商场促销系统

数据库设计文档（Proposed version）

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# 介绍

## 目的

这篇文档是商场促销系统的数据库设计文档。本文档说明的过程是：在需求分析文档的基础之上，对需求分析中提出的用例模型（数据库概念模型）进行扩展，进一步细化细节后设计生成了本文档中的数据库逻辑模型和物理模型，使得系统在数据上能够直接有能够运行的数据库作为数据源支撑其业务层的运行。

## 范围

这篇文档所介绍的内容范围紧紧围绕商场促销系统数据库建立所需要的分析和设计，包括其中数据库的逻辑模型和物理模型这两个重要的环节，以及建立数据库的PL/SQL脚本；除了数据库概念模型外（已经在需求分析用例部分体现），本文档还不包括与数据库关系不大的部分或非数据库中心的部分，如系统的设计、如何连接数据库等。

## 定义，缩写词

1. 促销系统：商场促销系统；
2. ERD/E-R图：Entity-Relationship Diagram；
3. 逻辑模型：数据库逻辑模型；
4. 物理模型：数据库物理模型；

## 参考资料

1. 百度百科 – E-R图
2. 百度百科 – 数据库逻辑模型
3. 百度百科 – 数据库物理模型

## 内容概览

### 逻辑模型

逻辑模型部分主要阐述促销系统中需要存储的各个实体，实体所具有的属性，实体与实体之间的各种关系以及在更新删除等等操作上各个实体之间应当是如何一致进行的。

### 物理模型

物理模型部分主要是在逻辑模型的基础之上，把逻辑模型中的实体、实体的属性以及实体间的关系分别映射到物理模型中的表、字段、外键概念，进而阐述如何将逻辑模型用于真实的DBMS中。

# 数据库设计表示方法

## 数据库设计范式

关系数据库中的关系必须满足一定的要求，即满足不同的范式。关系数据库有六种范式：第一范式（1NF）、第二范式（2NF）、第三范式（3NF）、巴德斯科范式（BCNF）、第四范式（4NF）和第五范式（5NF）。满足最低要求的范式是第一范式（1NF）。在第一范式的基础上进一步满足更多要求的称为第二范式（2NF），其余范式以次类推。一般说来，数据库只需满足第三范式（3NF）就行了。设计关系型数据库时，遵从不同的规范要求，设计出合理的关系型数据库。这些规范被称作范式。越高的范式数据库的冗余度就越低。其中第一范式的要求是：无重复的列；第二范式的要求是：属性完全依赖于主键；第三范式的要求是：无传递函数依赖。

## ERD

E-R图也称实体-联系图(Entity Relationship Diagram)，提供了表示实体类型、属性和联系的方法，用来描述现实世界的概念模型。

它是描述现实世界概念结构模型的有效方法。是表示概念模型的一种方式，用矩形表示实体型，矩形框内写明实体名；用椭圆表示实体的属性，并用无向边将其与相应的实体型连接起来；用菱形表示实体型之间的联系，在菱形框内写明联系名，并用无向边分别与有关实体型连接起来，同时在无向边旁标上联系的类型（1:1,1:n或m:n）。

## 数据库逻辑设计

数据库逻辑设计是整个设计的前半段，包括所需的实体和关系，实体规范化等工作。此过程需要设计数据库的逻辑结构，逻辑设计模型与具体的DBMS无关，主要反映业务逻辑。在逻辑设计阶段，通用的设计方法是采用ERD来描绘实体与属性间的关系，设计最直接的体现即是ERD。

## 数据库物理设计

设计数据库的物理结构，根据数据库的逻辑结构来选定RDBMS（如Oracle、Sybase等），并设计和实施数据库的存储结构、存取方式等。数据库物理设计，包括选择数据库产品，确定数据库实体属性（字段）、数据类型、长度、精度确定、DBMS页面大小等。物理结构依赖于给定的DBMS和和硬件系统，因此设计人员必须充分了解所用RDBMS的内部特征、存储结构、存取方法。数据库的物理设计通常分为两步，第一，确定数据库的物理结构，第二，评价实施空间效率和时间效率

确定数据库的物理结构包含下面四方面的内容：

1. 确定数据的存储结构

2. 设计数据的存取路径

3. 确定数据的存放位置

4. 确定系统配置

数据库物理设计过程中需要对时间效率、空间效率、维护代价和各种用户要求进行权衡，选择一个优化方案作为数据库物理结构。在数据库物理设计中，最有效的方式是集中地存储和检索对象。

