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# 数据库设计

## 数据库名

项目全称：大题小做在线教育网站

英文名：big problem small do

数据库缩写：dtxz

数据库地址：120.78.64.78

数据库连接帐号：dtxzdba

数据库连接密码：dtxz1314

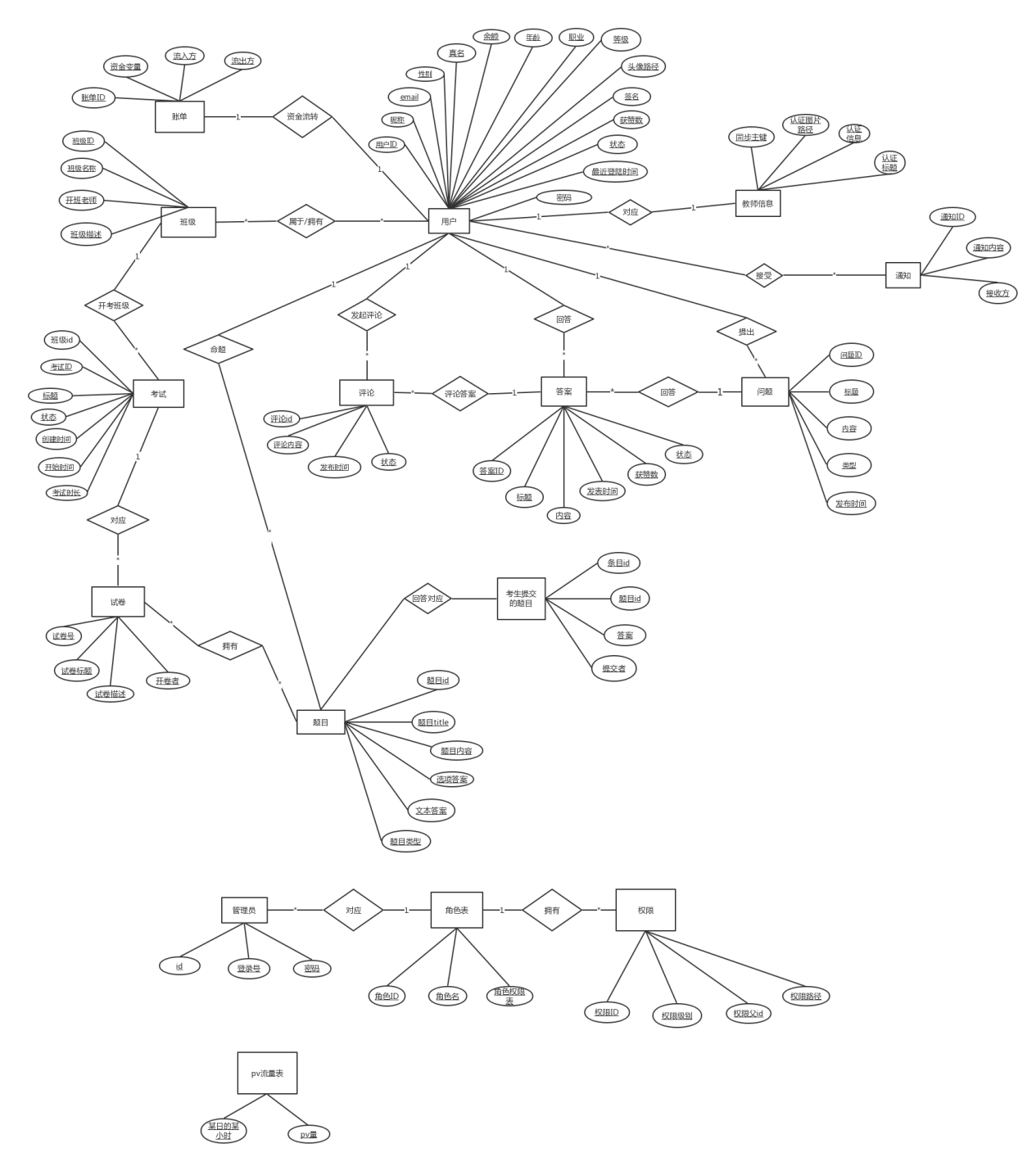
## 开发环境(系统和版本)

