\_info | station\_base\_fare |  |  |

执行脚本（Oracle，y\_1\_3\_3\_2）

|  |
| --- |
| -- 创建视图：站点信息  create view y\_1\_3\_3\_2.train\_other\_info(train\_other\_info\_id, train\_station\_order, train\_num, station\_name, train\_stoptime, train\_starttime, train\_station\_runmile, station\_p\_id, station\_n\_id, station\_base\_fare)  as  select train\_other\_info\_id, train\_station\_order, train\_num, station\_name, train\_stoptime, train\_starttime, train\_station\_runmile, station\_p\_id, station\_n\_id, station\_base\_fare  from train\_other\_info  ;  comment on table y\_1\_3\_3\_2.train\_other\_info is '站点信息';  comment on column y\_1\_3\_3\_2.train\_other\_info.train\_other\_info\_id is '编号';  comment on column y\_1\_3\_3\_2.train\_other\_info.train\_station\_order is '站次';  comment on column y\_1\_3\_3\_2.train\_other\_info.train\_num is '车次号';  comment on column y\_1\_3\_3\_2.train\_other\_info.station\_name is '站点名';  comment on column y\_1\_3\_3\_2.train\_other\_info.train\_stoptime is '停车时间';  comment on column y\_1\_3\_3\_2.train\_other\_info.train\_starttime is '发车时间';  comment on column y\_1\_3\_3\_2.train\_other\_info.train\_station\_runmile is '里程数';  comment on column y\_1\_3\_3\_2.train\_other\_info.station\_p\_id is '前序站点';  comment on column y\_1\_3\_3\_2.train\_other\_info.station\_n\_id is '后继站点';  comment on column y\_1\_3\_3\_2.train\_other\_info.station\_base\_fare is '站点区间基础票价'; |

##### 车站信息

表14.3.2.2‑3视图station\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车站名 | station\_name | station\_info | station\_name |  |  |
| 2 | 所属铁路局 | station\_railwayadmin | station\_info | station\_railwayadmin |  |  |
| 3 | 所属车务段 | station\_railwaymaster | station\_info | station\_railwaymaster |  |  |
| 4 | 车站等级 | station\_level | station\_info | station\_level |  |  |
| 5 | 车站次序 | station\_order | station\_info | station\_order |  |  |
| 6 | 供给站标志 | statin\_provide\_flag | station\_info | statin\_provide\_flag |  |  |

执行脚本（Oracle，y\_1\_3\_3\_2）

|  |
| --- |
| -- 创建视图：车站信息  create view y\_1\_3\_3\_2.station\_info(station\_name, station\_railwayadmin, station\_railwaymaster, station\_level, station\_order, statin\_provide\_flag)  as  select station\_name, station\_railwayadmin, station\_railwaymaster, station\_level, station\_order, statin\_provide\_flag  from station\_info  ;  comment on table y\_1\_3\_3\_2.station\_info is '车站信息';  comment on column y\_1\_3\_3\_2.station\_info.station\_name is '车站名';  comment on column y\_1\_3\_3\_2.station\_info.station\_railwayadmin is '所属铁路局';  comment on column y\_1\_3\_3\_2.station\_info.station\_railwaymaster is '所属车务段';  comment on column y\_1\_3\_3\_2.station\_info.station\_level is '车站等级';  comment on column y\_1\_3\_3\_2.station\_info.station\_order is '车站次序';  comment on column y\_1\_3\_3\_2.station\_info.statin\_provide\_flag is '供给站标志'; |

##### 车厢信息

表14.3.2.2‑4视图compart\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 编号 | compart\_info\_id | compart\_info | compart\_info\_id |  |  |
| 2 | 车次号 | train\_num | compart\_info | train\_num |  |  |
| 3 | 车厢号 | compart\_num | compart\_info | compart\_num |  |  |
| 4 | 车厢类型 | compart\_type | compart\_info | compart\_type |  |  |
| 5 | 座位总数 | compart\_siteamount | compart\_info | compart\_siteamount |  |  |

执行脚本（Oracle，y\_1\_3\_3\_2）

|  |
| --- |
| -- 创建视图：车厢信息  create view y\_1\_3\_3\_2.compart\_info(compart\_info\_id, train\_num, compart\_num, compart\_type, compart\_siteamount)  as  select compart\_info\_id, train\_num, compart\_num, compart\_type, compart\_siteamount  from compart\_info  ;  comment on table y\_1\_3\_3\_2.compart\_info is '车厢信息';  comment on column y\_1\_3\_3\_2.compart\_info.compart\_info\_id is '编号';  comment on column y\_1\_3\_3\_2.compart\_info.train\_num is '车次号';  comment on column y\_1\_3\_3\_2.compart\_info.compart\_num is '车厢号';  comment on column y\_1\_3\_3\_2.compart\_info.compart\_type is '车厢类型';  comment on column y\_1\_3\_3\_2.compart\_info.compart\_siteamount is '座位总数'; |

##### 用户信息

表14.3.2.2‑5视图user\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 用户名 | user\_name | user\_info | user\_name |  |  |
| 2 | 密码 | user\_pw | user\_info | user\_pw |  |  |
| 3 | 用户类型 | user\_name | user\_info | user\_name |  |  |

执行脚本（Oracle，y\_1\_3\_3\_2）

|  |
| --- |
| -- 创建视图：用户信息  create view y\_1\_3\_3\_2.user\_info(user\_name, user\_pw, user\_name)  as  select user\_name, user\_pw, user\_name  from user\_info  ;  comment on table y\_1\_3\_3\_2.user\_info is '用户信息';  comment on column y\_1\_3\_3\_2.user\_info.user\_name is '用户名';  comment on column y\_1\_3\_3\_2.user\_info.user\_pw is '密码';  comment on column y\_1\_3\_3\_2.user\_info.user\_name is '用户类型'; |

#### 函数

表14.3.2‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表14.3.2‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表14.3.2‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

### 站点3

#### 同义词

表14.3.3‑1同义词列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 英文名 | 代替者 | 用途 | 备注 |
| 1 | g\_area | y\_1\_2\_0\_3.g\_area | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的区域关系，实现位置透明 |  |
| 2 | g\_rail\_company | y\_1\_2\_0\_3.g\_rail\_company | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的分公司关系，实现位置透明 |  |
| 3 | g\_rail\_station | y\_1\_2\_0\_3.g\_rail\_station | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的火车站关系，实现位置透明 |  |
| 4 | g\_depart | y\_1\_2\_0\_3.g\_depart | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的部门关系，实现位置透明 |  |
| 5 | g\_post | y\_1\_2\_0\_3.g\_post | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的岗位关系，实现位置透明 |  |
| 6 | g\_employee | y\_1\_2\_0\_3.g\_employee | 指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的员工关系，实现位置透明 |  |
| 7 | g\_train | y\_1\_2\_0\_3.g\_train | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的列车关系，实现位置透明 |  |
| 8 | g\_carriage | y\_1\_2\_0\_3.g\_carriage | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车厢关系，实现位置透明 |  |
| 9 | g\_passenger | y\_1\_2\_0\_3.g\_passenger | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的乘客关系，实现位置透明 |  |
| 10 | g\_terminal | y\_1\_2\_0\_3.g\_terminal | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的网络售票终端关系，实现位置透明 |  |
| 11 | g\_include | y\_1\_2\_0\_3.g\_include | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的包含关系，实现位置透明 |  |
| 12 | g\_work\_on | y\_1\_2\_0\_3.g\_work\_on | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的从事关系，实现位置透明 |  |
| 13 | g\_pass\_by | y\_1\_2\_0\_3.g\_pass\_by | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的经过关系，实现位置透明 |  |
| 14 | g\_ticket\_business | y\_1\_2\_0\_3.g\_ticket\_business | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车票业务关系，实现位置透明 |  |
| 15 | g\_belong\_to | y\_1\_2\_0\_3.g\_belong\_to | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的隶属关系，实现位置透明 |  |
| 16 | g\_self\_service | y\_1\_2\_0\_3.g\_self\_service | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的自助操作关系，实现位置透明 |  |
| 17 | g\_superior | y\_1\_2\_0\_3.g\_superior | 指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的上级关系，实现位置透明 |  |

执行脚本（Oracle，y\_1\_3\_3\_3）

|  |
| --- |
| --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的区域关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_area for y\_1\_2\_0\_3.g\_area;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的分公司关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_rail\_company for y\_1\_2\_0\_3.g\_rail\_company;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的火车站关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_rail\_station for y\_1\_2\_0\_3.g\_rail\_station;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的部门关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_depart for y\_1\_2\_0\_3.g\_depart;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的岗位关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_post for y\_1\_2\_0\_3.g\_post;  --创建同义词：指向分布式数据库站点3第3类用户y\_1\_2\_0\_3的员工关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_employee for y\_1\_2\_0\_3.g\_employee;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的列车关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_train for y\_1\_2\_0\_3.g\_train;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车厢关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_carriage for y\_1\_2\_0\_3.g\_carriage;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的乘客关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_passenger for y\_1\_2\_0\_3.g\_passenger;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的网络售票终端关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_terminal for y\_1\_2\_0\_3.g\_terminal;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的包含关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_include for y\_1\_2\_0\_3.g\_include;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的从事关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_work\_on for y\_1\_2\_0\_3.g\_work\_on;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的经过关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_pass\_by for y\_1\_2\_0\_3.g\_pass\_by;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的车票业务关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_ticket\_business for y\_1\_2\_0\_3.g\_ticket\_business;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的隶属关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_belong\_to for y\_1\_2\_0\_3.g\_belong\_to;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的自助操作关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_self\_service for y\_1\_2\_0\_3.g\_self\_service;  --创建同义词：指向分布式数据库站点3第2类用户y\_1\_2\_0\_3的上级关系，实现位置透明  create synonym y\_1\_3\_3\_3.g\_superior for y\_1\_2\_0\_3.g\_superior; |

#### 视图

表14.3.3‑2视图列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 单据/报表 | 备注 |
| 1 | 车次信息 | train\_info | 单据 |  |
| 2 | 站点信息 | train\_other\_info | 单据 |  |
| 3 | 车站信息 | station\_info | 单据 |  |
| 4 | 车厢信息 | compartment\_info | 单据 |  |
| 5 | 管理员信息 | administer\_info | 报表 |  |

##### 视图1

表14.3.3.2‑1视图train\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train\_info | train\_id |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | train\_info | train\_passstatin\_num |  |  |
| 3 | 运行时间 | train\_runtime | train\_info | train\_runtime |  |  |
| 4 | 全程里程数 | train\_runmile | train\_info | train\_runmile |  |  |
| 5 | 票价上浮比率 | fare\_rate | train\_info | fare\_rate |  |  |

执行脚本（Oracle，y\_1\_3\_3\_3）

|  |
| --- |
| -- 创建视图：视图1  create view y\_1\_3\_3\_3.train\_info(train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate)  as  select train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate  from train\_info  ;  comment on table y\_1\_3\_3\_3.train\_info is '视图1';  comment on column y\_1\_3\_3\_3.train\_info.train\_id is '车次号';  comment on column y\_1\_3\_3\_3.train\_info.train\_passstatin\_num is '经过站点数';  comment on column y\_1\_3\_3\_3.train\_info.train\_runtime is '运行时间';  comment on column y\_1\_3\_3\_3.train\_info.train\_runmile is '全程里程数';  comment on column y\_1\_3\_3\_3.train\_info.fare\_rate is '票价上浮比率'; |

##### 车次信息

表14.3.3.2‑2视图train\_info的属性说明

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 来自表或视图 | 来自属性 | 条件 | 备注 |
| 1 | 车次号 | train\_id | train\_info | train\_id |  |  |
| 2 | 经过站点数 | train\_passstatin\_num | train\_info | train\_passstatin\_num |  |  |
| 3 | 运行时间 | train\_runtime | train\_info | train\_runtime |  |  |
| 4 | 全程里程数 | train\_runmile | train\_info | train\_runmile |  |  |
| 5 | 票价上浮比率 | fare\_rate | train\_info | fare\_rate |  |  |

执行脚本（Oracle，y\_1\_3\_3\_3）

|  |
| --- |
| -- 创建视图：车次信息  create view y\_1\_3\_3\_3.train\_info(train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate)  as  select train\_id, train\_passstatin\_num, train\_runtime, train\_runmile, fare\_rate  from train\_info  ;  comment on table y\_1\_3\_3\_3.train\_info is '车次信息';  comment on column y\_1\_3\_3\_3.train\_info.train\_id is '车次号';  comment on column y\_1\_3\_3\_3.train\_info.train\_passstatin\_num is '经过站点数';  comment on column y\_1\_3\_3\_3.train\_info.train\_runtime is '运行时间';  comment on column y\_1\_3\_3\_3.train\_info.train\_runmile is '全程里程数';  comment on column y\_1\_3\_3\_3.train\_info.fare\_rate is '票价上浮比率'; |

#### 函数

表14.3.3‑3函数列表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 返回值 | 功能 | 备注 |
| 1 | 函数1 |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

##### 函数1

函数代码

|  |
| --- |
|  |

#### 过程

表14.3.3‑4过程列表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 参数列表 | 功能 | 备注 |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

##### 过程中文名

过程代码

|  |
| --- |
|  |

#### 触发器

表14.3.3‑5触发器列表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 编号 | 中文名 | 英文名 | 功能 | 备注 |
| 1 | 触发器1 |  |  |  |
| 2 |  |  |  |  |

##### 触发器1

触发器代码

|  |
| --- |
|  |

# 系统使用手册

## 系统安装配置

### 数据库服务器

### 应用服务器

**1 JDK的安装与配置**

1.1 JDK安装

1. 下载jdk-8u181-windows-x64.exe；
2. 双击运行安装文件jdk-8u181-windows-x64.exe；
3. 指定jdk安装目录 C:\JAVA\JDK， 点击“下一步”；
4. 指定JRE安装目录C:\JAVA\JRE，点击“下一步”；
5. 安装完成，点击“关闭”。

1.2 JDK环境变量配置

（1）新建 JAVA\_HOME 环境变量，C:\JAVA\JDK

（2）修改 path 环境变量，在path变量尾部添加%JAVA\_HOME%\bin

（3）新建 classpath 环境变量 ，classpath=.;%JAVA\_HOME%\lib;%JAVA\_HOME%\lib\dt.jar;%JAVA\_HOME%\tools.jar

1.3 验证java命令

打开cmd命令行窗口，输入 java ，回车执行



得到以上java命令输出表明jdk安装配置成功

**2 Tomcat的安装与配置**

**1.Tomcat安装**

**（1）下载apache-tomcat-** **8.5.47.exe；**

**（2）**双击运行安装文件**apache-tomcat-** **8.5.47.exe；**

（3）安装完成，点击“关闭”。

2.Tomcat环境变量配置

（1）新建 TOMCAT\_HOME 环境变量，C:\Program Files\ Tomcat8.5

（2）新建 CATALINA\_HOME 环境变量， C:\Program Files\ Tomcat8.5

（3）修改 path 环境变量，在path变量尾部添加%CATALINA\_HOME%\bin

（4）修改 classpath 环境变量，在classpath变量尾部填加，%CATALINA\_HOME%\lib\servlet-api.jar

3.启动Tomcat

单击“开始”—“运行”，键入"cmd"，在控制台输入service install Tomcat8.5，在系统中安装Tomcat9服务项。然后进入控制面板—系统和安全—管理工具—服务，找到Apache Tomcat Tomcat8.5服务项，右击该项，点“启动”，启动该服务。

