GDPLS Movie

Grand Duke of Programming Language Script

2017 June
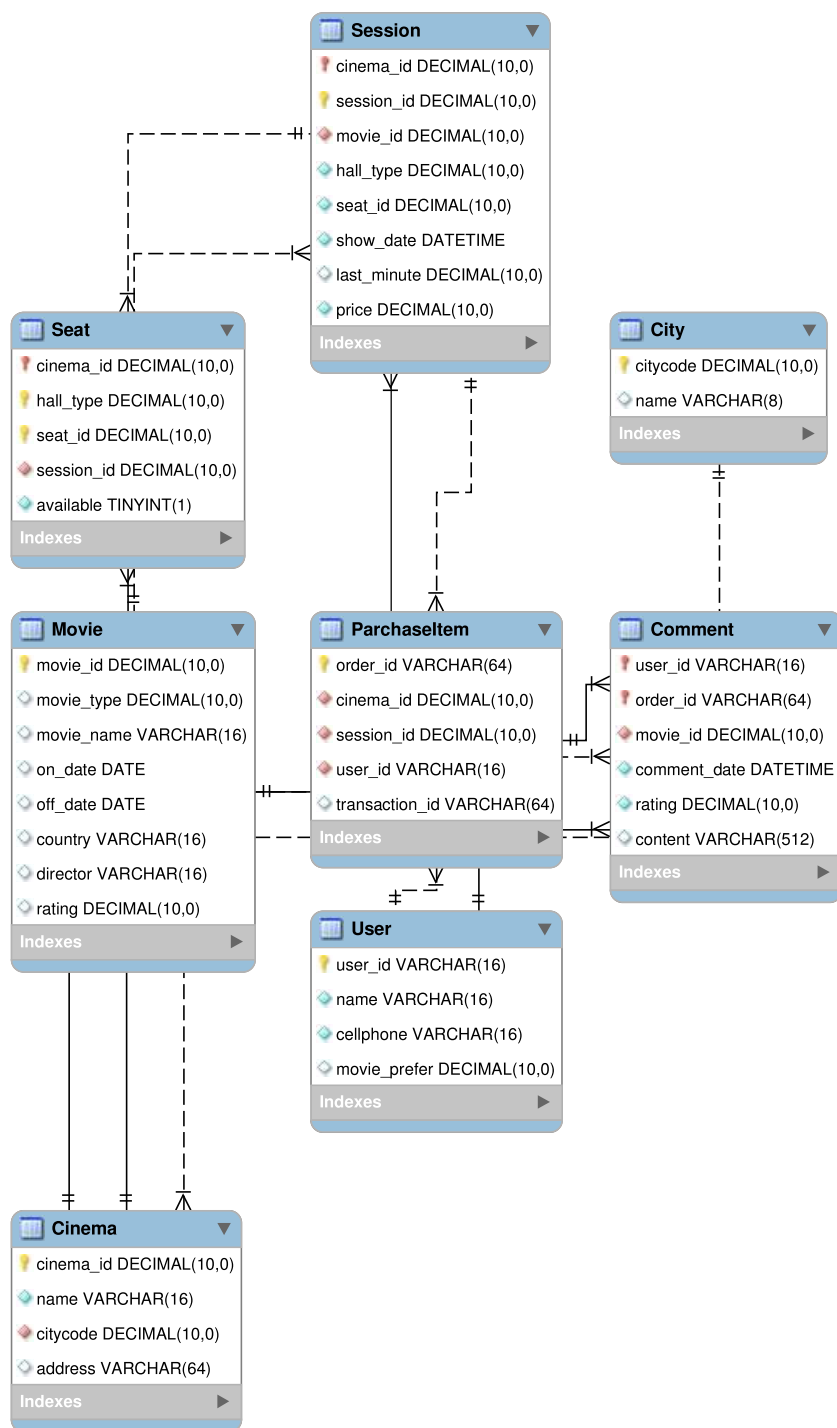
Database Model

版本日志

版本号	修改人	修改时间	说明
1.0.0	方铭	2017.5.6	设计初稿

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设计初稿

1 数据模型

2 设计代码

```
1  drop database movie_db;
2  create database movie_db;
3  use movie_db;
4
5  -- 用户使用微信号作为主键，不需要记录登录口令，用户头像图片
```

```sql
 6  -- movie_prefer为用户喜欢的电影类型, 一个数据位为一种类型的电影,
 7  -- 1表示感兴趣, 0表示不感兴趣
 8  create table User (
 9      -- use weinxin account for user_id
10      user_id varchar(16) not null primary key,
11      name nvarchar(16) not null,
12      cellphone varchar(16) not null,
13      movie_prefer numeric
14  );
15
16  -- 购买记录, transaction_id为交易流水号, 接入微信支付
17  -- 若未发起支付, transaction_id为null
18  create table ParchaseItem (
19      order_id varchar(64) not null primary key,
20      cinema_id numeric not null,
21      session_id numeric not null,
22      user_id varchar(16) not null,
23      transaction_id varchar(64)
24      -- -- when user comments, insert comment_id
25      -- comment_id numeric
26  );
27
28  -- 评论信息使用user_id和order_id作为主键
29  -- move_id是冗余项, 可以在order_id中查到,
30  -- 考虑打开某电影介绍界面可能需要查找评价信息,
31  -- 这里加上是为了便于查表, 可以考虑删除
32  create table Comment (
33      -- comment_id numeric not null primary key,
34      user_id varchar(16) not null,
35      order_id varchar(64) not null,
36      movie_id numeric not null,
37      comment_date datetime not null,
38      rating numeric not null,
39      content nvarchar(512),
40      primary key (user_id, order_id)
41  );
42
43  create table Session (
44      cinema_id numeric not null,
45      session_id numeric not null,
46      movie_id numeric not null,
47      hall_type numeric not null,
48      seat_id numeric not null,
49      show_date datetime not null,
50      last_minute numeric,
51      price numeric not null,
52      primary key (cinema_id, session_id)
53  );
54
55  create table Cinema (
56      cinema_id numeric not null primary key,
57      name nvarchar(16) not null,
58      citycode numeric not null,
59      address nvarchar(64)
60  );
61
62  create table City (
63      citycode numeric not null primary key,
64      name nvarchar(8)