# DBMS环境

促销系统采用Oracle 12c数据库系统，用户、表空间等的建立都应符合此版本的DBMS要求。

# 数据库设计逻辑模型

## ERD View

Package in package 'Model'

ERD View

Version 1.0 Phase 1.0 Proposed

created on 2017/5/20. Last modified 2011/3/24

Alias

## Entity Relationship Diagram diagram

Entity Relationship diagram in package 'ERD View'

Entity Relationship Diagram

Version 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21



1. Entity Relationship Diagram

## Cash\_Side\_Employees

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Cash\_Side\_Employees

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_play\_Roles | |
| Source: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Cash\_Side\_Roles «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_Create\_Rules | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [1..\*] | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_Responsible\_Payments | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity»  Cardinality: [1..\*] | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_Responsible\_Orders | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [1..\*] | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] |

## Cash\_Side\_Roles

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Cash\_Side\_Roles

Version 1.0 Phase 1.0

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| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Cash\_Side\_Roles «ERD\_Entity» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_play\_Roles | |
| Source: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Cash\_Side\_Roles «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_Role «ERD\_Attribute» | Target: Public (ERD\_Entity) Cash\_Side\_Roles «ERD\_Entity» |

## Condition\_Value

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Condition\_Value

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Condition\_Value «ERD\_Attribute» |

## Date

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Date

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Date «ERD\_Attribute» | Target: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» |

## Discount\_Goods

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Discount\_Goods

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Good\_ID «ERD\_Attribute» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Rules\_have\_Goods | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Discount\_Goods «ERD\_Entity»  Cardinality: [1..\*] |

## Discount\_Rate

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Discount\_Rate

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Discount\_Rate «ERD\_Attribute» |

## Discount\_Rules

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Discount\_Rules

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Rules\_have\_Goods | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Discount\_Goods «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Rule\_has\_many\_Presents | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Presents «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_Create\_Rules | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [1..\*] | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Free\_Money «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Sprcial\_Price «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Condition\_Value «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Discount\_Rate «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_Name «ERD\_Attribute» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_Type «ERD\_Attribute» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [\*] |

## Em\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Em\_ID

Version 1.0 Phase 1.0

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| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |

## Em\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Em\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Payments «ERD\_Entity» |

## Em\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Em\_ID

Version 1.0 Phase 1.0

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| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» |

## Em\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Em\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Cash\_Side\_Roles «ERD\_Entity» |

## Em\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Em\_ID

Version 1.0 Phase 1.0

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| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity» |

## Em\_Role

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Em\_Role

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_Role «ERD\_Attribute» | Target: Public (ERD\_Entity) Cash\_Side\_Roles «ERD\_Entity» |

## Free\_Money

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

For Cash Free Use.

Free\_Money

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Free\_Money «ERD\_Attribute» |

## Good\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Good\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Good\_ID «ERD\_Attribute» |

## Good\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Good\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Good\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» |

## Order\_Cus\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Order\_Cus\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity» | Target: Public (ERD\_Attribute) Order\_Cus\_ID «ERD\_Attribute» |

## Order\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Order\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Order\_ID «ERD\_Attribute» |

## Order\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Order\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_ID «ERD\_Attribute» | Target: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» |

## Order\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Order\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |

## Order\_Status

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Order\_Status

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_Status «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |

## Order\_Sum

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Order\_Sum

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_Sum «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |

## Orders

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Orders

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [\*] | Target: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Order\_has\_many\_Goods | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_Responsible\_Orders | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [1..\*] | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_ID «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity» | Target: Public (ERD\_Attribute) Order\_Cus\_ID «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Sum\_Money «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_Status «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_Sum «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Payment\_has\_Orders | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [1..\*] |

## Payment\_Channel

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Payment\_Channel

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_Channel «ERD\_Attribute» |

## Payment\_ChannelSide\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Payment\_ChannelSide\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_ChannelSide\_ID «ERD\_Attribute» |

## Payment\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Payment\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_ID «ERD\_Attribute» |

## Payment\_ID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Payment\_ID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_ID «ERD\_Attribute» |