打开浏览器，地址栏输入http://localhost:8080。如果出现tomcat示例主页，则表示服务器安装成功。

1. 配置Tomcat

### 客户端

客户端使用浏览器进行访问，支持大多数浏览器，推荐使用IE，Chrome，FireFox浏览器。

外部访问地址：http://202.207.12.213:7101

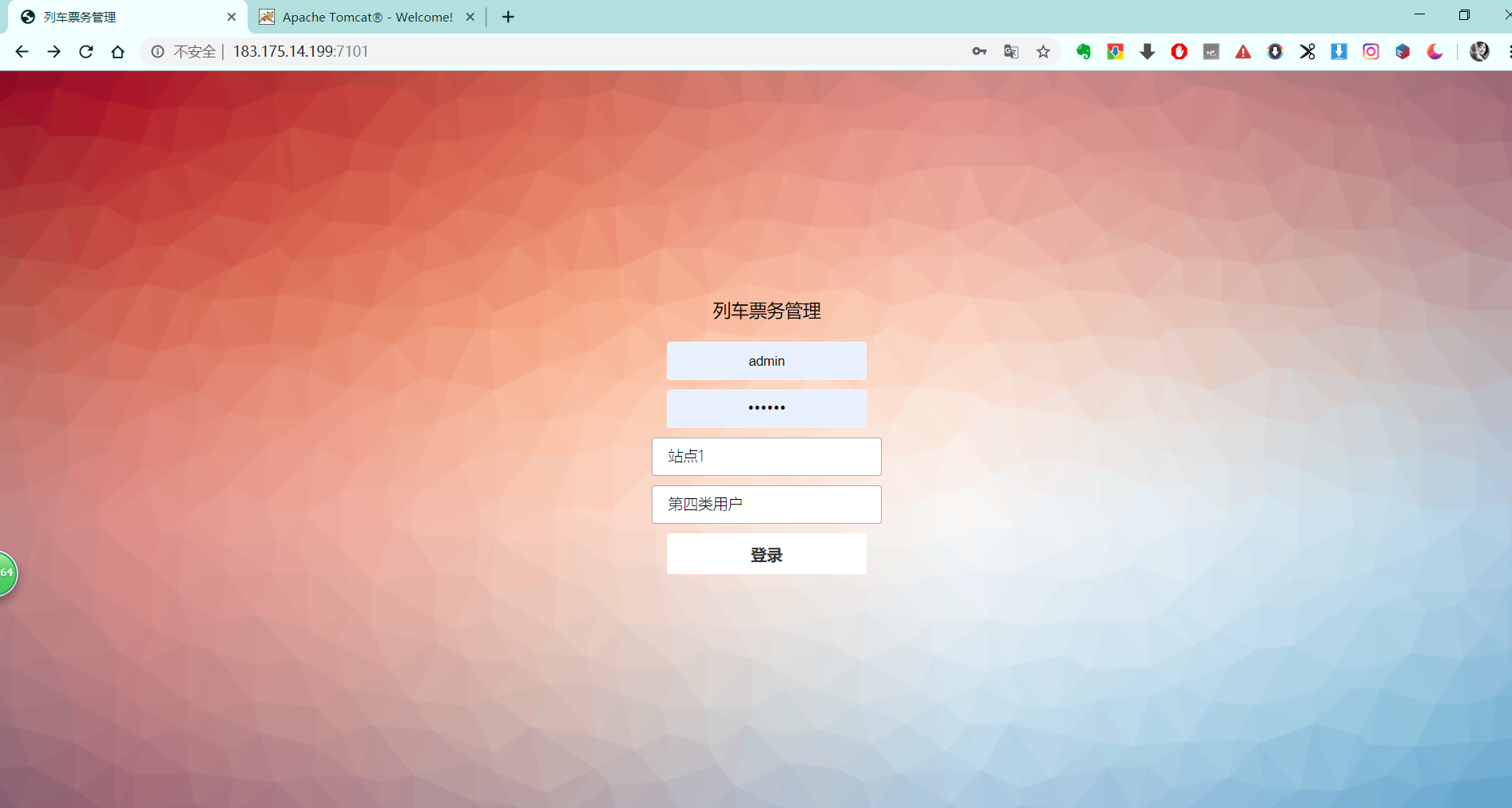
登录页面：



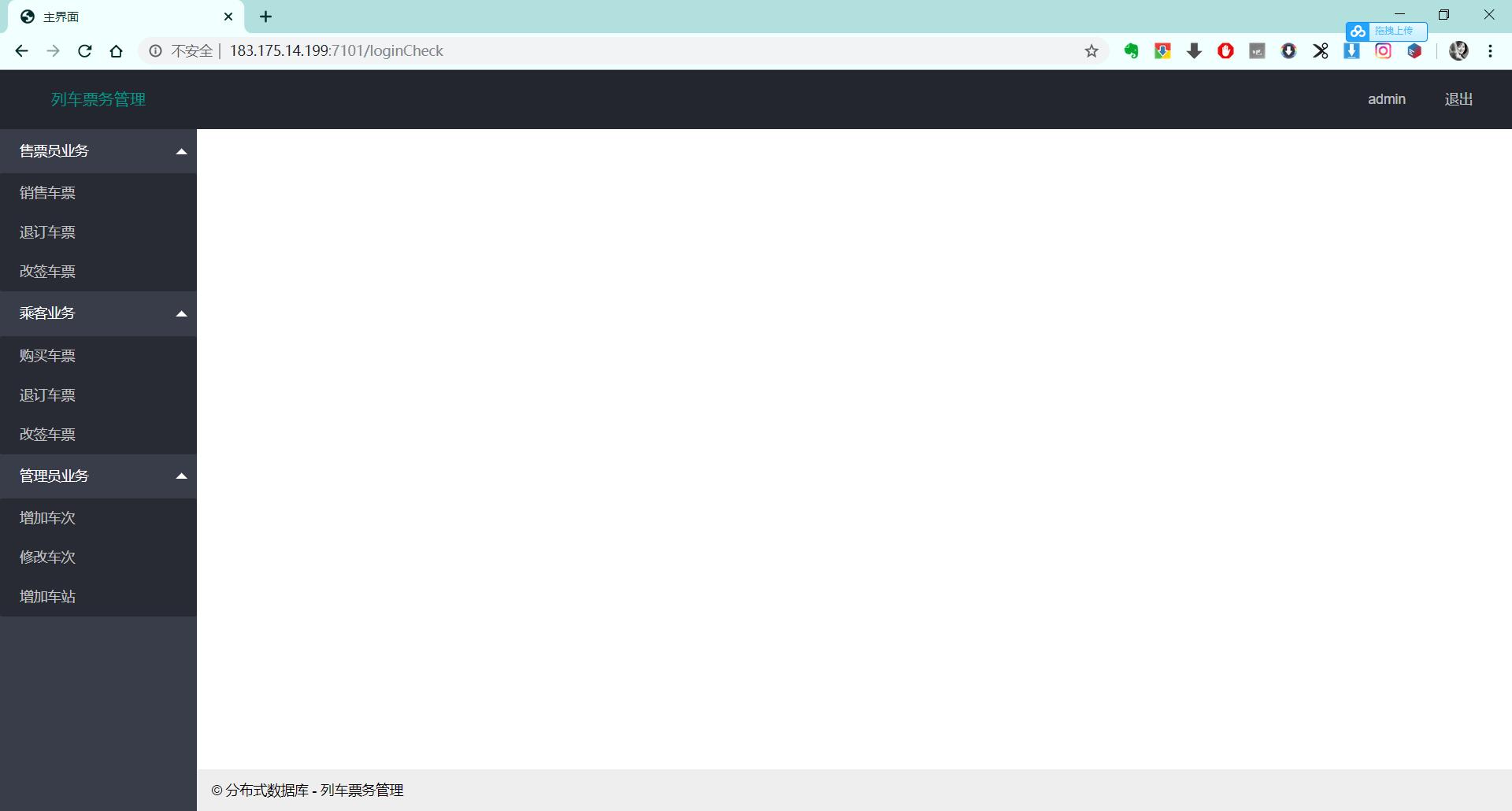
## 系统使用说明

### 登录

1.输入用户名及密码后，在下拉列表中选择站点用户种类



2.点击登录，跳转到登陆界面



注：管理员用户名：admin，售票员用户名：seller，乘客用户名：passenger，密码均为000000。

### 售票员业务

#### 销售车票

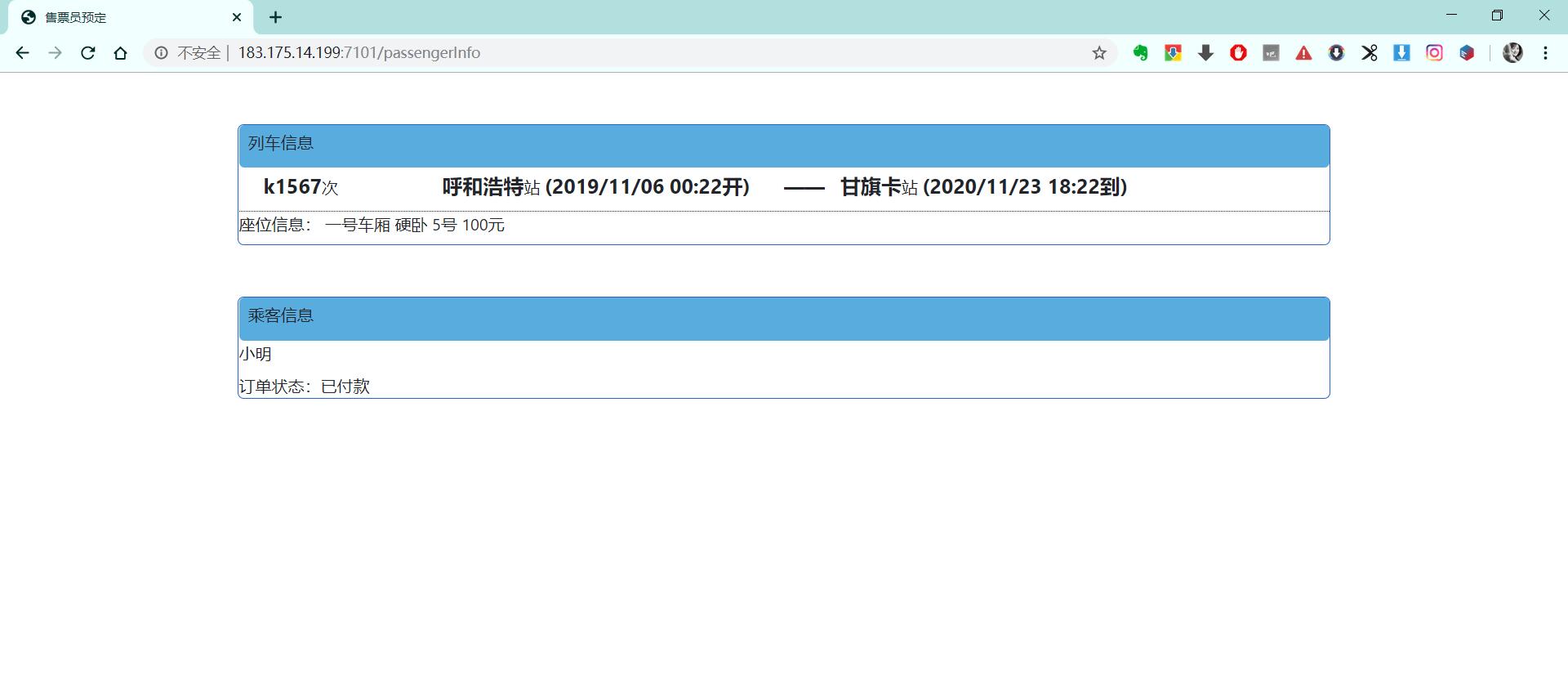
1. 输入出发地、目的地及日期，点击查询后显示相关车次：



1. 点击预定



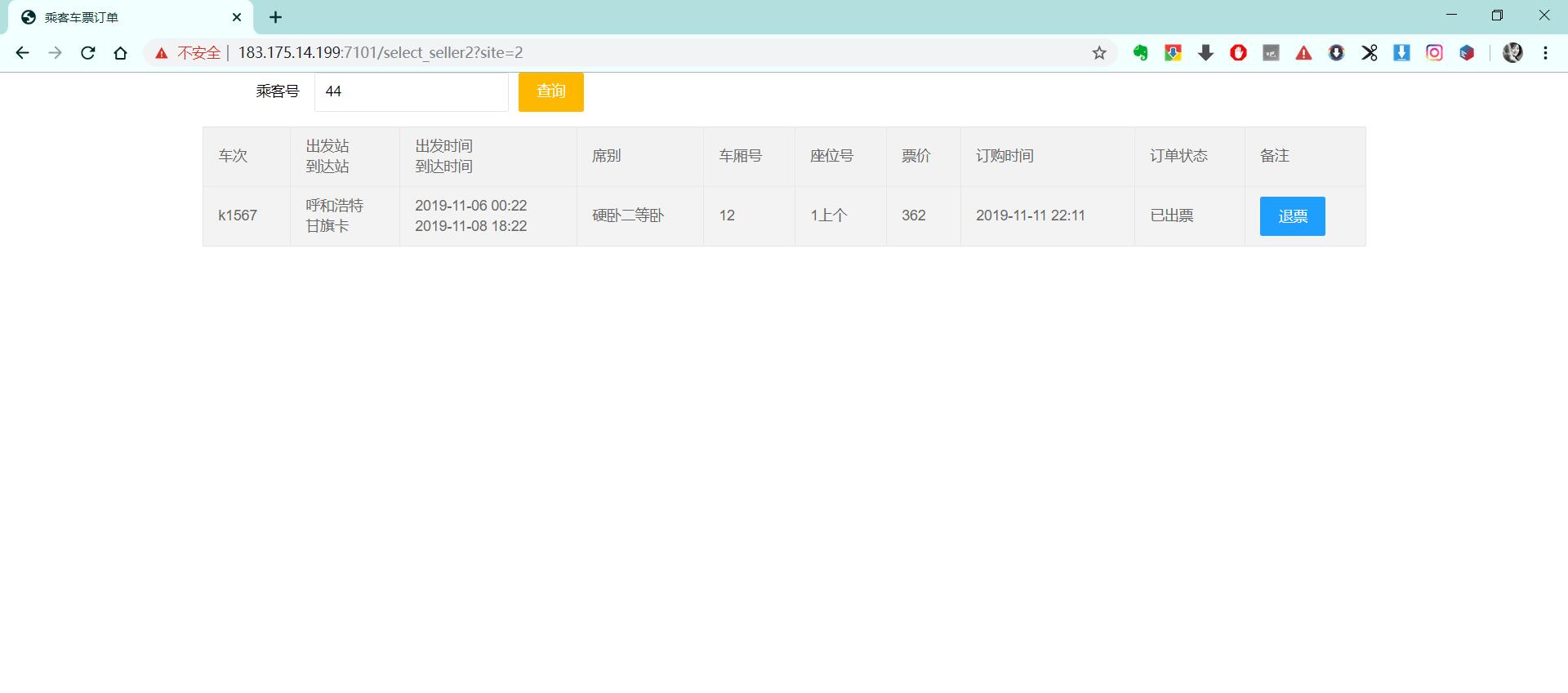
1. 输入姓名及身份证号码，提交订单



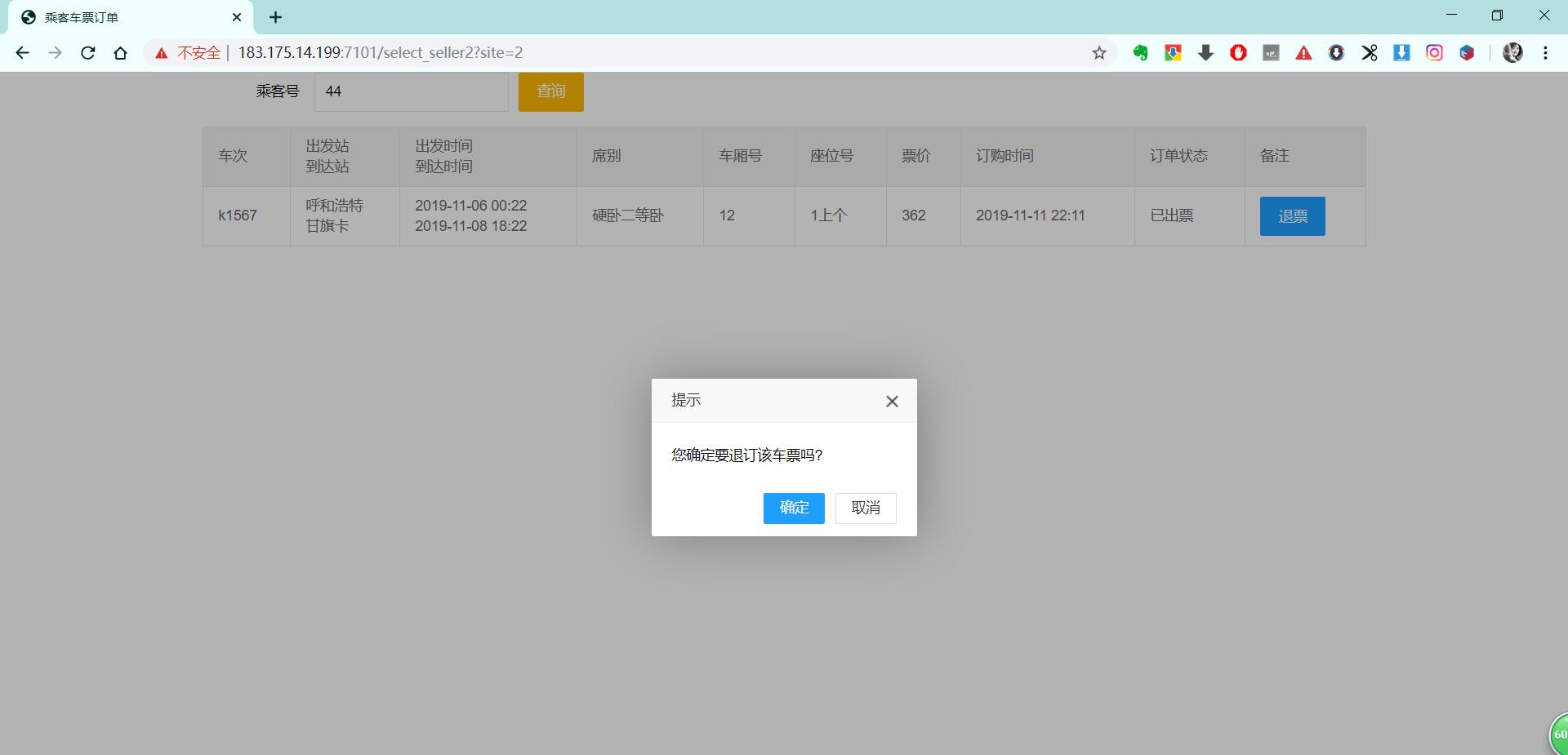
4.订票成功。

#### 退订车票

1. 从主界面点击售票员业务的退订车票链接，跳转到退订车票界面。