65  );
66
67  create table Seat (
68      cinema_id numeric not null,
```

```
69        hall_type numeric not null,
70        seat_id numeric not null,
71        session_id numeric not null,
72        available boolean not null,
73        primary key (cinema_id, hall_type, seat_id)
74  );
75
76  -- 之前在Comment的表中加入了movie_id，这里本可以不用存放rating
77  -- 存rating只是为了缓存评分
78  create table Movie (
79        movie_id numeric not null primary key,
80        -- one type per bit
81        movie_type numeric,
82        movie_name nvarchar(16),
83        on_date date,
84        off_date date,
85        country varchar(16),
86        director nvarchar(16),
87        rating numeric
88  );
89
90  alter table ParchaseItem
91        add constraint FK_PI_REF_USER foreign key (user_id)
92        references User(user_id);
93  alter table ParchaseItem
94        add constraint FK_PI_REF_SESS foreign key (cinema_id, session_id)
95        references Session(cinema_id, session_id);
96  -- alter table ParchaseItem
97  --   add constraint FK_PI_REF_CMNT foreign key (comment_id)
98  --   references Comment(comment_id);
99
100 alter table Comment
101       add constraint FK_CMNT_REF_USER foreign key (user_id)
102       references User(user_id);
103 alter table Comment
104       add constraint FK_CMNT_REF_PI foreign key (order_id)
105       references ParchaseItem(order_id);
106 alter table Comment
107       add constraint FK_CMNT_REF_MOVIE foreign key (movie_id)
108       references Movie(movie_id);
109
110 alter table Session
111       add constraint FK_SESS_REF_MOVIE foreign key (movie_id)
112       references Movie(movie_id);
113 alter table Session
114       add constraint FK_SESS_REF_CINE foreign key (cinema_id)
115       references Cinema(cinema_id);
116
117 alter table Cinema
118       add constraint FK_CINE_REF_CITY foreign key (citycode)
119       references City(citycode);
120
121 alter table Seat
122       add constraint FK_SEAT_REF_CINE foreign key (cinema_id)
123       references Cinema(cinema_id);
124 alter table Seat
125       add constraint FK_SEAT_REF_SESS foreign key (cinema_id, session_id)
126       references Session(cinema_id, session_id);
```