## Payment\_Sum

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Payment\_Sum

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_Sum «ERD\_Attribute» |

## Payments

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Payments

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/20

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_ID «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_ChannelSide\_ID «ERD\_Attribute» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Em\_Responsible\_Payments | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity»  Cardinality: [1..\*] | Target: Public (ERD\_Entity) Cash\_Side\_Employees «ERD\_Entity»  Cardinality: [1] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_Channel «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity» | Target: Public (ERD\_Attribute) Payment\_Sum «ERD\_Attribute» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Payment\_has\_Orders | |
| Source: Public (ERD\_Entity) Payments «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Em\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Payments «ERD\_Entity» |

## Present\_Condition\_Value

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Present\_Condition\_Value

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Presents «ERD\_Entity» | Target: Public (ERD\_Attribute) Present\_Condition\_Value «ERD\_Attribute» |

## Present\_Discount\_Value

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Present\_Discount\_Value

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Presents «ERD\_Entity» | Target: Public (ERD\_Attribute) Present\_Discount\_Value «ERD\_Attribute» |

## Present\_Type

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Present\_Type

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Present\_Type «ERD\_Attribute» | Target: Public (ERD\_Entity) Presents «ERD\_Entity» |

## Present\_UUID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Present\_UUID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Present\_UUID «ERD\_Attribute» | Target: Public (ERD\_Entity) Presents «ERD\_Entity» |

## Presents

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Presents

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Presents «ERD\_Entity» | Target: Public (ERD\_Attribute) Present\_Condition\_Value «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Presents «ERD\_Entity» | Target: Public (ERD\_Attribute) Present\_Discount\_Value «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Presents «ERD\_Entity» | Target: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Rule\_has\_many\_Presents | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Presents «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Present\_Type «ERD\_Attribute» | Target: Public (ERD\_Entity) Presents «ERD\_Entity» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Present\_UUID «ERD\_Attribute» | Target: Public (ERD\_Entity) Presents «ERD\_Entity» |

## Price

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Price

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Price «ERD\_Attribute» |

## Rule\_Name

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Rule\_Name

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_Name «ERD\_Attribute» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» |

## Rule\_Type

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Rule\_Type

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_Type «ERD\_Attribute» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» |

## Rule\_UUID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Rule\_UUID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» |

## Rule\_UUID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Rule\_UUID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» | Target: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» |

## Rule\_UUID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Rule\_UUID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Presents «ERD\_Entity» | Target: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» |

## Rule\_UUID

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Rule\_UUID

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» |

## Rules\_Orders

ERD\_naryAssociation «ERD\_naryAssociation» in package 'ERD View'

Rules\_Orders

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» | Target: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity»  Cardinality: [\*] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Order\_ID «ERD\_Attribute» | Target: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [\*] | Target: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Rule\_UUID «ERD\_Attribute» | Target: Public (ERD\_naryAssociation) Rules\_Orders «ERD\_naryAssociation» |

## Saled\_Goods

ERD\_Entity «ERD\_Entity» in package 'ERD View'

Saled\_Goods

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Sum «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Order\_ID «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Price «ERD\_Attribute» |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Date «ERD\_Attribute» | Target: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» |
| ERD\_Relationship (direction: 不指定的) «ERD\_Relationship» Order\_has\_many\_Goods | |
| Source: Public (ERD\_Entity) Orders «ERD\_Entity»  Cardinality: [1] | Target: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity»  Cardinality: [1..\*] |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Good\_ID «ERD\_Attribute» | Target: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» |

## Sprcial\_Price

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Sprcial\_Price

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Discount\_Rules «ERD\_Entity» | Target: Public (ERD\_Attribute) Sprcial\_Price «ERD\_Attribute» |

## Sum

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Sum

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Entity) Saled\_Goods «ERD\_Entity» | Target: Public (ERD\_Attribute) Sum «ERD\_Attribute» |

## Sum\_Money

ERD\_Attribute «ERD\_Attribute» in package 'ERD View'

Sum\_Money

Version 1.0 Phase 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21

| ASSOCIATIONS | |
| --- | --- |
| ERD\_Connector (direction: 不指定的) «ERD\_Connector» | |
| Source: Public (ERD\_Attribute) Sum\_Money «ERD\_Attribute» | Target: Public (ERD\_Entity) Orders «ERD\_Entity» |