2. 输入乘客号，显示该乘客购买的车票。



1. 点击退票。



1. 点击确定，显示收取退票费



5.点击确定



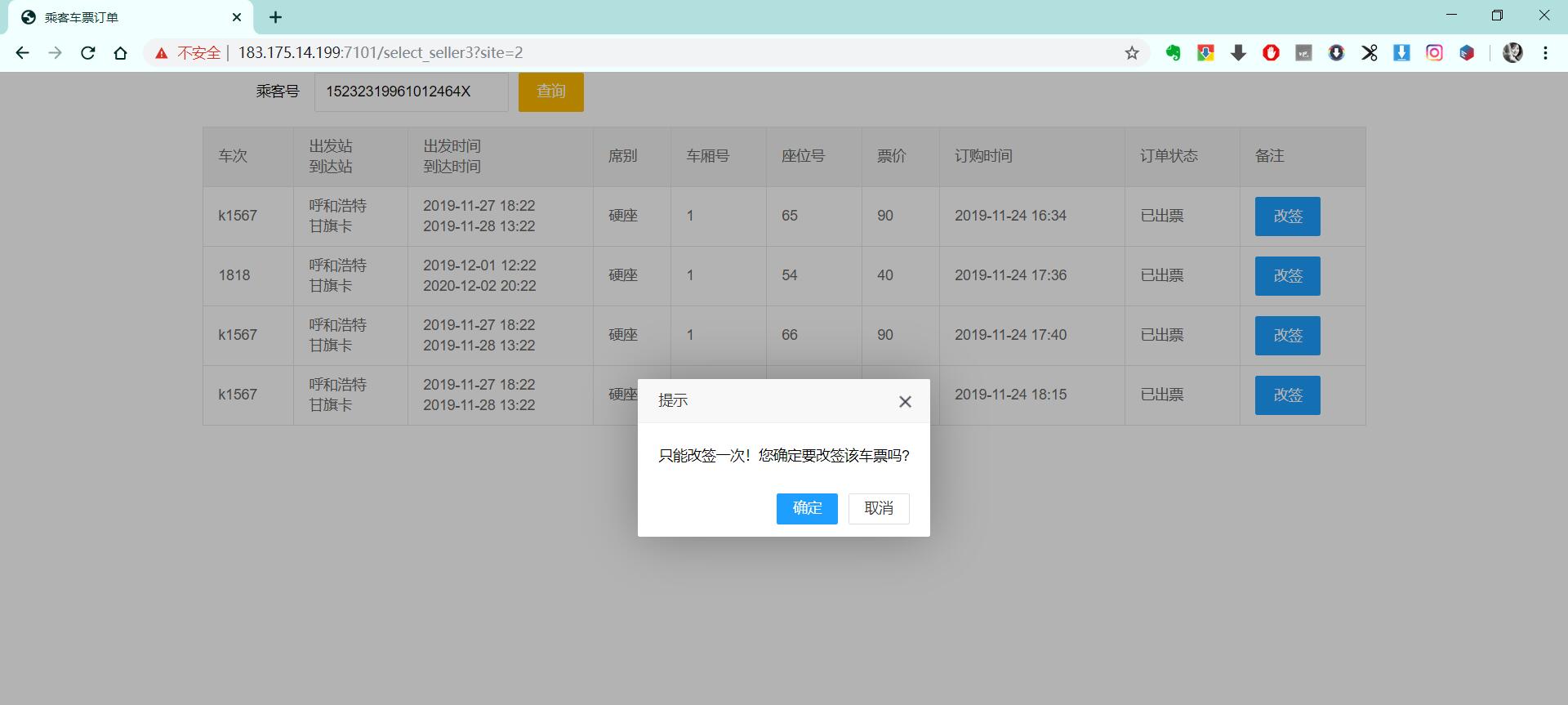
6.订单状态变为已退订。

#### 改签车票

1. 从主界面点击售票员业务的改签车票链接，跳转到改签车票界面。
2. .输入乘客号，显示该乘客购买的车票。



1. 点击改签按键。



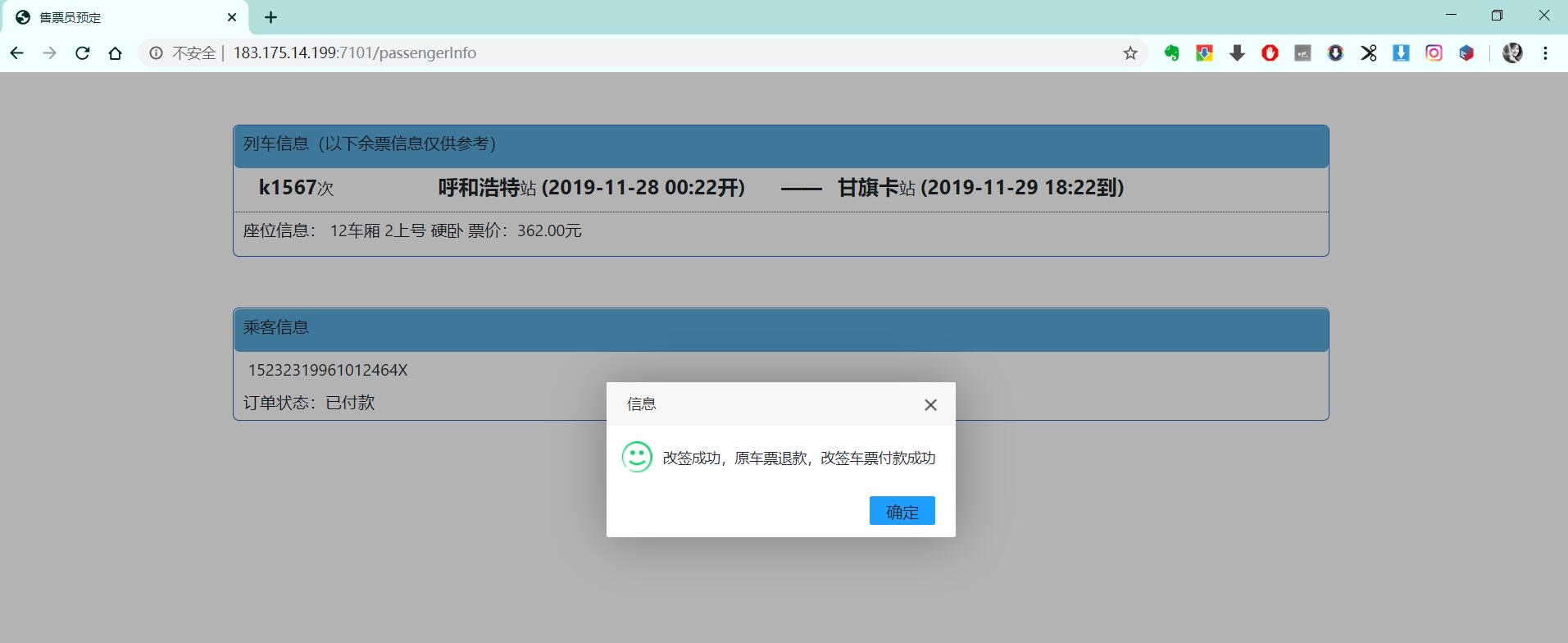
1. 点击确定。



1. 重新选择出发日期、目的地后点击约定



1. 选择席别，提交订单。



1. 改签成功

### 乘客业务

#### 购买车票

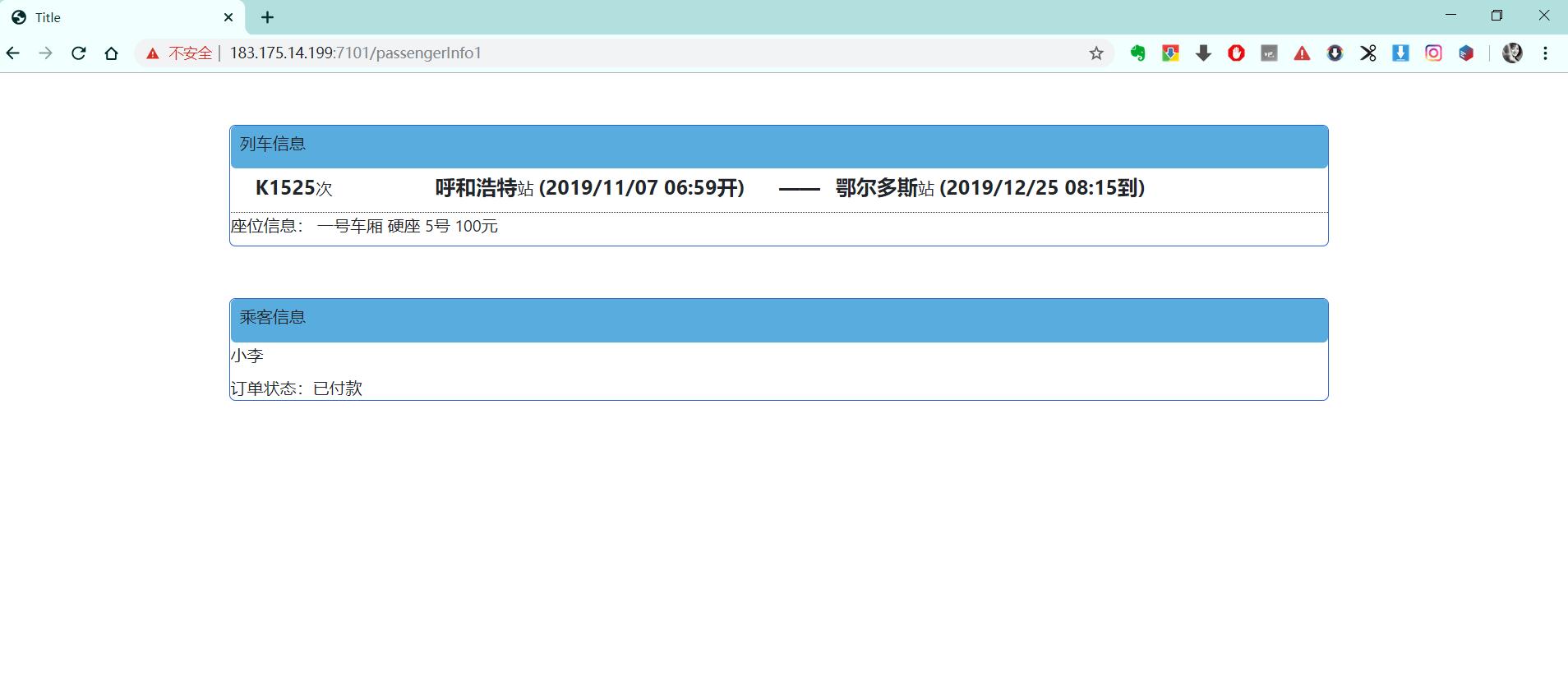
1. 输入出发地、目的地及日期，点击查询后显示相关车次：



1. 点击预定



1. 输入姓名及身份证号码，提交订单



1. 订票成功

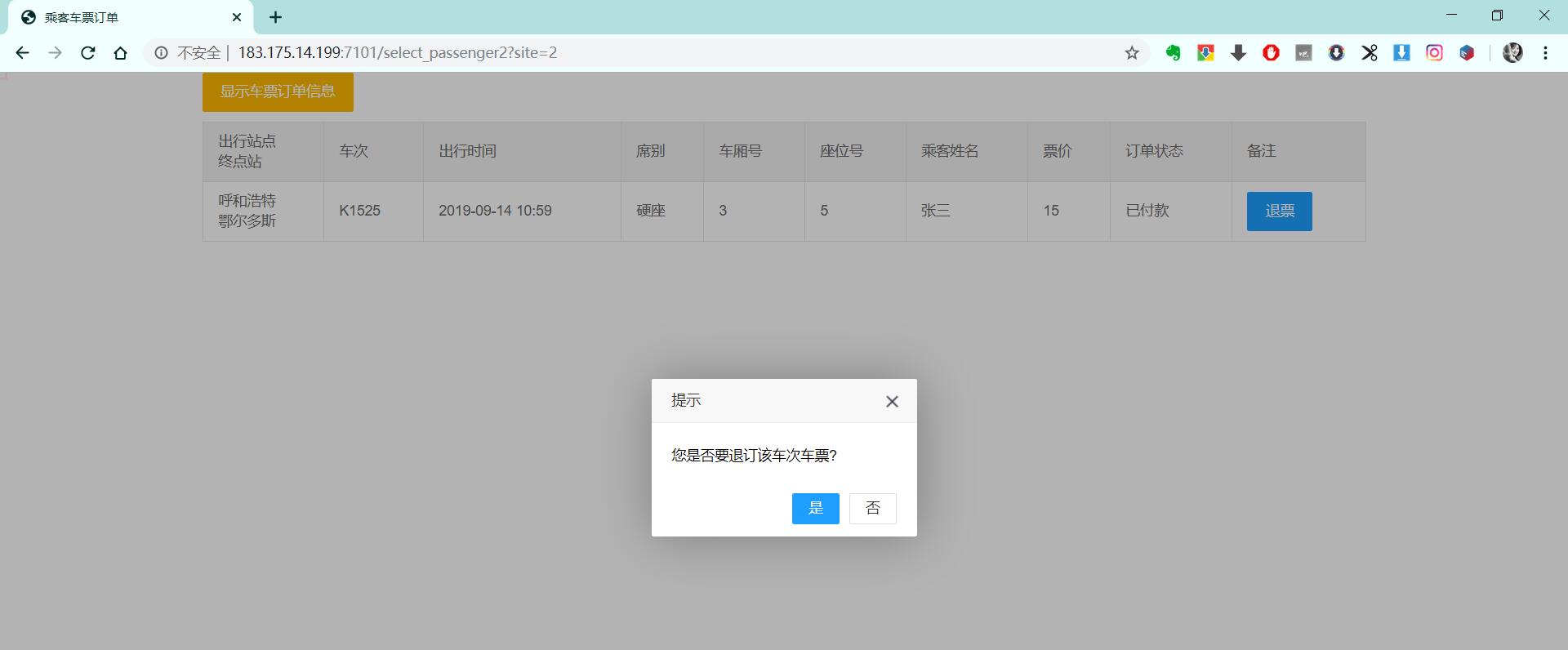
#### 退订车票

1. 从主界面点击乘客业务的退订车票链接，跳转到退订车票界面。

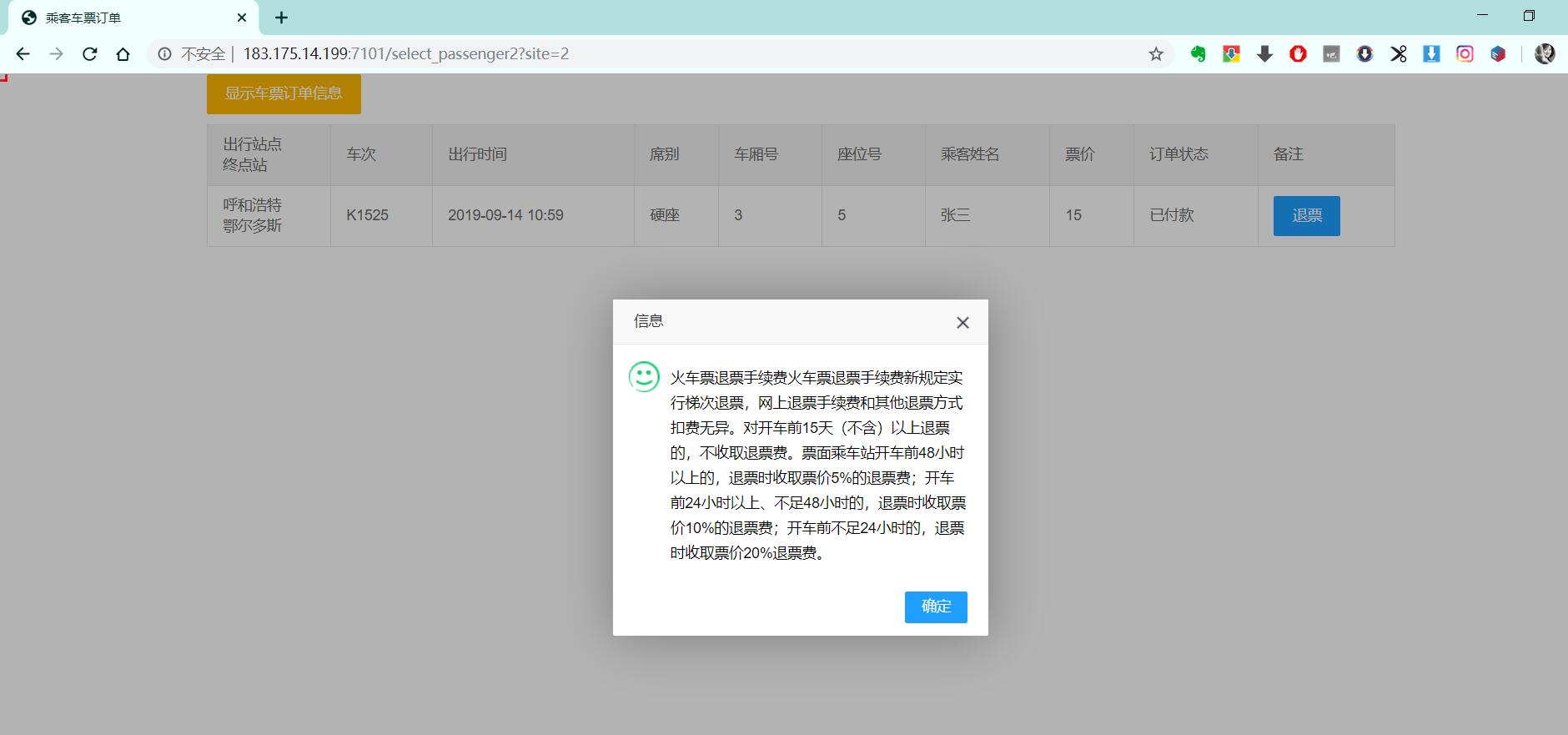
2. 点击“显示车票订单按钮”，显示该乘客购买的车票。



3.点击退票



4.点击“是”



5.点击“确定”

