互联网电影售票系统

数据库模型

该数据库模型是基于领域模型产生的，利用 PowerDesigner 设计并以 MySQL 的形式输出，用数据库的形式展现了互联网电影售票系统的设计中的各个类的数据库形式表示，以更精确标准的图形化和程序化展现。

Spotlight 小组（D7）

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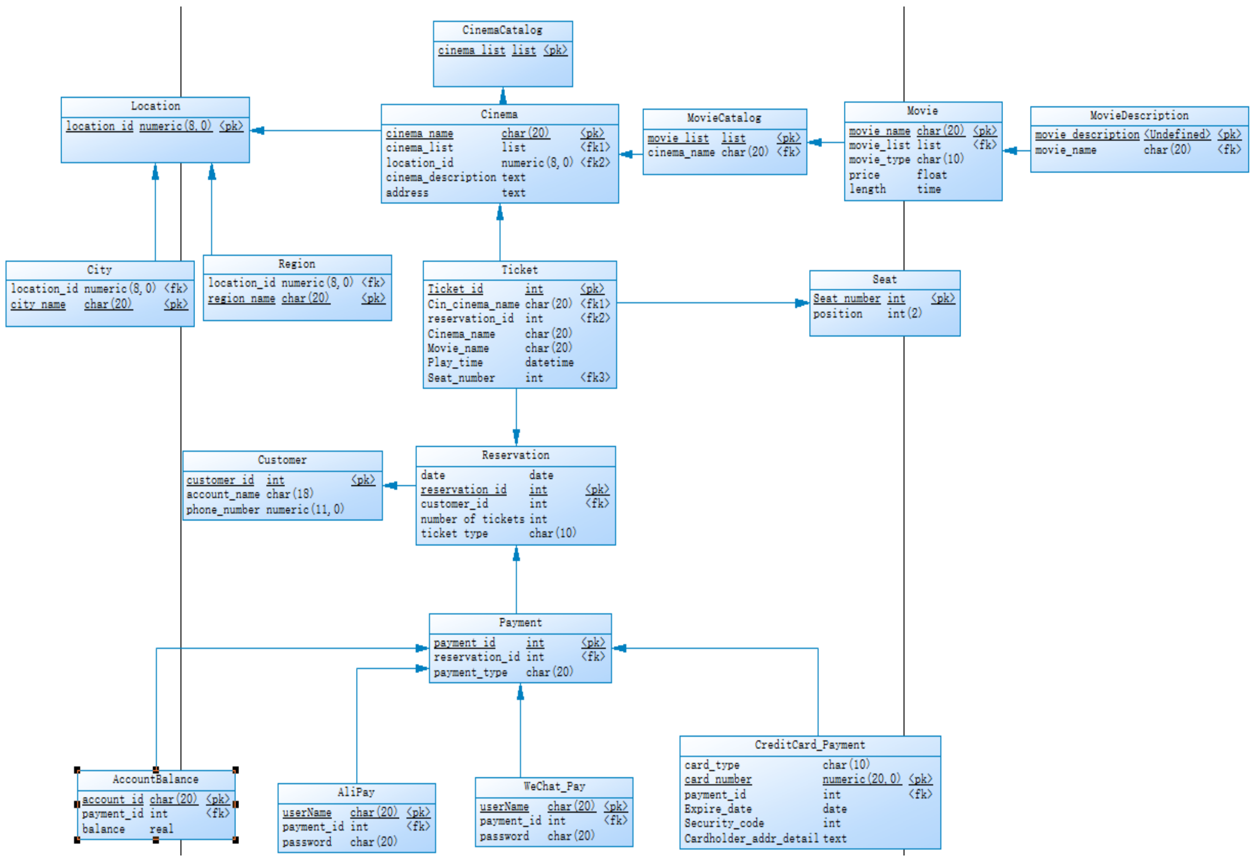
一、建模工具