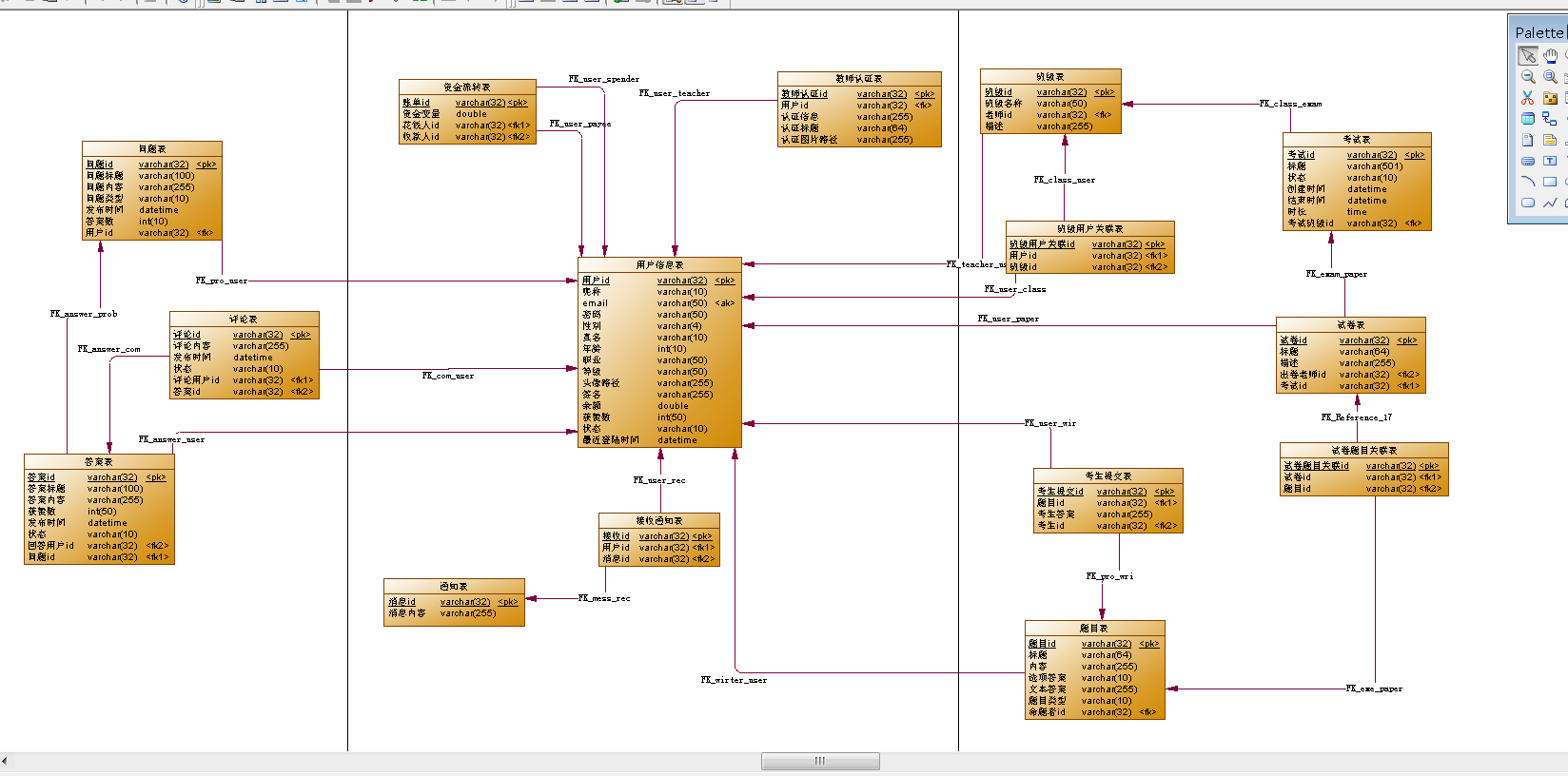
系统第一版数据库环境：mysql 5.6以上

# 库表清单

|  |  |  |
| --- | --- | --- |
| **序号** | **库表名** | **说明** |
|  | dxtz\_user | 用户信息表 |
|  | dxtz\_bill | 资金流转表 |
|  | dxtz\_teacher\_auth | 教师认证表 |
|  | dxtz\_class | 班级表 |
|  | dxtz\_user\_class | 班级用户关联表 |
|  | dxtz\_exam | 考试表 |
|  | dxtz\_exampaper | 试卷表 |
|  | dxtz\_exercise | 题目表 |
|  | dxtz\_paper\_exe | 试卷题目关联表 |
|  | dxtz\_submit | 考生提交表 |
|  | dxtz\_message | 通知表 |
|  | dxtz\_receive | 接收通知表 |
|  | dxtz\_problem | 问题表 |
|  | dxtz\_answer | 答案表 |
|  | dxtz\_comment | 评论表 |
|  | dxtz\_pv | pv流量表 |
|  | dxtz\_admin | 管理员表 |
|  | dxtz\_role | 角色表 |
|  | dxtz\_power | 权限表 |