6.重新刷新页面，点击显示“车票订单信息”。订单状态已改为“已退票”。

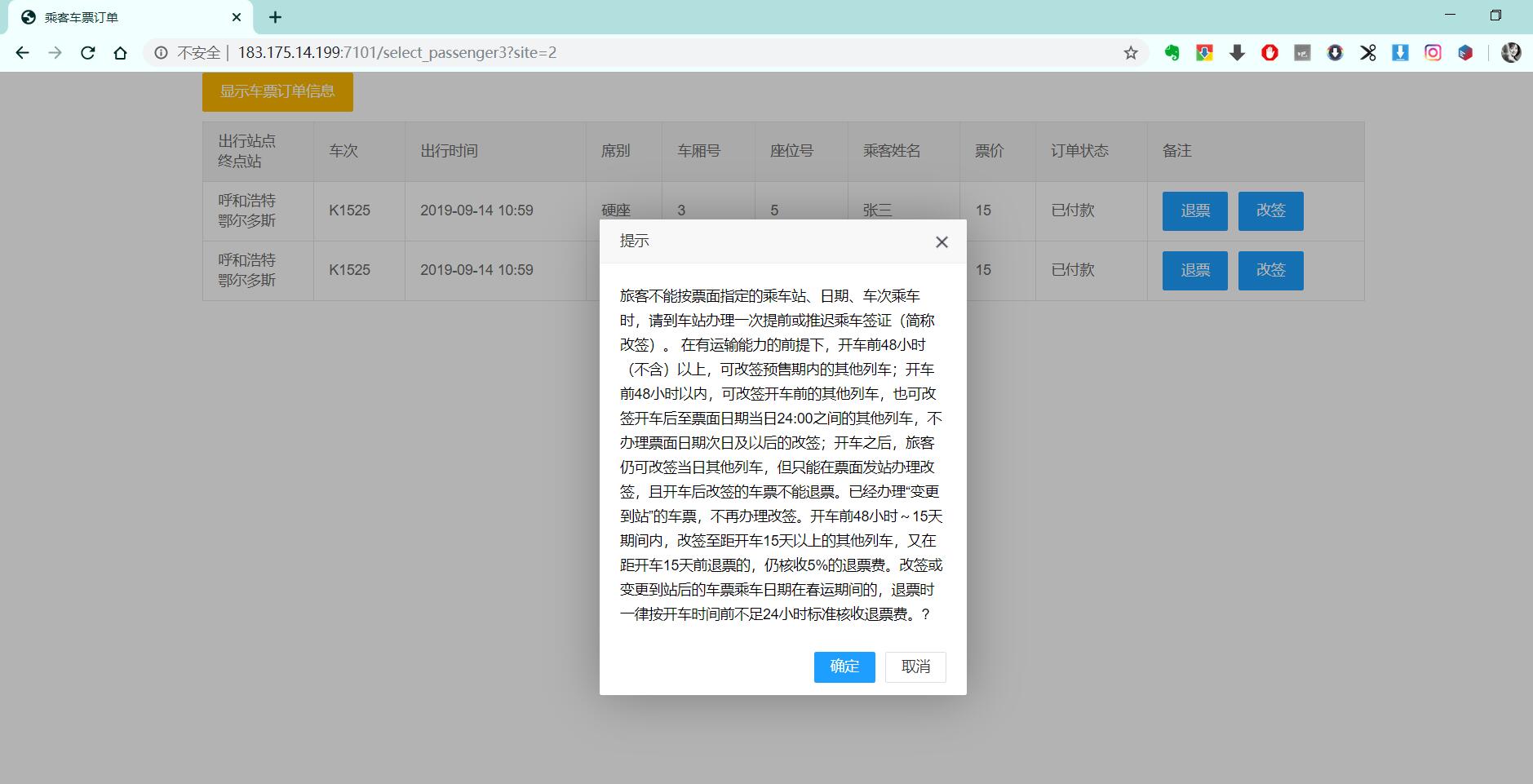


#### 改签车票

1. 从主界面点击乘客业务的改签车票链接，跳转到改签车票界面。
2. 点击“显示车票订单按钮”，显示该乘客购买的车票。



1. 点击改签按钮，提示信息，点击确定。



1. 选择改签日期，并点击查询。

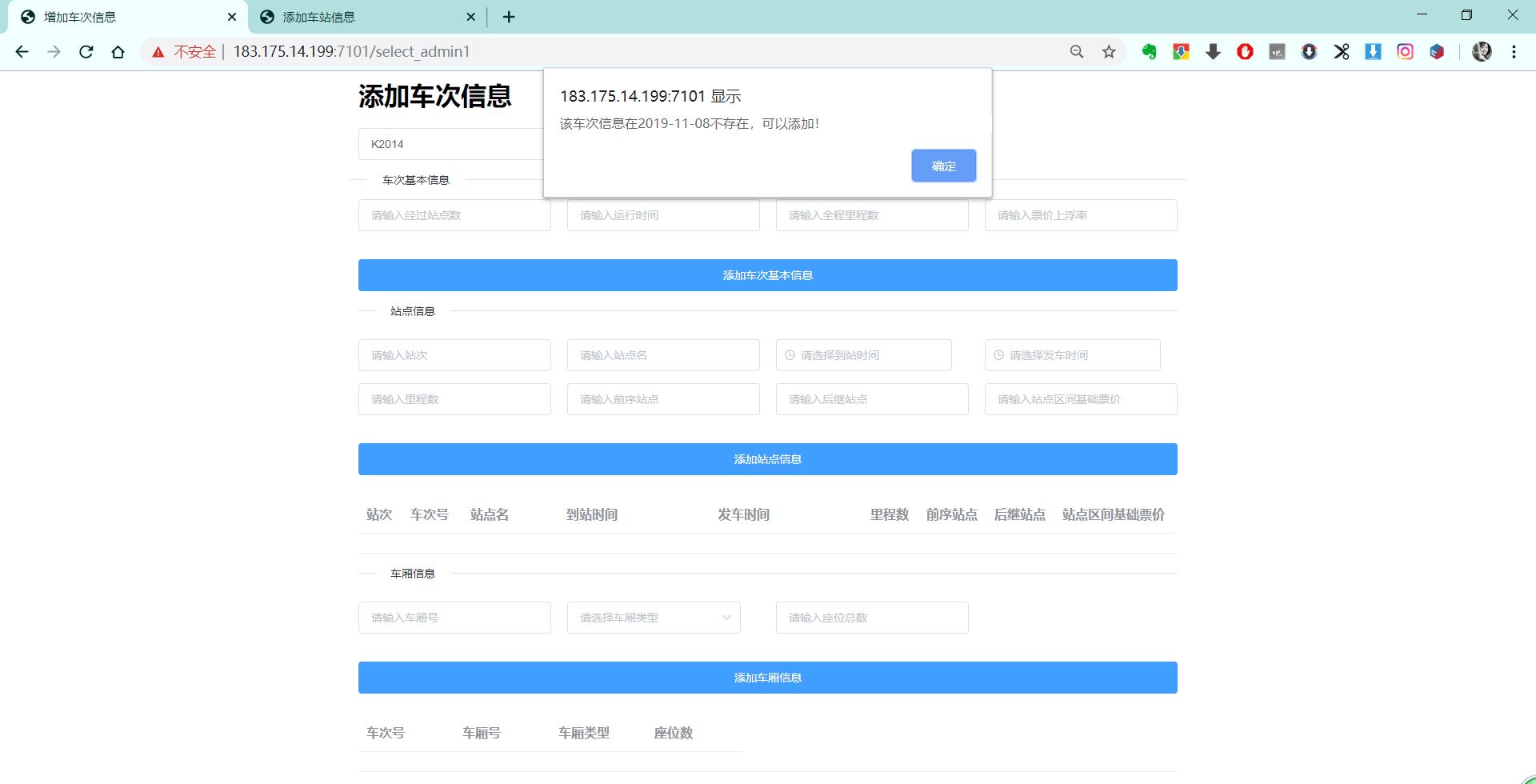


1. 点击预定按钮。
2. 确认订单。
3. 改签成功。

### 管理员业务

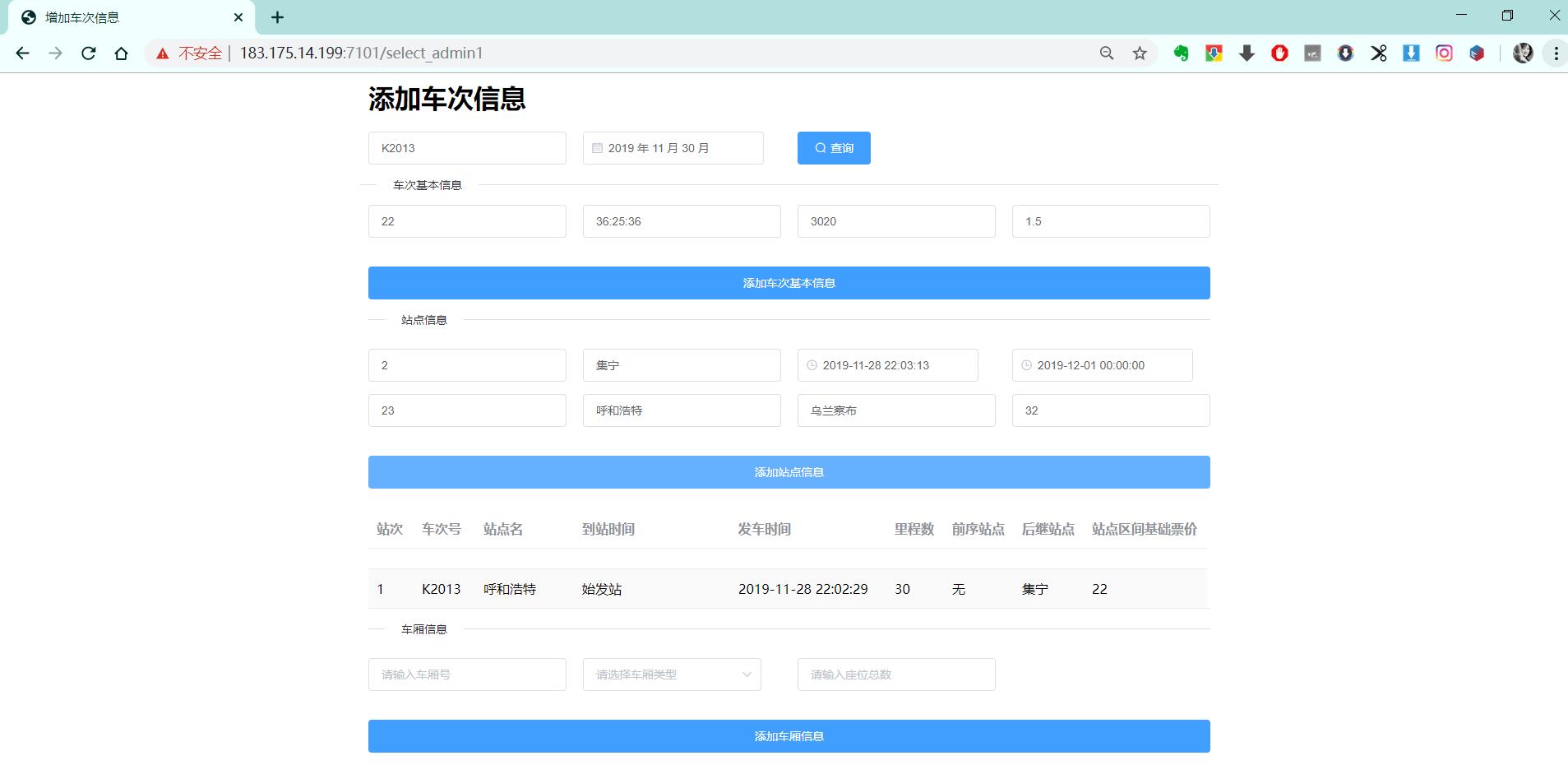
#### 增加车次

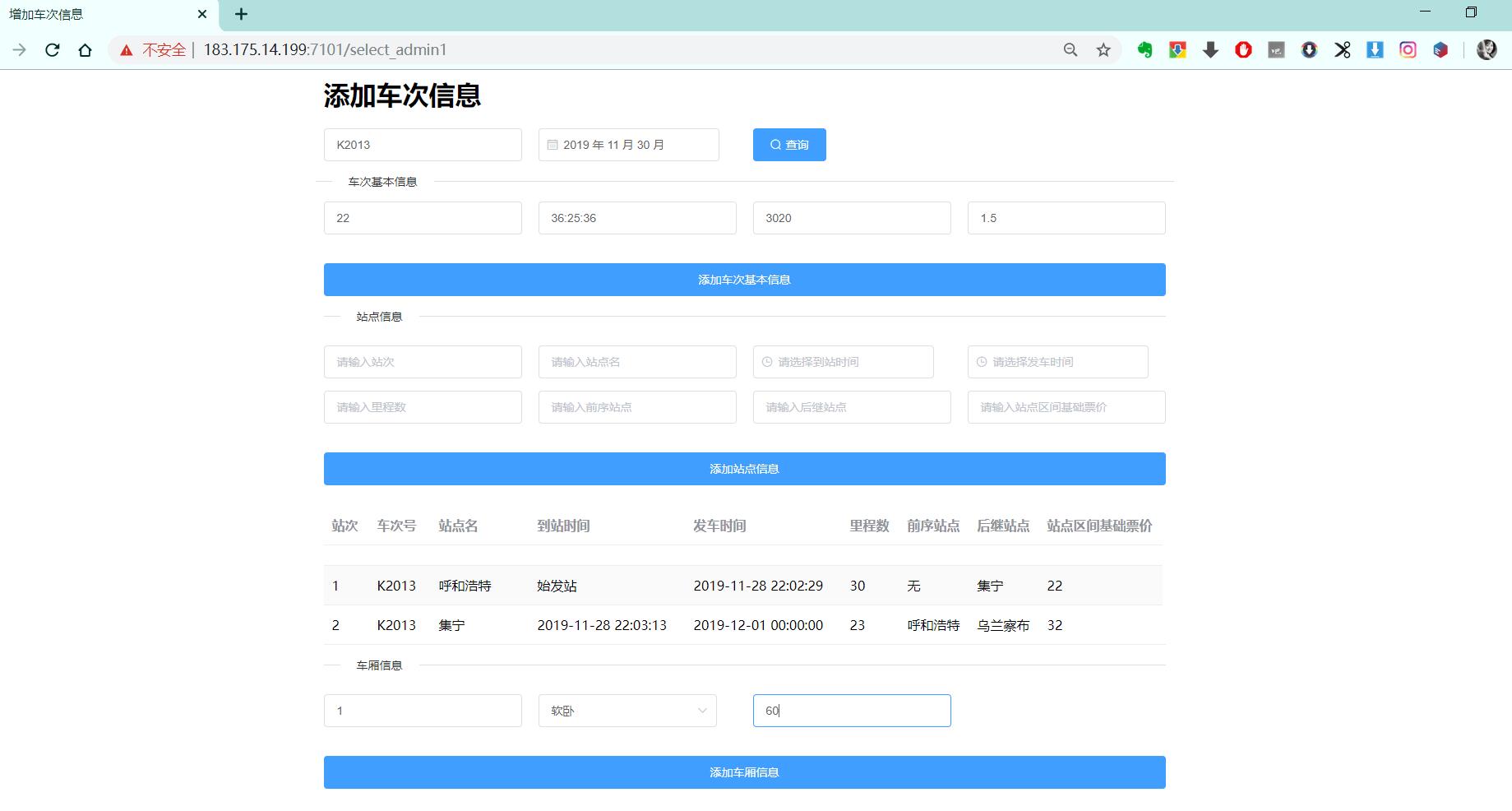
1. 输入车次、发车日期，点击查询：



1. 依次输入车次基本信息、站点信息和车厢信息，并分别按下相应的添加按钮：（若该车次存在则不必输入车次基本信息，只需输入相应日期的站点信息和车厢信息）