# 数据库设计物理模型

## Data Model - Oracle

Package «DataModel» in package 'Model'

Data Model - Oracle

Version 1.0 Phase 1.0 Proposed

EA created on 2017/5/20. Last modified 2014/6/19

Alias

## Data Model - Oracle diagram

Data Modeling diagram in package 'Data Model - Oracle'

Data Model - Oracle

Version 1.0

EA created on 2017/5/20. Last modified 2017/5/20



1. Data Model - Oracle

## Oracle

Package «Database» in package 'Data Model - Oracle'

Oracle

Version 1.0 Phase 1.0 Proposed

EA created on 2017/5/20. Last modified 2017/5/20

Alias

### Oracle diagram

Data Modeling diagram in package 'Oracle'

Oracle

Version 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/20



1. Oracle

### Functions

Package in package 'Oracle'

Functions

Version 1.0 Phase 1.0 Proposed

EA created on 2017/5/20. Last modified 2017/5/20

Alias

#### Functions diagram

Data Modeling diagram in package 'Functions'

Functions

Version 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/20



1. Functions

### Packages

Package in package 'Oracle'

Packages

Version 1.0 Phase 1.0 Proposed

EA created on 2017/5/20. Last modified 2017/5/20

Alias

#### Packages diagram

Data Modeling diagram in package 'Packages'

Packages

Version 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21



1. Packages

#### DiscountPkg

Package in package 'Packages'

DiscountPkg

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

Alias

### Procedures

Package in package 'Oracle'

Procedures

Version 1.0 Phase 1.0 Proposed

EA created on 2017/5/20. Last modified 2017/5/20

Alias

#### Procedures diagram

Data Modeling diagram in package 'Procedures'

Procedures

Version 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/20



1. Procedures

### Sequences

Package in package 'Oracle'

Sequences

Version 1.0 Phase 1.0 Proposed

EA created on 2017/5/20. Last modified 2017/5/20

Alias

#### Sequences diagram

Data Modeling diagram in package 'Sequences'

Sequences

Version 1.0

邱依强 created on 2017/5/20. Last modified 2017/5/21



1. Sequences

#### Seq\_Order

Database «dbsequence» in package 'Sequences'

Order Auto Increment Sequence

Seq\_Order

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

|  |
| --- |
|  |

#### Seq\_Payment

Database «dbsequence» in package 'Sequences'

Payment Auto increment Sequence

Seq\_Payment

Version 1.0 Phase 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

|  |
| --- |
|  |

### Tables

Package in package 'Oracle'

Tables

Version 1.0 Phase 1.0 Proposed

EA created on 2017/5/20. Last modified 2017/5/20

Alias

#### Tables diagram

类 diagram in package 'Tables'

Tables

Version 1.0

邱依强 created on 2017/5/21. Last modified 2017/5/21



1. Tables

#### Cash\_Side\_Employees

Database table in package 'Tables'

Cash\_Side\_Employees

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Em\_ID | VARCHAR2(64) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Cash\_Side\_Employees | Em\_ID |  |

#### Cash\_Side\_Roles

Database table in package 'Tables'

Cash\_Side\_Roles

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Em\_Role | VARCHAR2(64) | True |  |
| Em\_ID | VARCHAR2(64) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Cash\_Side\_Roles | Em\_Role, Em\_ID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Em\_play\_Roles\_Cash\_Side\_Employees | Em\_ID | Cash\_Side\_Employees(Em\_ID) |

#### Discount\_Goods

Database table in package 'Tables'

Discount\_Goods

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Rule\_UUID | CHAR(32) | True |  |
| Good\_ID | VARCHAR2(64) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Discount\_Goods | Rule\_UUID, Good\_ID |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_Discount\_Goo\_Discoun01 | Rule\_UUID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Rules\_have\_Goods | Rule\_UUID | Discount\_Rules(Rule\_UUID) |

#### Discount\_Rules

Database table in package 'Tables'