PowerDesigner

二、数据库模型图形化展示



三、ＭｙＳＱＬ代码

```
/*==============================================================
=*/
/* DBMS name:      MySQL 4.0                                    */
/* Created on:     2016/4/27                                    */
/*==============================================================
=*/
drop table if exists AccountBalance;

drop table if exists AliPay;

drop table if exists Cinema;
drop table if exists CinemaCatalog;

drop table if exists City;

drop table if exists CreditCard_Payment;

drop table if exists Customer;

drop table if exists Location;

drop table if exists Movie;

drop table if exists MovieCatalog;

drop table if exists MovieDescription;

drop table if exists Payment;

drop table if exists Region;

drop table if exists Reservation;

drop table if exists Seat;

drop table if exists Ticket;

drop table if exists WeChat_Pay;

/*==============================================================
=*/
/* Table: AccountBalance                                        */
/*==============================================================
=*/
create table AccountBalance
(
   account_id           char(20)                       not null,
   payment_id            int,
   balance              real                           not null,
   primary key (account_id)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_15_FK"                                              */
/*==============================================================
=*/
create index Reference_15_FK
(
   payment_id
);

/*==============================================================
=*/
/* Table: AliPay                                                 */
/*==============================================================
=*/
create table AliPay
(
   userName                       char(20)                       not null,
   payment_id                     int,
   password                       char(20)                       not null,
   primary key (userName)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_12_FK"                                              */
/*==============================================================
=*/
create index Reference_12_FK
(
   payment_id
);

/*==============================================================
=*/
/* Table: Cinema                                                 */
/*==============================================================
=*/
create table Cinema
(
   cinema_name                    char(20)                       not null,
   cinema_list                    list,
   location_id                    numeric(8,0),
   cinema_description             text,
   address                         text,
   primary key (cinema_name)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_1_FK"                                      */
/*==============================================================
=*/
create index Reference_1_FK
(
   cinema_list
);
/*==============================================================
=*/
/* Index: "Reference_5_FK"                                      */
/*==============================================================
=*/
create index Reference_5_FK
(
   location_id
);

/*==============================================================
=*/
/* Table: CinemaCatalog                                         */
/*==============================================================
=*/
create table CinemaCatalog
(
   cinema_list                 list                       not null,
   primary key (cinema_list)
)
type = InnoDB;

/*==============================================================
=*/
/* Table: City                                                  */
/*==============================================================
=*/
create table City
(
   location_id                 numeric(8,0),
    city_name                       char(20)                       not null,
    primary key (city_name)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_6_FK"                                          */
/*==============================================================
=*/
create index Reference_6_FK
(
    location_id
);

/*==============================================================
=*/
/* Table: CreditCard_Payment                                   */
/*==============================================================
=*/
create table CreditCard_Payment
(
    card_type                       char(10),
    card_number                     numeric(20,0)                  not null,
    payment_id                      int,
    Expire_date                     date                           not null,
    Security_code                   int                            not null,
    Cardholder_addr_detail          text,
    primary key (card_number)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_14_FK"                                         */
/*==============================================================
=*/
create index Reference_14_FK
(
    payment_id
);

/*==============================================================
=*/
```

```
/* Table: Customer                                              */
/*==============================================================
=*/
create table Customer
(
   customer_id                  int                          not null,
   account_name                 char(18)                     not null,
   phone_number                 numeric(11,0)                not null,
   primary key (customer_id)
)
type = InnoDB;

/*==============================================================
=*/
/* Table: Location                                              */
/*==============================================================
=*/
create table Location
(
   location_id                  numeric(8,0)                 not null,
   primary key (location_id)
)
type = InnoDB;

/*==============================================================
=*/
/* Table: Movie                                                 */
/*==============================================================
=*/
create table Movie
(
   movie_name                   char(20)                     not null,
   movie_list                   list,
   movie_type                   char(10),
   price                        float                        not null,
   length                       time,
   primary key (movie_name)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_3_FK"                                      */
/*==============================================================
=*/
create index Reference_3_FK
(
   movie_list
);

/*==============================================================
=*/
/* Table: MovieCatalog                                          */
/*==============================================================
=*/
create table MovieCatalog
(
   movie_list                     list                           not null,
   cinema_name                    char(20),
   primary key (movie_list)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_2_FK"                                      */
/*==============================================================
=*/
create index Reference_2_FK
(
   cinema_name
);

/*==============================================================
=*/
/* Table: MovieDescription                                      */
/*==============================================================
=*/
create table MovieDescription
(
   movie_description              char(10)                       not null,
   movie_name                     char(20),
   primary key (movie_description)
)
type = InnoDB;