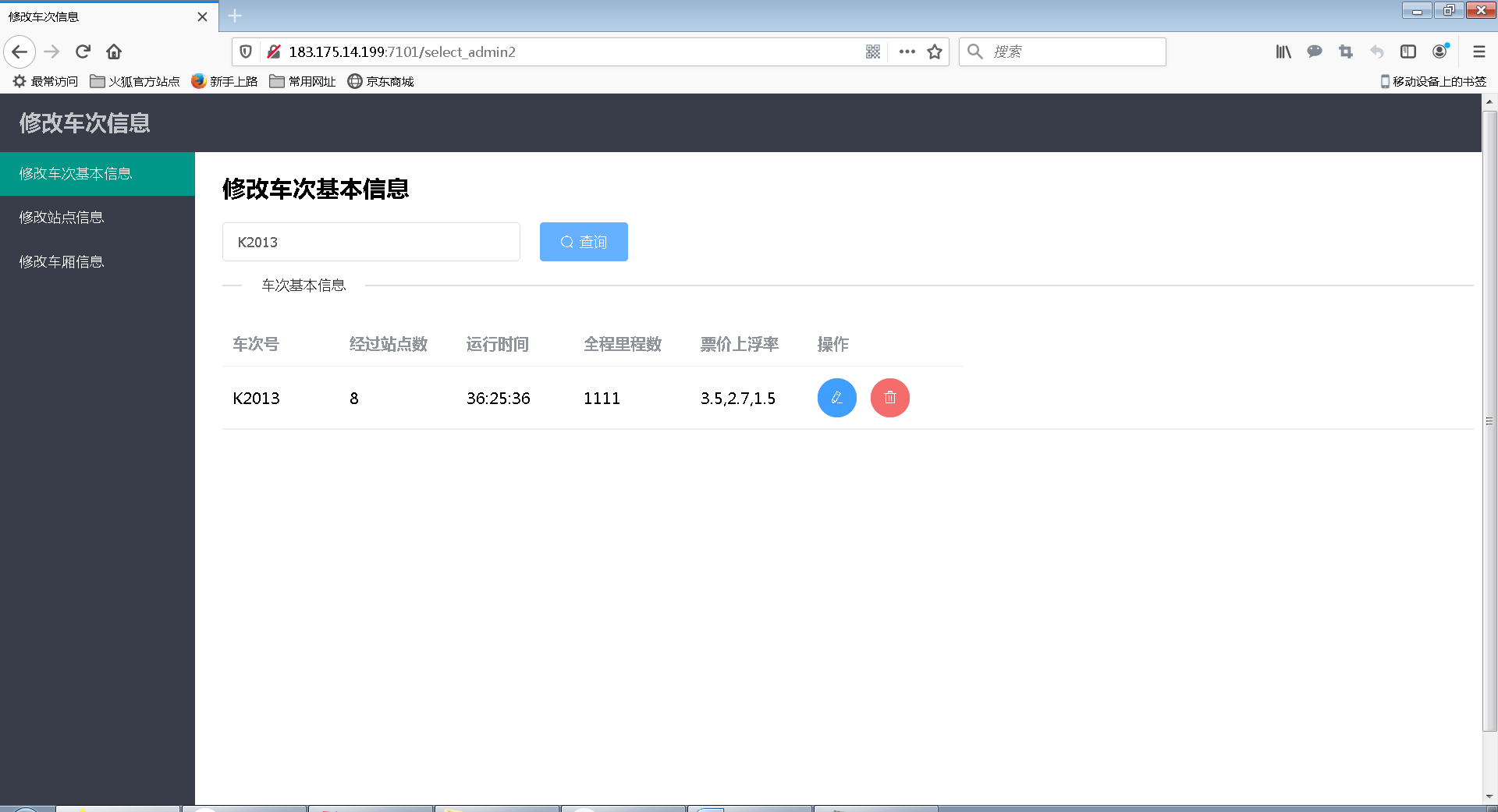


1. 显示添加成功：

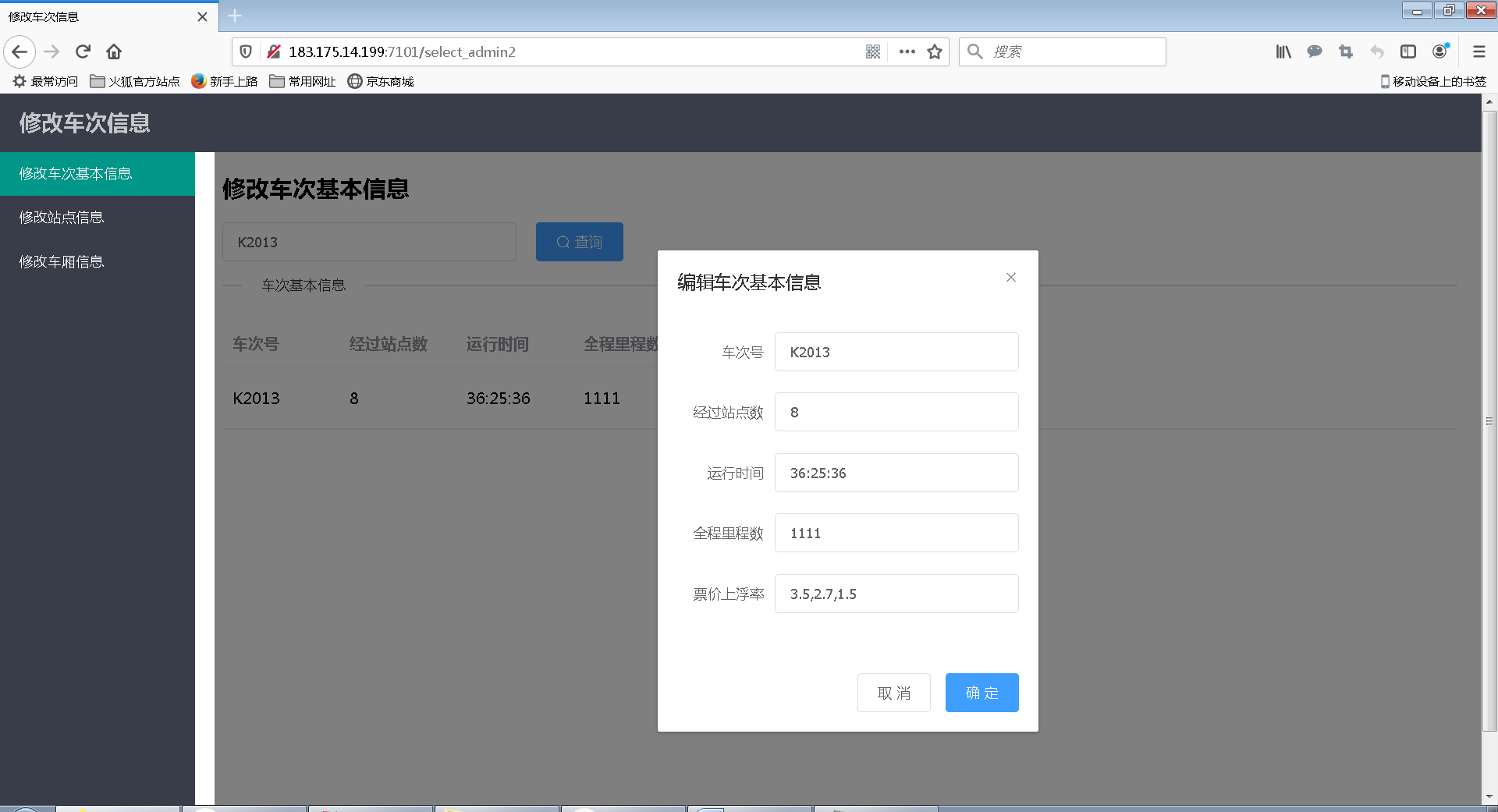


#### 修改车次

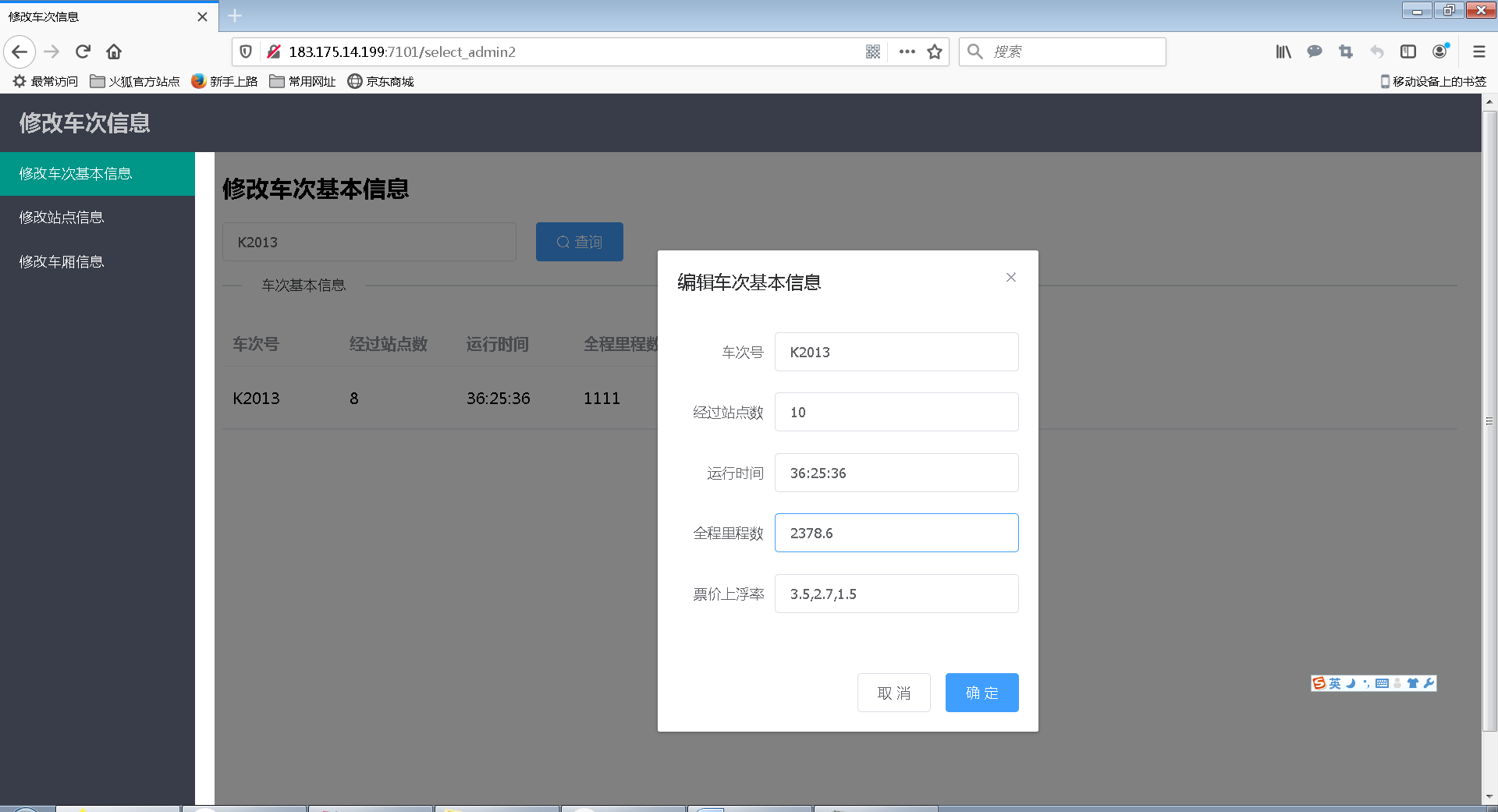
1. 输入车次号（如K2013）

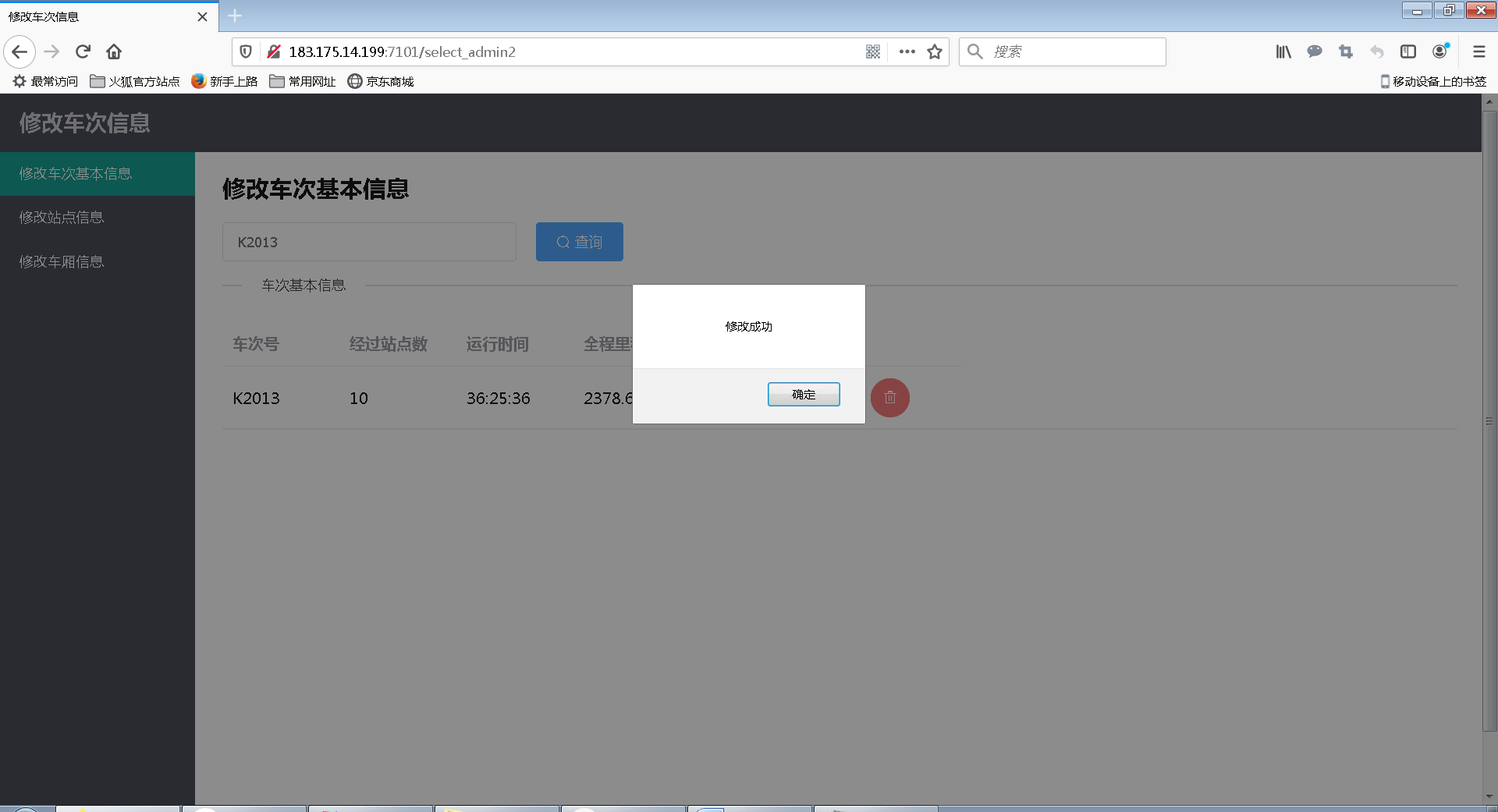


1. 修改车次基本信息：
   1. 点击蓝色编辑图标，跳转到以下界面

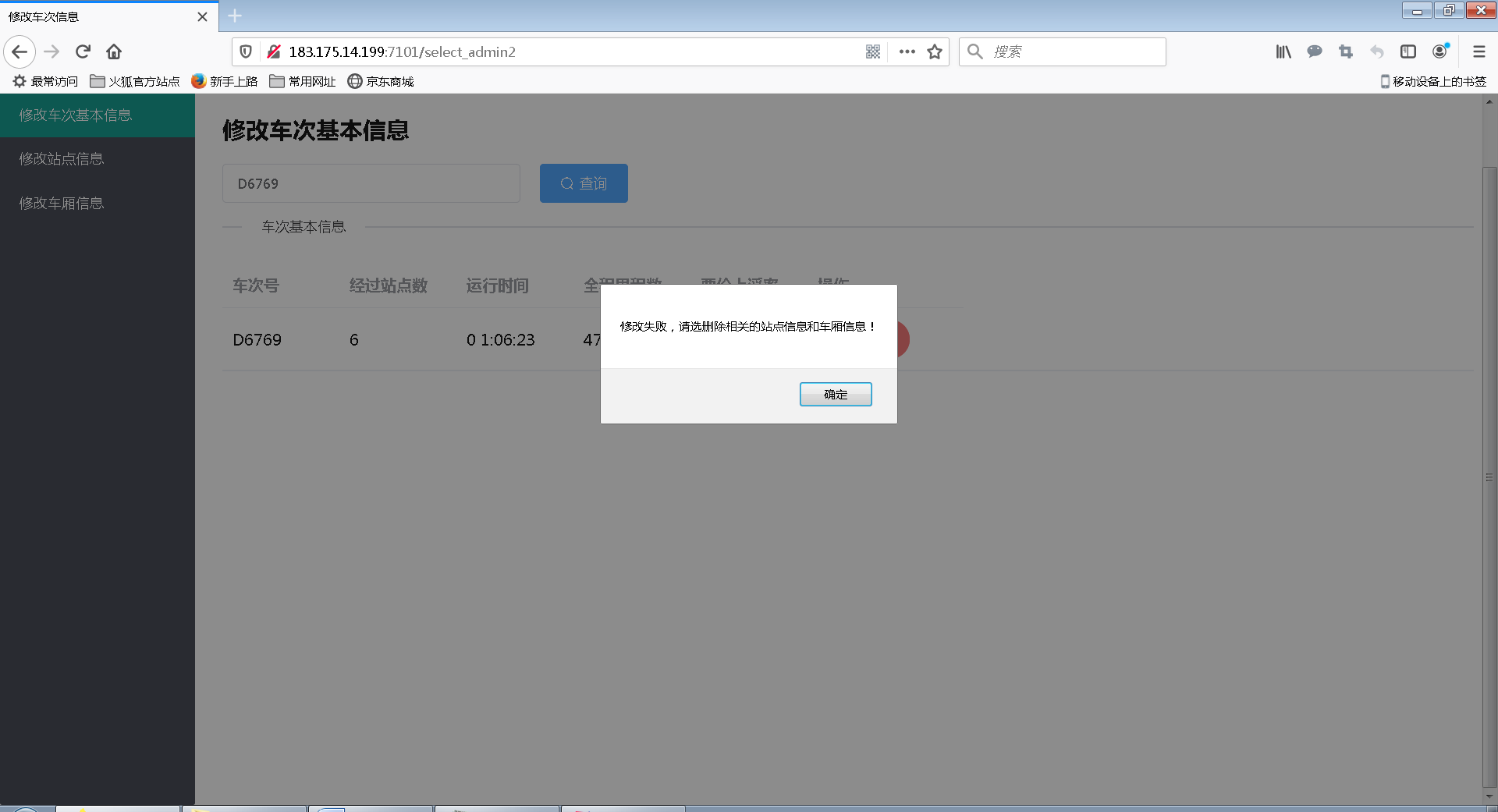


* 1. 修改信息（如将经过站点书改为10，全程里程数改为2378.6），点击确定。





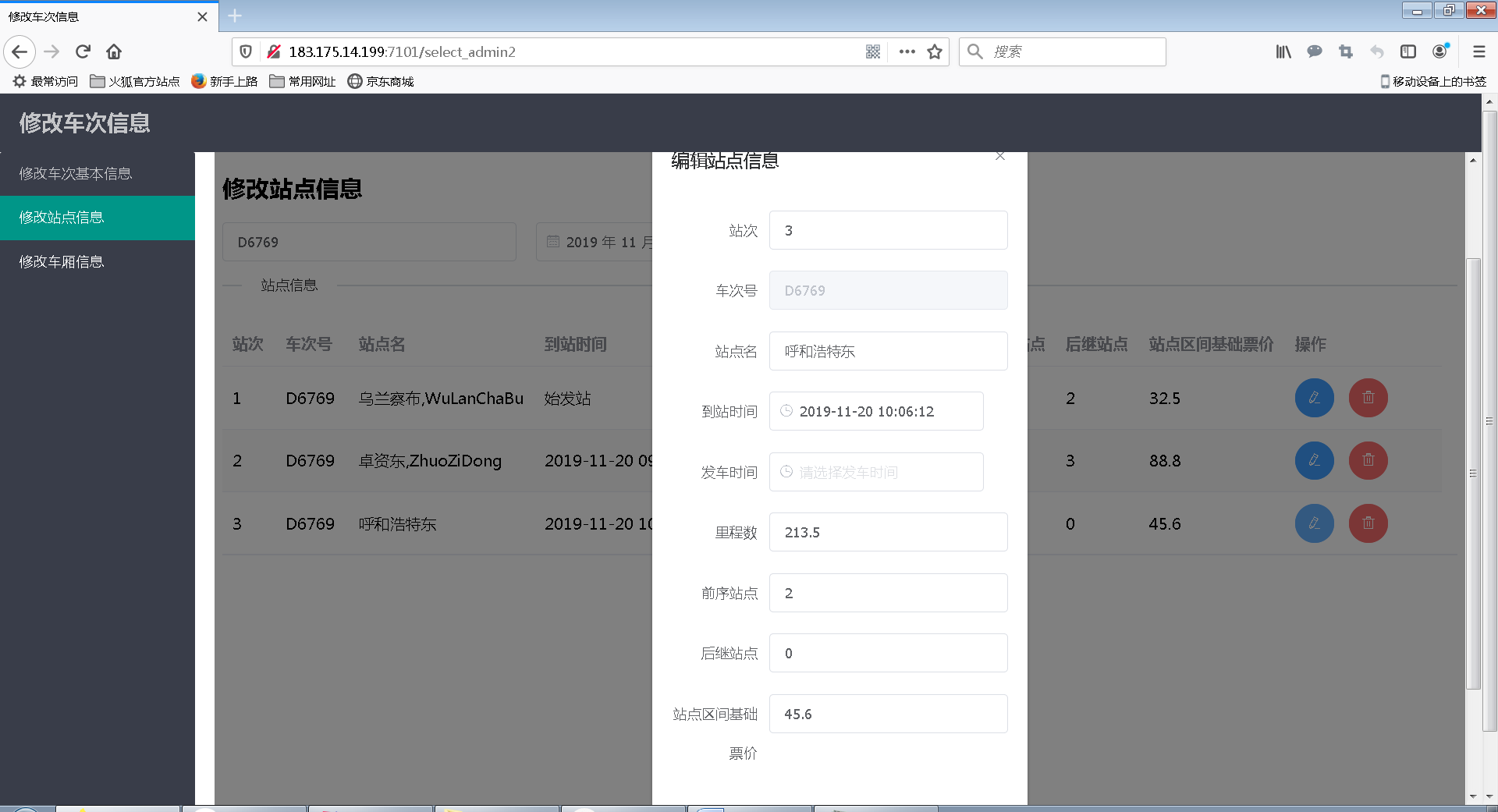
* 1. 当该车次有相关的站点信息或者车厢信息时（如D6769）：



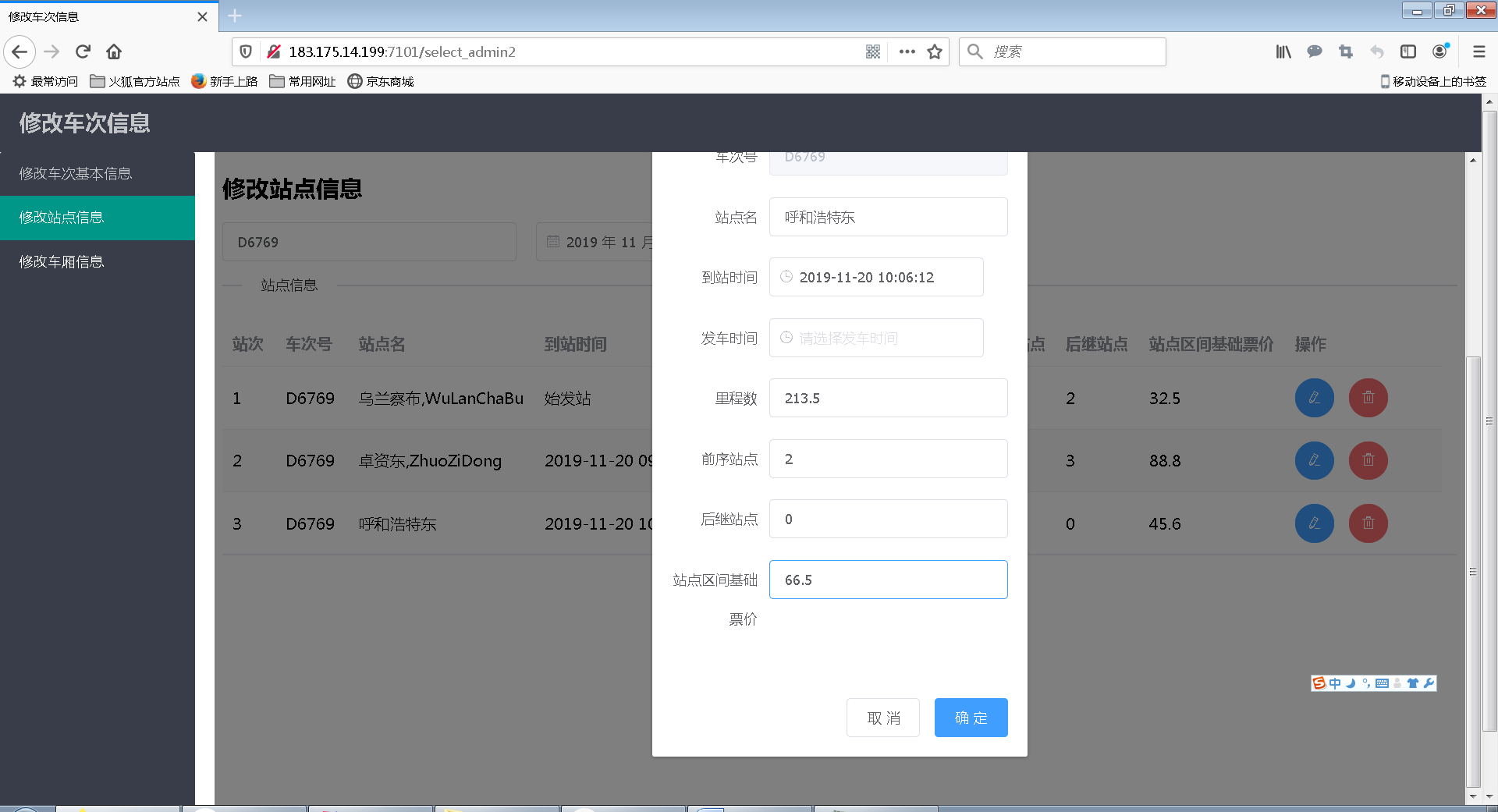
1. 点击左侧的“修改站点信息”，输入车次号和发车日期（如D6769 2019年11月20日）：