# 物理模型图 E-R 物理模型图(.pdm)





# 系统表设计

## dtxz\_user表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | user\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | nickname | varchar | 10 |  |  | N |  | 昵称 |
|  | email | varchar | 50 |  |  | N |  | 唯一性 |
|  | pwd | varchar | 50 |  |  | N |  |  |
|  | sex | varchar | 50 |  |  | Y |  |  |
|  | name | varchar | 50 |  |  | Y |  | 真名 |
|  | age | int | 10 |  |  | Y |  |  |
|  | job | varchar | 50 |  |  | Y |  | 职业 |
|  | rank | varchar | 50 |  |  | Y |  | 等级 |
|  | img | varchar | 250 |  |  | Y |  | 头像路径 |
|  | [signature](http://www.baidu.com/link?url=8gK8tvWiQYfFmL7bTWXuupq8r-DFcZgmoti7sSCBMWz_8vSWH1XUJZftIzL-ib8qt5z1yj1pZ1NTQdLT93cOK82rY552fkyrLsysRFfq0apzq414ylSA4m3-Q7IMkSjd) | varchar | 50 |  |  | Y |  | 签名 |
|  | money | varchar | 50 |  |  | N | 0 |  |
|  | praise\_count | int | 50 |  |  | N | 0 | 获赞数 |
|  | status | varchar | 16 |  |  | Y |  |  |
|  | recent\_login\_time | datetime |  |  |  | Y |  |  |

表说明：用户信息表。

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_bill表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | bill\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | cost | double | 8 |  |  | N |  | 资金变量 |
|  | spender\_id | varchar | 32 |  | fk（user\_id） | N |  | 花钱人 |
|  | payee\_id | varchar | 32 |  | fk（user\_id） | N |  | 收款人 |

表说明：资金流转表。

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_authen表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | authen\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | user\_id | varchar | 32 |  | fk（user\_id） | N |  |  |
|  | info | varchar | 255 |  |  | N |  | 认证信息 |
|  | title | varchar | 64 |  |  | N |  | 认证标题 |
|  | img | varchar | 255 |  |  | N |  | 认证图片路径 |

表说明：教师认证表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_clazz表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | clazz\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | name | varchar | 50 |  |  | N |  | 班级名称 |
|  | teacher\_id | varchar | 32 |  | fk（user\_id） | N |  | 老师(用户)id |
|  | description | varchar | 255 |  |  | Y |  | 描述 |

表说明：班级表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_user\_class表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | uc\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | user\_id | varchar | 32 |  | fk(user\_id) | N |  |  |
|  | clazz\_id | varchar | 32 |  | fk（clazz\_id） | N |  |  |

表说明：班级用户关联表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_exam表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | exam\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | title | varchar | 100 |  |  | N |  |  |
|  | status | varchar | 16 |  |  | Y |  |  |
|  | createtime | datetime |  |  |  | N |  |  |
|  | begintime | datetime |  |  |  | N |  |  |
|  | duration | time |  |  |  | N |  | 时长 |
|  | clazz\_id | varchar | 32 |  | fk(clazz\_id) | N |  |  |
|  | ep\_id | varchar | 32 |  | fk(ep\_id) | N |  |  |

表说明：考试表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_exampaper表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | ep\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | title | varchar | 64 |  |  | N |  |  |
|  | description | varchar | 255 |  |  | Y |  |  |
|  | teacher\_id | varchar | 32 |  | fk(user\_id) | N |  | 命题老师 |

表说明：试卷表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_exercise表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | exercise\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | title | varchar | 64 |  |  | N |  |  |
|  | description | varchar | 255 |  |  | N |  | 题目内容 |
|  | answer | text |  |  |  | N |  | 正确答案 |
|  | type | varchar | 10 |  |  | N |  | 题目类型 |
|  | writer\_id | varchar | 32 |  | fk（user\_id） | N |  | 命题者 |

表说明：题目表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_paper\_exe表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | pe\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | ep\_id | varchar | 32 |  | fk(ep\_id) | N |  |  |
|  | exercise\_id | varchar | 32 |  | fk(exercise\_id) | N |  |  |

表说明：试卷题目关联表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_submit表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | submit\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | execrise\_id | varchar | 32 |  | fk(exercise\_id) | N |  |  |
|  | answer | text |  |  |  | Y |  | 答案 |
|  | examinee\_id | varchar | 32 |  | fk（user\_id） | N |  | 考生 |