Discount\_Rules

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Rule\_UUID | CHAR(32) | True |  |
| Rule\_Type | VARCHAR2(50) | True |  |
| Em\_ID | VARCHAR2(64) | True |  |
| Rule\_Name | VARCHAR2(50) | True |  |
| Discount\_Rate | NUMBER(8,2) | False |  |
| Free\_Money | NUMBER(8,2) | False |  |
| Sprcial\_Price | NUMBER(8,2) | False |  |
| Condition\_Value | NUMBER(8,2) | False |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» PK\_Discount\_Rules | Rule\_UUID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Em\_Create\_Rules\_Discount\_Rules | Em\_ID | Cash\_Side\_Employees(Em\_ID) |

#### ERD\_naryAssociation1

Database table in package 'Tables'

ERD\_naryAssociation1

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

#### Orders

Database table in package 'Tables'

Orders

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Order\_ID | CHAR(32) | True |  |
| Order\_Sum | NUMBER(8,2) | True |  |
| Sum\_Money | NUMBER(10,2) | True |  |
| Order\_Cus\_ID | VARCHAR2(50) | False |  |
| Order\_Status | VARCHAR2(50) | True |  |
| Payment\_ID | CHAR(32) | False |  |
| EM\_ID | VARCHAR2(64) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Orders | Order\_ID |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_Payment\_has\_Orders\_P01 | Payment\_ID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Em\_Responsible\_Orders | EM\_ID | Cash\_Side\_Employees(Em\_ID) |
| FK\_Payment\_has\_Orders\_Payments | Payment\_ID | Payments(Payment\_ID) |

#### Payments

Database table in package 'Tables'

Payments

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Payment\_ID | CHAR(32) | True |  |
| Payment\_Sum | NUMBER(16,2) | True |  |
| PAYMENT\_CHANNELSIDE\_ID | VARCHAR2(64) | True |  |
| Payment\_Channel | VARCHAR2(64) | True |  |
| EM\_ID | VARCHAR2(64) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Payments | Payment\_ID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Em\_Responsible\_Payments | EM\_ID | Cash\_Side\_Employees(Em\_ID) |

#### Presents

Database table in package 'Tables'

Presents

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Present\_UUID | CHAR(32) | True |  |
| Present\_Type | VARCHAR2(64) | True |  |
| Present\_Condition\_Value | NUMBER(8,2) | False |  |
| Present\_Discount\_Value | NUMBER(8,2) | False |  |
| Rule\_UUID | CHAR(32) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Presents | Present\_UUID |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_Rule\_has\_many\_Presen01 | Rule\_UUID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Rule\_has\_many\_Presents\_Discount\_Rules | Rule\_UUID | Discount\_Rules(Rule\_UUID) |

#### Rules\_Orders

Database table in package 'Tables'

Rules\_Orders

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Rule\_UUID | CHAR(32) | True |  |
| Order\_ID | CHAR(32) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Rules\_Orders | Rule\_UUID, Order\_ID |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_Rules\_Orders\_Discoun01 | Rule\_UUID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Rules\_Orders\_Discount\_Rules |  | Discount\_Rules() |
| FK\_Orders\_Rules\_Orders | Order\_ID | Orders(Order\_ID) |

#### Saled\_Goods

Database table in package 'Tables'

Saled\_Goods

Version 1.0 Phase 1.0 提议的

邱依强 created on 2017/5/21. Last modified 2017/5/21

DBMS Oracle

| COLUMN NAME | DATATYPE | NOT NULL | COMMENTS |
| --- | --- | --- | --- |
| Good\_ID | VARCHAR2(64) | True |  |
| Date | DATE | True |  |
| Sum | NUMBER(8,2) | True |  |
| Price | NUMBER(9,2) | True |  |
| Order\_ID | CHAR(32) | True |  |

|  |  |  |
| --- | --- | --- |
| PRIMARY KEY NAME | COLUMNS | COMMENTS |
| PK\_Saled\_Goods | Good\_ID, Date |  |

|  |  |  |
| --- | --- | --- |
| TYPE / NAME | COLUMNS | COMMENTS |
| «index» IXFK\_Order\_has\_many\_Goods01 | Order\_ID |  |

|  |  |  |
| --- | --- | --- |
| FOREIGN KEY NAME | COLUMNS | REFERENCES |
| FK\_Order\_has\_many\_Goods\_Orders | Order\_ID | Orders(Order\_ID) |

### Views

Package in package 'Oracle'

Views

Version 1.0 Phase 1.0 Proposed

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Alias

#### Views diagram

Data Modeling diagram in package 'Views'

Views

Version 1.0

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1. Views