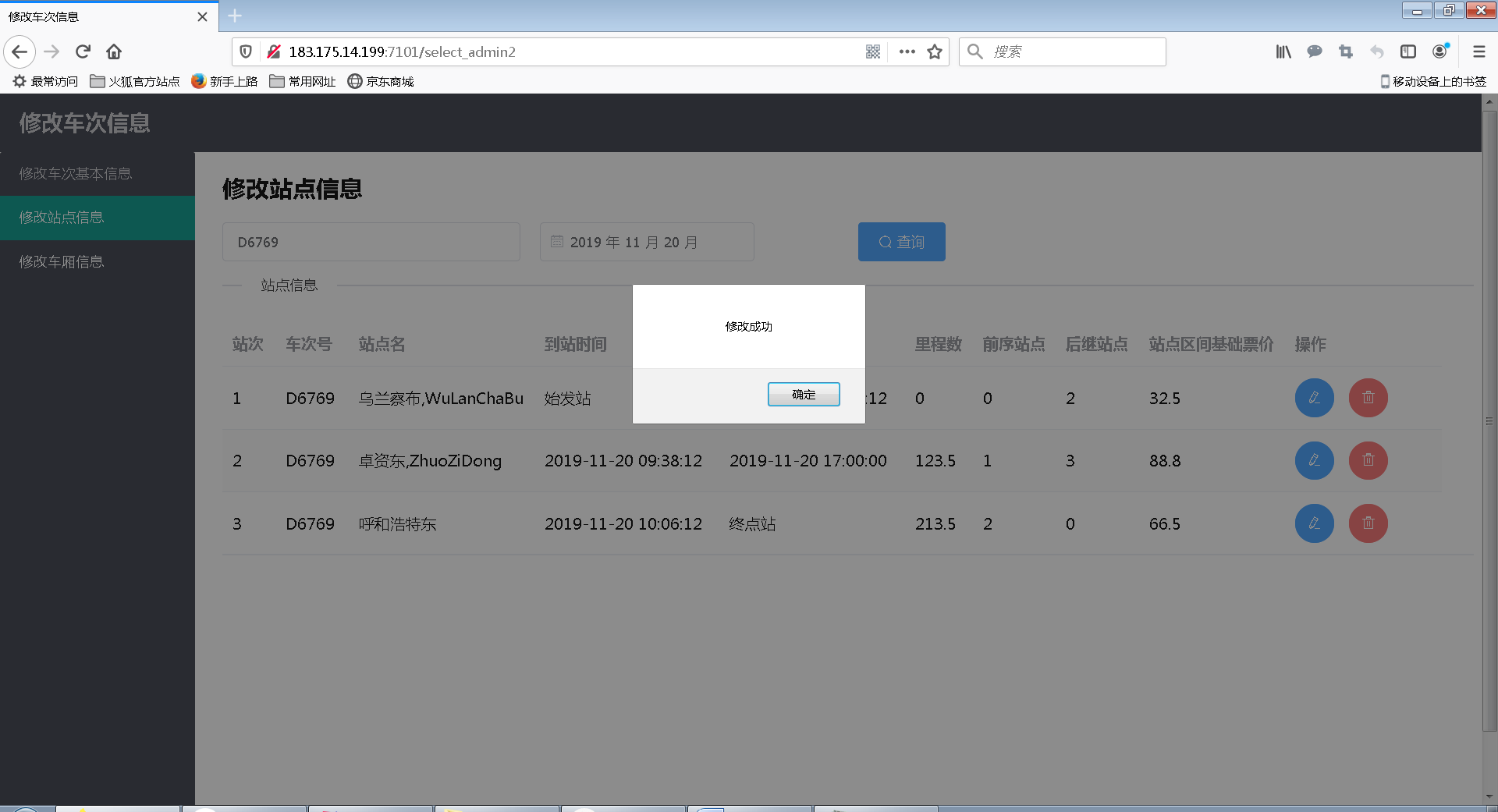


* 1. 点击蓝色修改按钮，跳转到以下界面。

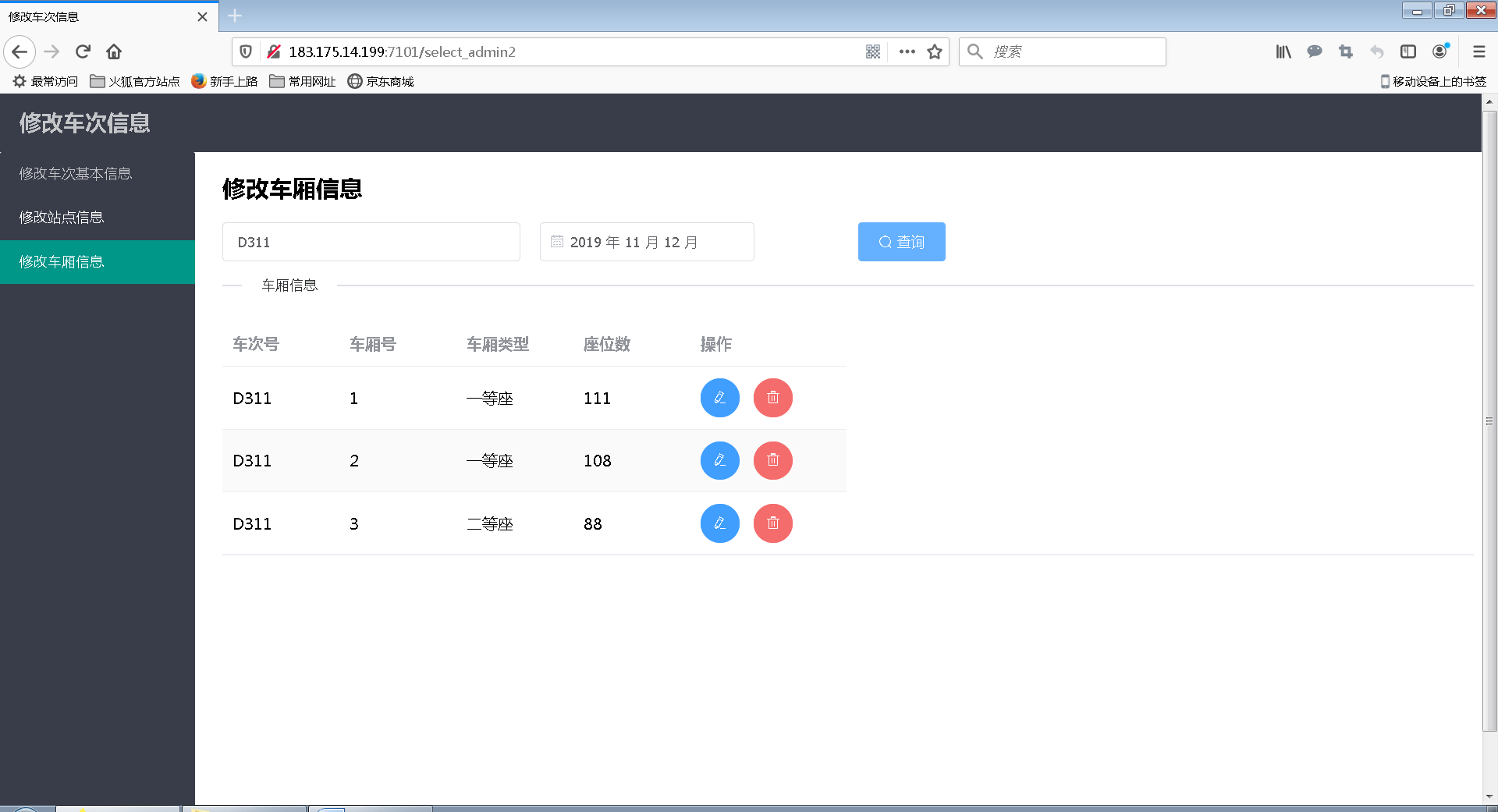


* 1. 修改站点信息（这里站点区间基础票价为66.5），并点击确定。

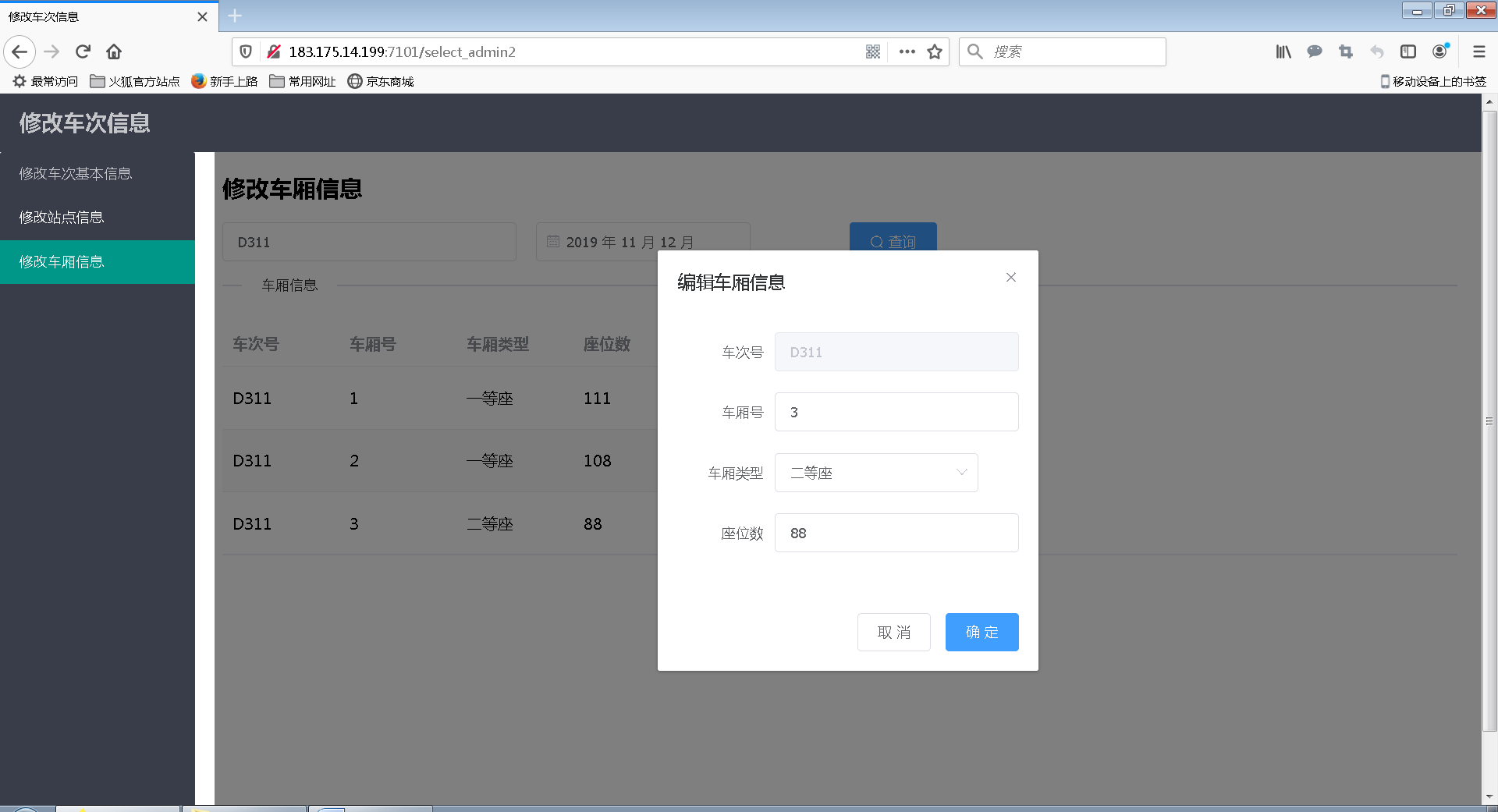




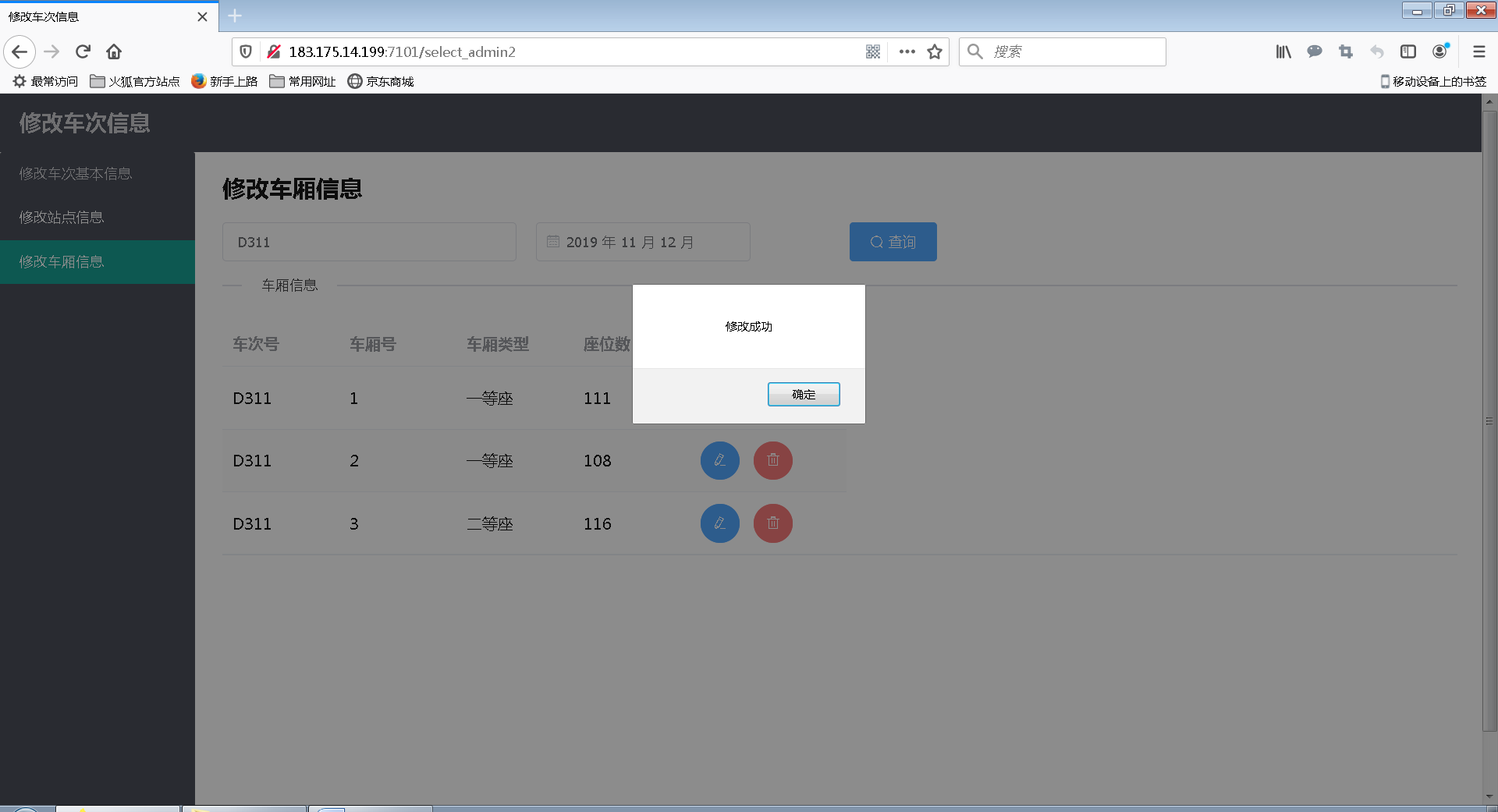
1. 修改车厢信息
   1. 点击左侧导航栏中“修改车厢信息”，输入车次号和发车日期（如 D311 2019年11月12日），点击“查询”：