表说明：考生提交表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_message表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | mes\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | content | varchar | 255 |  |  | N |  | 内容 |

表说明：通知表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_receive表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | rec\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | user\_id | varchar | 32 |  | fk(user\_id） | N |  |  |
|  | mes\_id | varchar | 32 |  | fk(mes\_id) | N |  |  |

表说明：接收通知表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_problem表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | prob\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | title | varchar | 100 |  |  | N |  |  |
|  | content | varchar | 255 |  |  | N |  | 内容 |
|  | type | varchar | 16 |  |  | Y |  | 题目类型 |
|  | pub\_time | datetime | 8 |  |  | N |  | 发布时间 |
|  | user\_id | varchar | 32 |  | fk(user\_id） | N |  |  |
|  | count | int | 4 |  |  | N |  | 答案数 |

表说明：问题表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_answer表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | answer\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | title | varchar | 100 |  |  | Y |  |  |
|  | content | varchar | 255 |  |  | N |  | 内容 |
|  | praise\_count | int | 50 |  |  | N | 0 |  |
|  | pub\_time | datetime | 8 |  |  | N |  | 发布时间 |
|  | status | varchar | 16 |  |  | Y |  |  |
|  | user\_id | varchar | 32 |  | fk(user\_id） | N |  |  |
|  | prob\_id | varchar | 32 |  | fk(prob\_id) | N |  |  |

表说明：答案表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_comment表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | comment\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | content | varchar | 255 |  |  | N |  | 内容 |
|  | pub\_time | datetime | 8 |  |  | N |  | 发布时间 |
|  | status | varchar | 16 |  |  | Y |  |  |
|  | user\_id | varchar | 32 |  | fk(user\_id） | N |  |  |
|  | answer\_id | varchar | 32 |  | fk(answer\_id) | N |  |  |

表说明：评论表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_pv表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | pv\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | hour | datetime |  |  |  | N |  |  |
|  | pv | varchar | 255 |  |  | N |  |  |

表说明：pv流量表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_admin表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | admin\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | account | varchar | 32 |  |  | N |  |  |
|  | pwd | varchar | 32 |  |  | N |  | Md5加密 |
|  | role\_id | varchar | 32 |  | fk(role\_id) | N |  |  |

表说明：管理员表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_role表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | role\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | name | varchar | 32 |  |  | N |  |  |
|  | power | varchar | 255 |  |  | N |  | 角色权限表 |

表说明：角色表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_power表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | power\_id | varchar | 32 | pk |  | N |  | 主键标识 |
|  | rank | varchar | 50 |  |  | N |  |  |
|  | src | varchar | 255 |  |  | N |  |  |
|  | parent\_id | varchar | 32 |  |  | Y |  |  |

表说明：权限表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |

## dtxz\_exam\_submit视图

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **列名** | **数据类型** | **长度** | **主键** | **外键** | **允许空** | **默认值** | **说明** |
|  | examId | varchar | 32 | pk |  | N |  | 主键标识 |
|  | title | varchar | 50 |  |  | N |  | 考试标题 |
|  | status | varchar | 255 |  |  | N |  | 考试状态 |
|  | createtime | varchar | 32 |  |  | Y |  | 考试创建时间 |
|  | begintime | datetime |  |  |  |  |  | 考试结束时间 |
|  | duration | datetime |  |  |  |  |  | 考试时长 |
|  | clazzId |  |  |  |  |  |  | 班级id |
|  | epId |  |  |  |  |  |  | 试卷id |
|  | epTitle |  |  |  |  |  |  | 试卷标题 |
|  | epDescription |  |  |  |  |  |  | 试卷描述 |
|  | teacherId |  |  |  |  |  |  | 试卷命题老师id |
|  | peId |  |  |  |  |  |  | 标识，没啥用 |
|  | exerciseId |  |  |  |  |  |  | 题目id |
|  | ecTitle |  |  |  |  |  |  | 题目标题 |
|  | ecDescription |  |  |  |  |  |  | 题目描述 |
|  | type |  |  |  |  |  |  | 题目类型 |
|  | ecWriter |  |  |  |  |  |  | 命题者id |
|  | submitId |  |  |  |  |  |  | 题目回答的id |
|  | examineeId |  |  |  |  |  |  | 答题者id |

表说明：权限表

字段说明：

|  |  |
| --- | --- |
| 字段名称 | 说明 |
|  |  |