/*==============================================================
=*/
```

```
/* Index: "Reference_4_FK"                                              */
/*==============================================================
=*/
create index Reference_4_FK
(
   movie_name
);

/*==============================================================
=*/
/* Table: Payment                                                */
/*==============================================================
=*/
create table Payment
(
   payment_id                     int                            not null,
   reservation_id                 int,
   payment_type                   char(20),
   primary key (payment_id)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_16_FK"                                             */
/*==============================================================
=*/
create index Reference_16_FK
(
   reservation_id
);

/*==============================================================
=*/
/* Table: Region                                                 */
/*==============================================================
=*/
create table Region
(
   location_id                    numeric(8,0),
   region_name                    char(20)                       not null,
   primary key (region_name)
)
type = InnoDB;
```

```
/*==============================================================
=*/
/* Index: "Reference_7_FK"                                     */
/*==============================================================
=*/
create index Reference_7_FK
(
   location_id
);

/*==============================================================
=*/
/* Table: Reservation                                          */
/*==============================================================
=*/
create table Reservation
(
   date                           date                           not null,
   reservation_id                 int                            not null,
   customer_id                    int,
   "number of tickets"            int                            not null,
   "ticket type"                  char(10)                       not null,
   primary key (reservation_id)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_11_FK"                                    */
/*==============================================================
=*/
create index Reference_11_FK
(
   customer_id
);

/*==============================================================
=*/
/* Table: Seat                                                 */
/*==============================================================
=*/
create table Seat
(
   Seat_number                    int                                not null,
   position                       int(2)                             not null,
   primary key (Seat_number)
)
type = InnoDB;

/*==============================================================
=*/
/* Table: Ticket                                                */
/*==============================================================
=*/
create table Ticket
(
   Ticket_id                      int                                not null,
   Cin_cinema_name                char(20),
   reservation_id                 int,
   Cinema_name                    char(20)                           not null,
   Movie_name                     char(20)                           not null,
   Play_time                      datetime                           not null,
   Seat_number                    int                                not null,
   primary key (Ticket_id)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_8_FK"                                      */
/*==============================================================
=*/
create index Reference_8_FK
(
   Cin_cinema_name
);
/*==============================================================
=*/
/* Index: "Reference_9_FK"                                      */
/*==============================================================
=*/
create index Reference_9_FK
(
   reservation_id
);
/*==============================================================
=*/
```

```
/* Index: "Reference_17_FK"                                             */
/*==============================================================
=*/
create index Reference_17_FK
(
   Seat_number
);

/*==============================================================
=*/
/* Table: WeChat_Pay                                            */
/*==============================================================
=*/
create table WeChat_Pay
(
   userName                    char(20)                    not null,
   payment_id                  int,
   password                    char(20)                    not null,
   primary key (userName)
)
type = InnoDB;

/*==============================================================
=*/
/* Index: "Reference_13_FK"                                             */
/*==============================================================
=*/
create index Reference_13_FK
(
   payment_id
);

alter table AccountBalance add constraint FK_Reference_15 foreign key (payment_id)
      references Payment (payment_id) on delete restrict on update restrict;

alter table AliPay add constraint FK_Reference_12 foreign key (payment_id)
      references Payment (payment_id) on delete restrict on update restrict;

alter table Cinema add constraint FK_Reference_1 foreign key (cinema_list)
      references CinemaCatalog (cinema_list) on delete restrict on update restrict;

alter table Cinema add constraint FK_Reference_5 foreign key (location_id)
      references Location (location_id) on delete restrict on update restrict;
```

```
alter table City add constraint FK_Reference_6 foreign key (location_id)
      references Location (location_id) on delete restrict on update restrict;

alter table CreditCard_Payment add constraint FK_Reference_14 foreign key (payment_id)
      references Payment (payment_id) on delete restrict on update restrict;

alter table Movie add constraint FK_Reference_3 foreign key (movie_list)
      references MovieCatalog (movie_list) on delete restrict on update restrict;

alter table MovieCatalog add constraint FK_Reference_2 foreign key (cinema_name)
      references Cinema (cinema_name) on delete restrict on update restrict;

alter table MovieDescription add constraint FK_Reference_4 foreign key (movie_name)
      references Movie (movie_name) on delete restrict on update restrict;

alter table Payment add constraint FK_Reference_16 foreign key (reservation_id)
      references Reservation (reservation_id) on delete restrict on update restrict;

alter table Region add constraint FK_Reference_7 foreign key (location_id)
      references Location (location_id) on delete restrict on update restrict;

alter table Reservation add constraint FK_Reference_11 foreign key (customer_id)
      references Customer (customer_id) on delete restrict on update restrict;

alter table Ticket add constraint FK_Reference_17 foreign key (Seat_number)
      references Seat (Seat_number) on delete restrict on update restrict;

alter table Ticket add constraint FK_Reference_8 foreign key (Cin_cinema_name)
      references Cinema (cinema_name) on delete restrict on update restrict;

alter table Ticket add constraint FK_Reference_9 foreign key (reservation_id)
      references Reservation (reservation_id) on delete restrict on update restrict;

alter table WeChat_Pay add constraint FK_Reference_13 foreign key (payment_id)
      references Payment (payment_id) on delete restrict on update restrict;
```