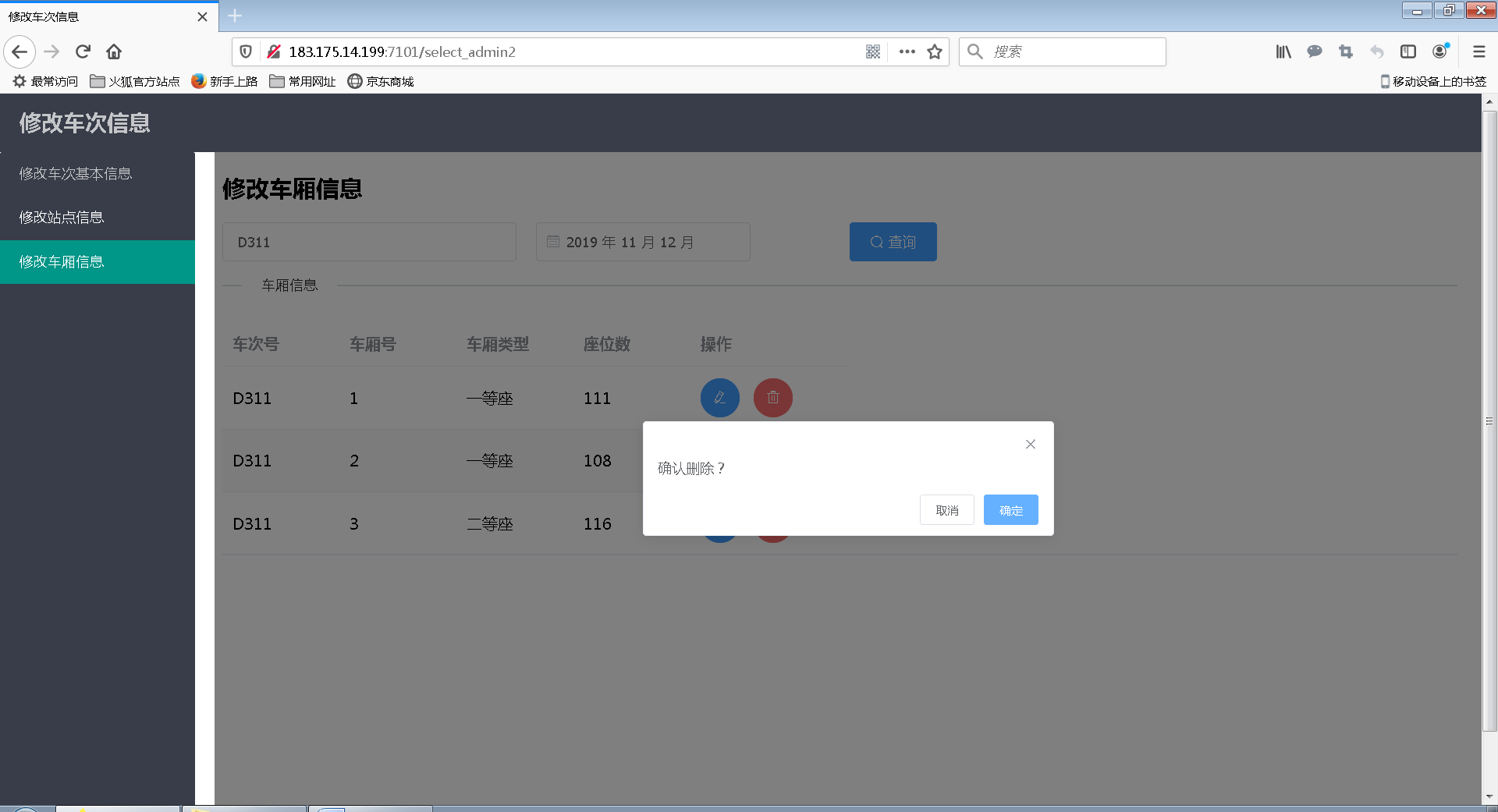
* 1. 点击蓝色修改按钮：



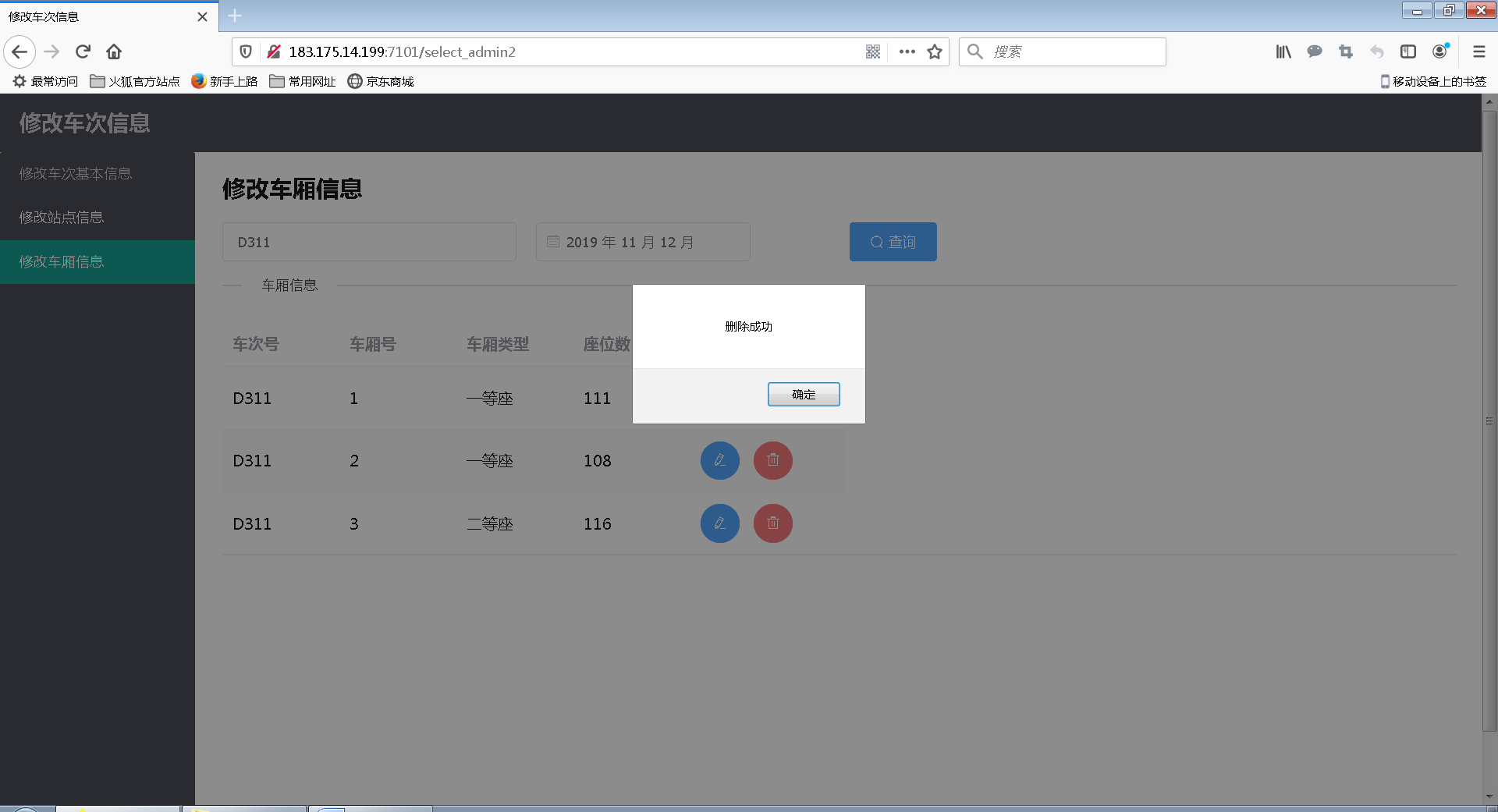
* 1. 输入修改信息（如把座位数改为116），点击确定按钮，显示修改成功：



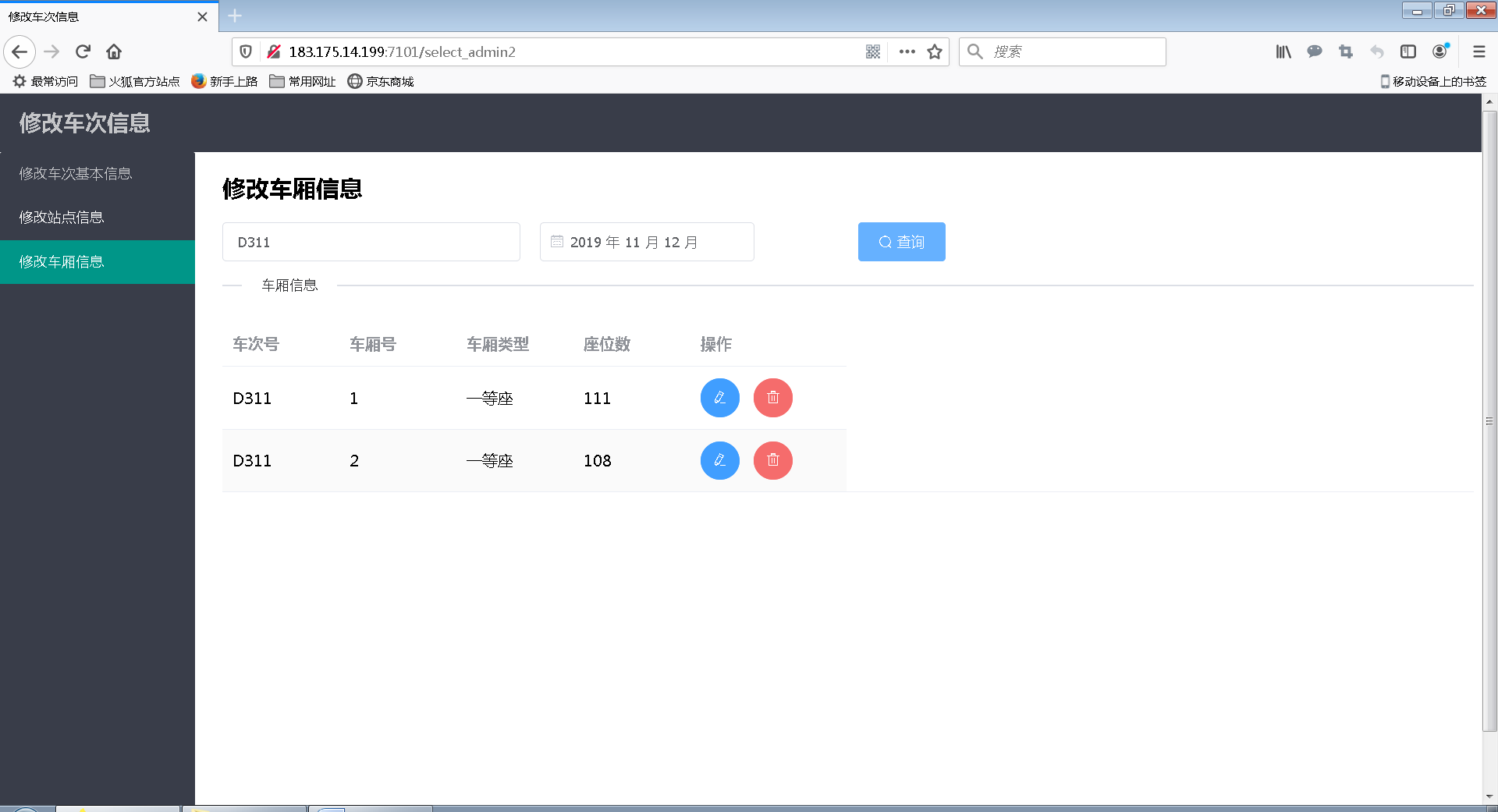
1. 删除车厢信息
   1. 点击红色删除按钮



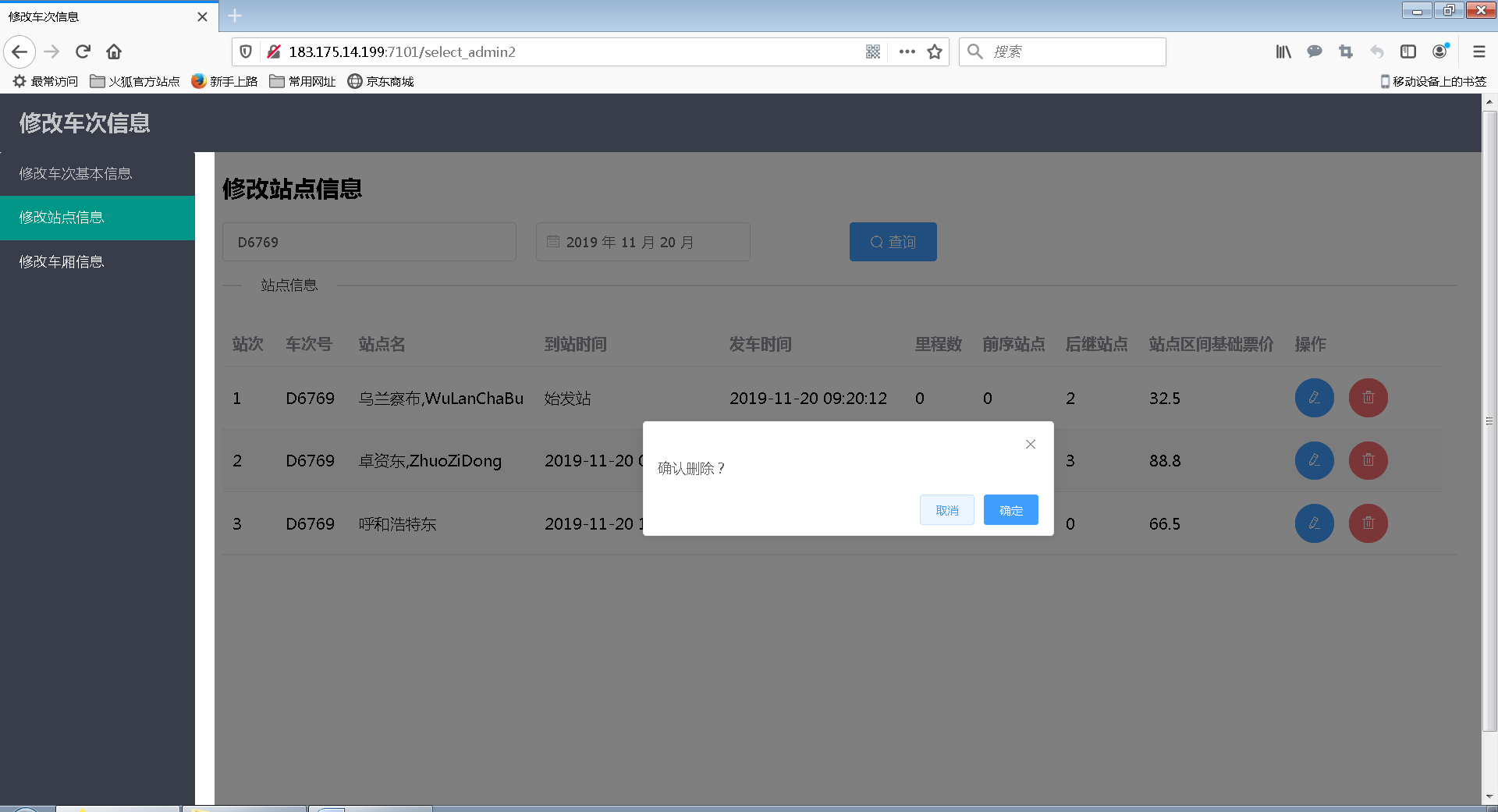
* 1. 点击确定，提示删除成功：



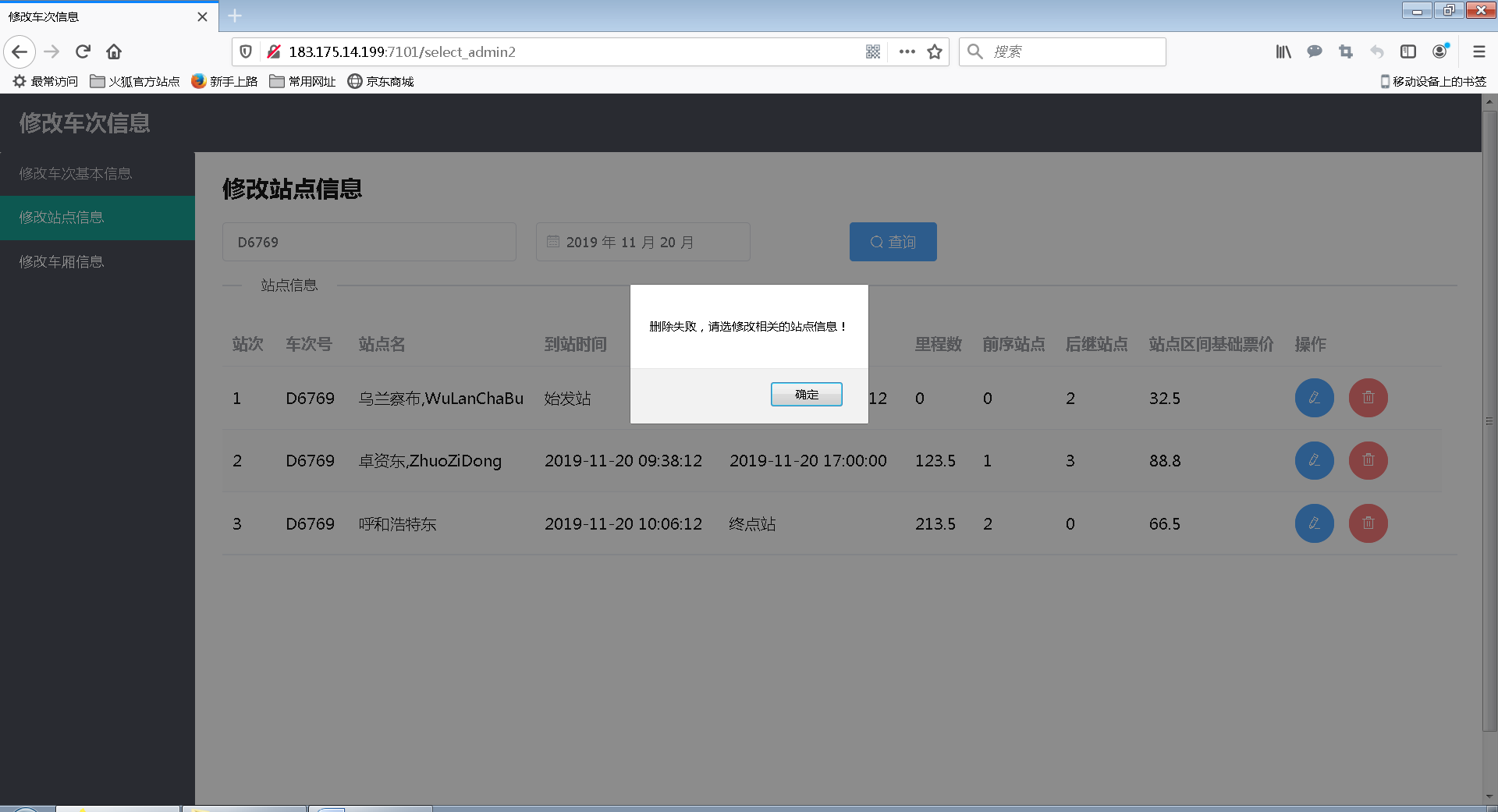
* 1. 重新查询一下



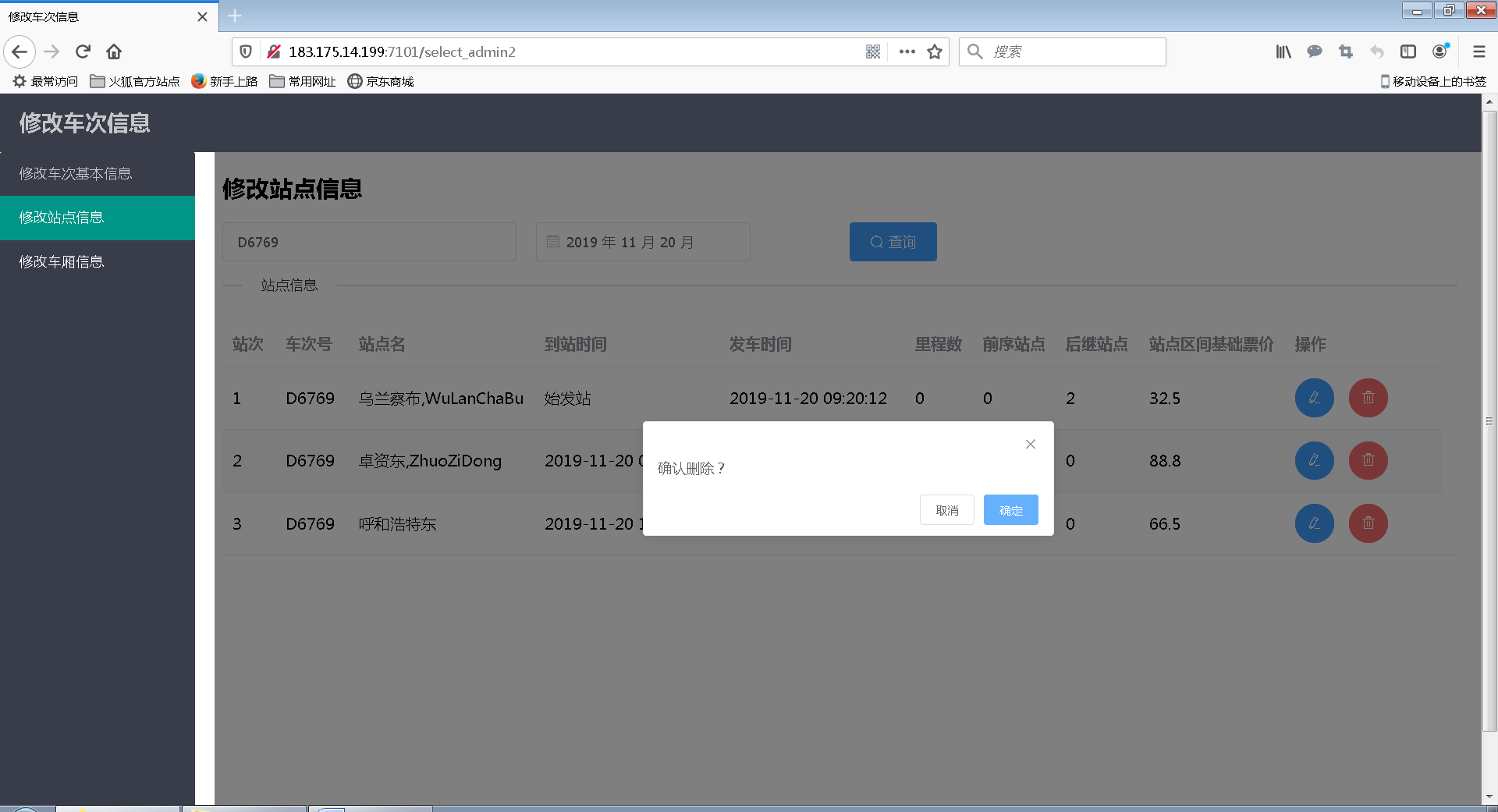
1. 删除站点信息
   1. 点击红色删除按钮：

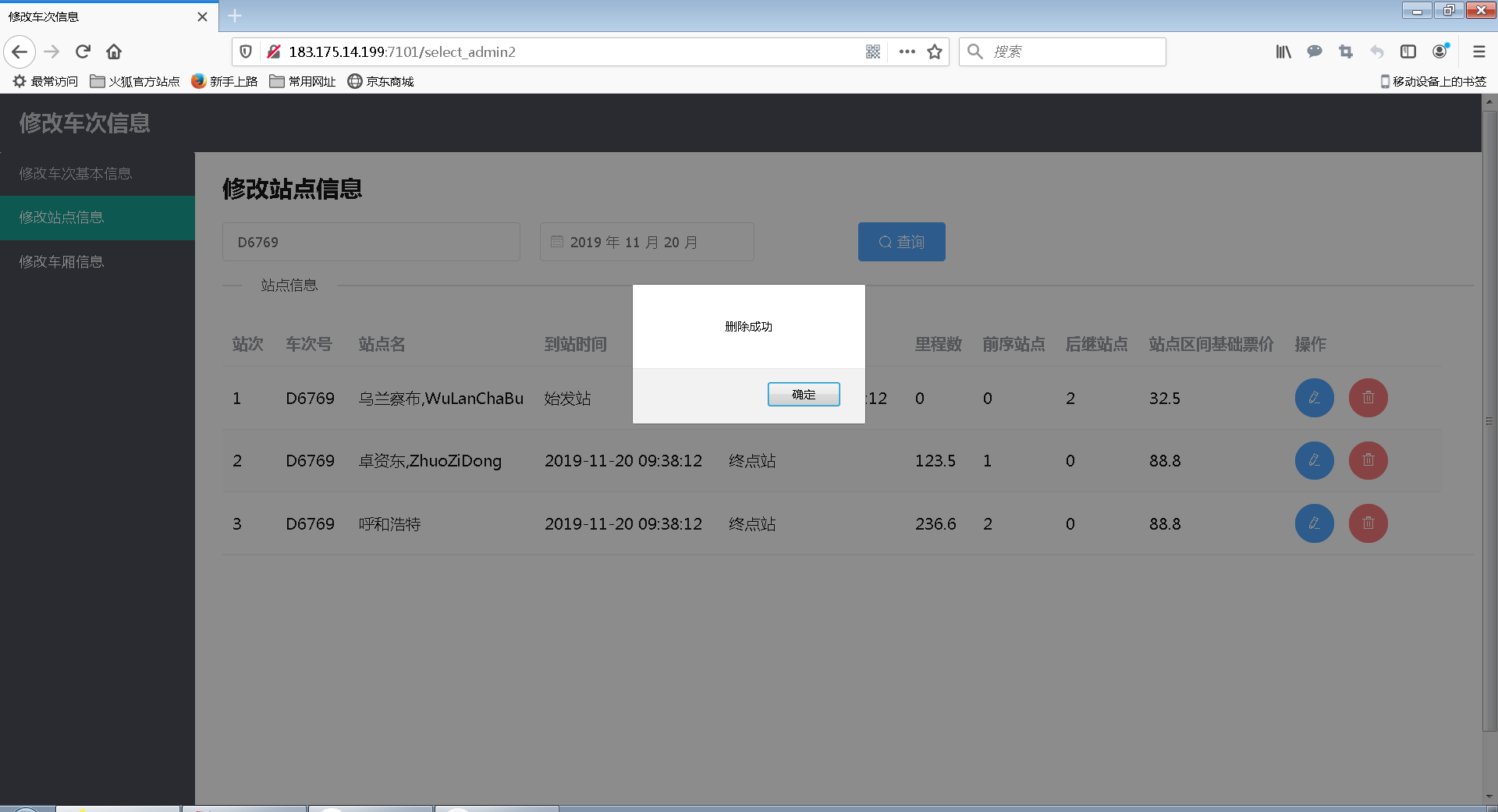


* 1. 当要删除的这个站点为其他站点的前序或者后继站点时（如站点2），提示：

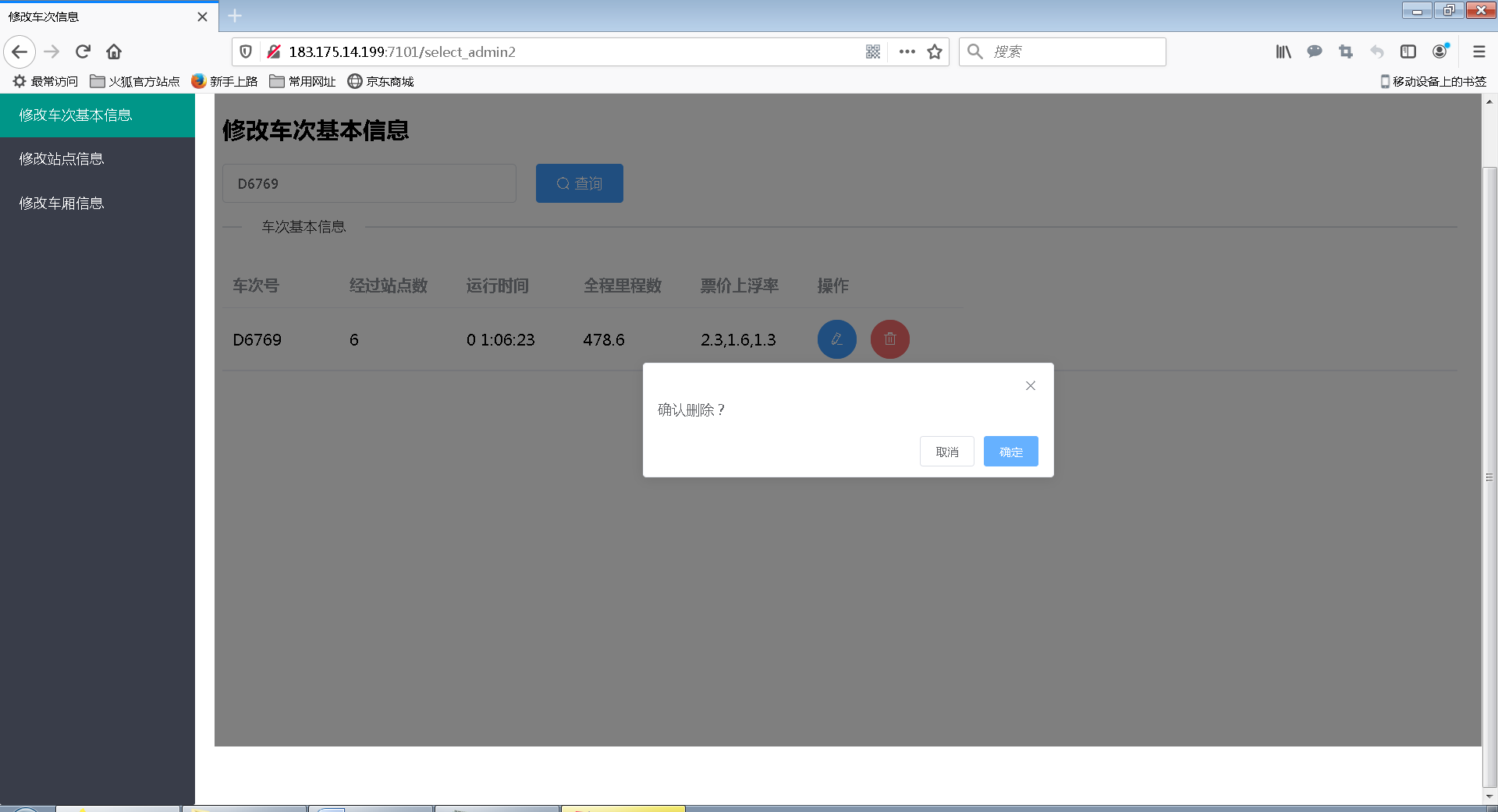


* 1. 要删除的这个站点没有其他相关的站点时（把站点二的后继站点改为0），点击确定按钮：

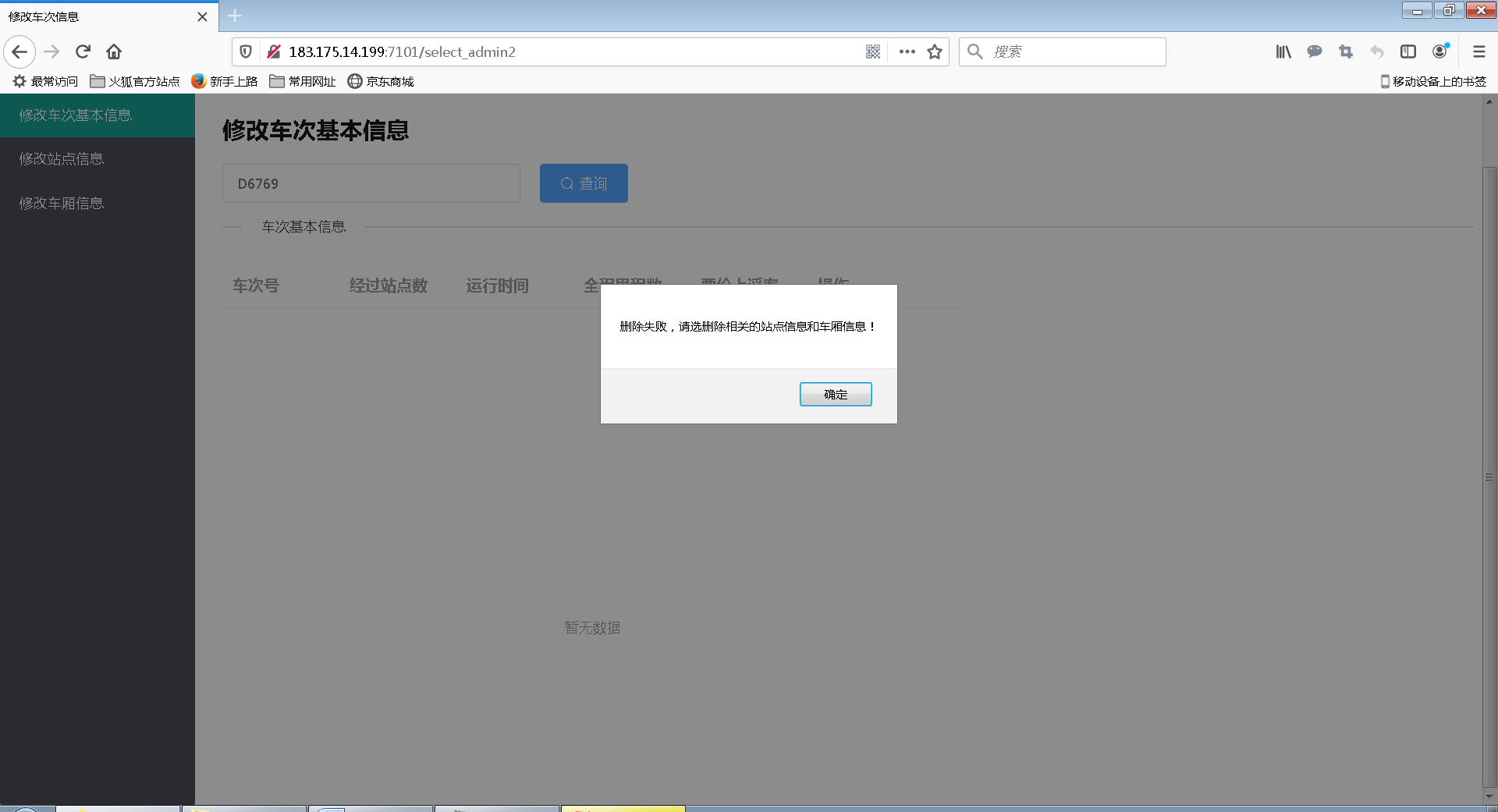




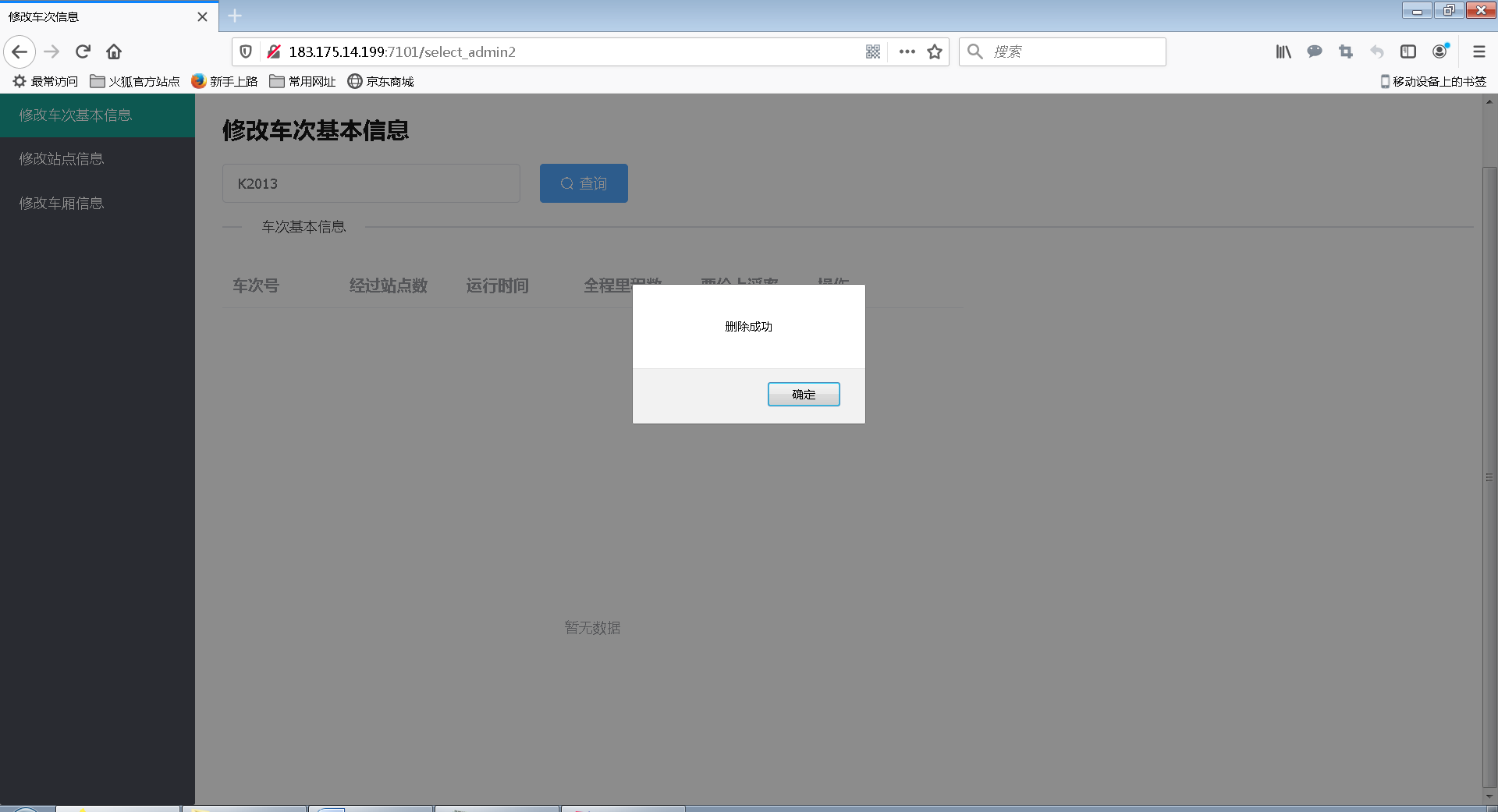
1. 删除车次基本信息
   1. 点击红色删除按钮：



* 1. 当该车次号有相关的站点信息或者车厢信息时，会提示：

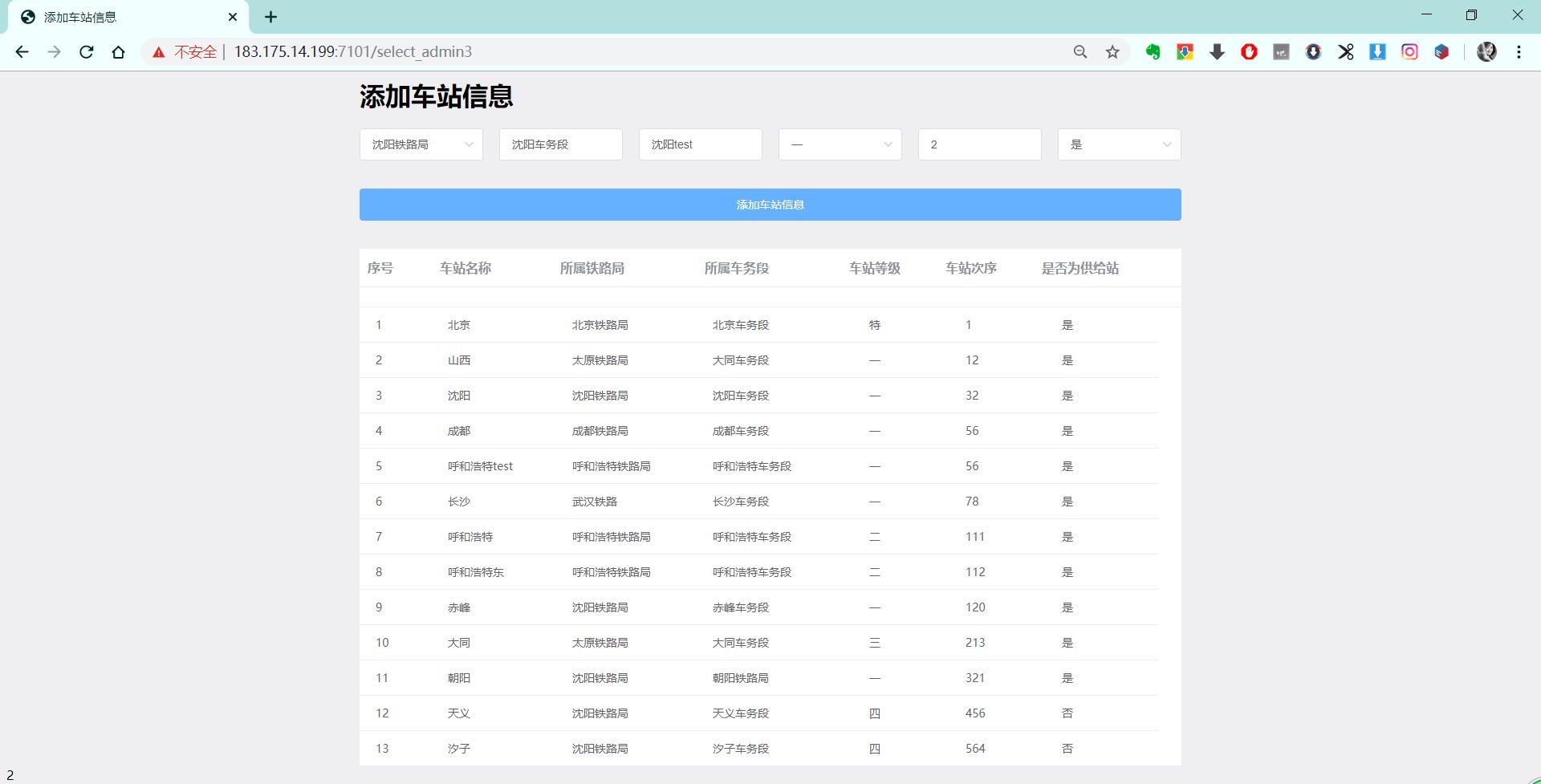


* 1. 当该车次没有相关的站点信息或者车厢信息时（如K2013）,删除成功：

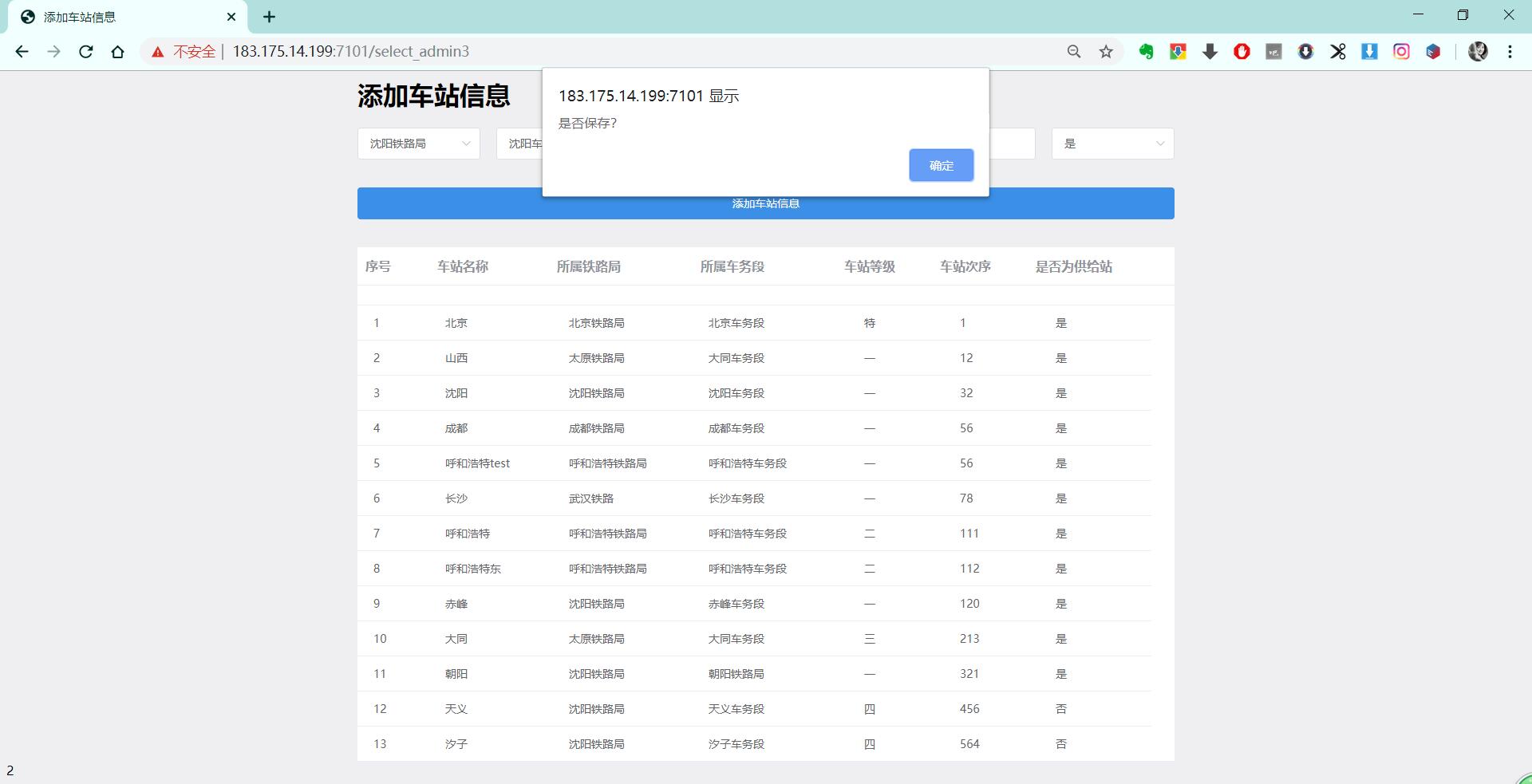


#### 增加车站

1. 从主界面点击管理员业务的增加车站链接，跳转到增加车站界面。
2. 输入对应信息、并点击添加按钮。



1. 弹出弹窗提是否保存，点击确认。



1. 添加成功。

