**Cruise Passenger Information Proposal**

**海上有艘船

描述已自动生成**

**Project description**

The cruise passenger management system is used to manage passenger booking information and match it with the corresponding cruise ship. This system allows you to add, delete, and modify the corresponding passenger information, and the information of the booked cruise.

The system will use MySQL to process the data.

**Domain**

This system will be focusing on the data collection and search. Using different passengers’ information to set up a complete database system.

The domain in our system in the below:

The different cruises information.

The different ship information

The different passenger information(including name, phone number, travel details)

The manifest information(cruise, cabin, ship, passenger).

**Functionality**

In our system, we allow to insert, delete, modify passengers’ information and travel details.

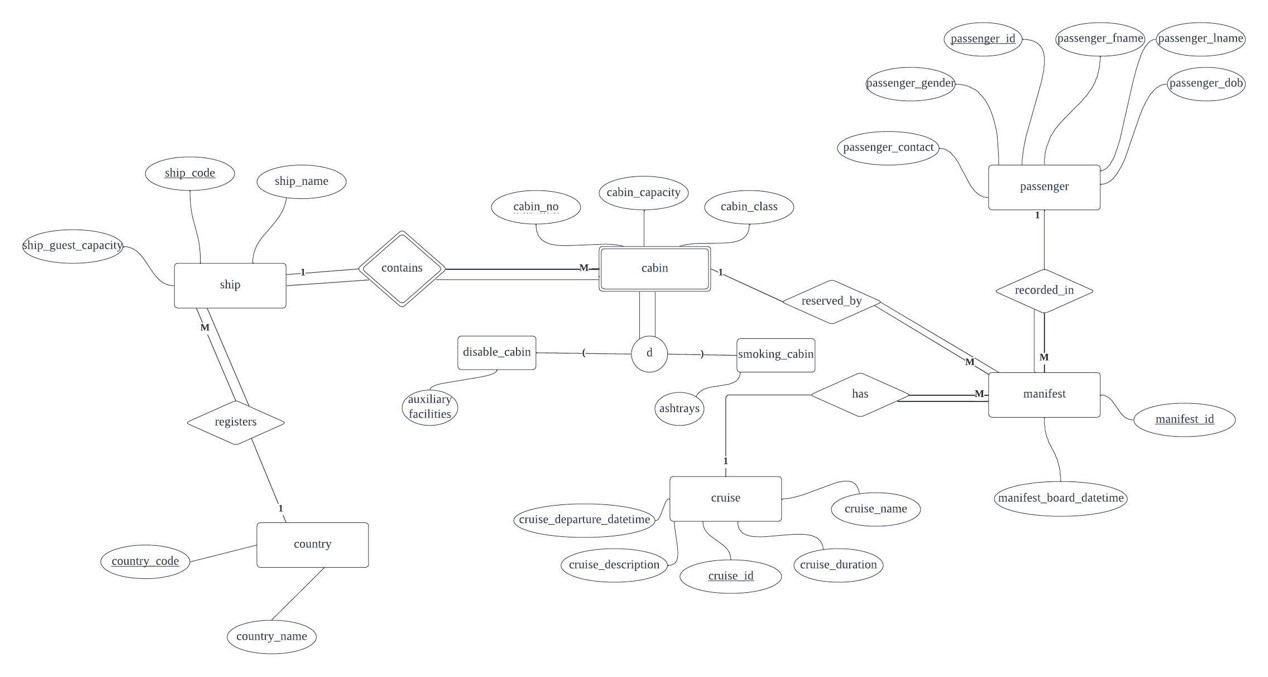
1. Passenger: we have passengers’ information.
2. We have manifest record which list passengers will travel which cruise.
3. We have different cabins for passengers with different needs.

Our system is used to store passenger travel details.

**platforms**

For database system, I will use MySQL to develop.

**E/R Diagram**

****



**Schema**

**Below is the schema for project:**

TABLE passenger (

passenger\_id NUMBER(6) NOT NULL,

passenger\_fname VARCHAR2(30),

passenger\_lname VARCHAR2(30),

passenger\_dob DATE NOT NULL,

passenger\_gender CHAR(1) NOT NULL,

passenger\_contact CHAR(10)

PRIMARY KEY(passenger\_id)

)

CONSTRAINT chk\_passenger\_gender CHECK ( passenger\_gender IN ( 'M', 'F', 'X' ) )

TABLE recorded\_in(

passenger\_id NUMBER(6) NOT NULL,

manifest\_id NUMBER(7) NOT NULL

PRIMARY KEY(passenger\_id, manifest\_id)

)

TABLE manifest(

manifest\_id NUMBER(7) NOT NULL,

passenger\_id NUMBER(6) NOT NULL,

cruise\_id NUMBER(6) NOT NULL,

cabin\_no NUMBER(5) NOT NULL,

ship\_code NUMBER(4) NOT NULL,

manifest\_board\_datetime DATE

PRIMARY KEY(manifest\_id)

passenger.passenger\_id -> manifest\_passenger\_id

cruise.cruise\_id->manifest\_cruise\_id

cabin.ship\_code->manifest\_ship\_code

cabin.cabin\_no->manifest\_cabin\_no

)

CONSTRAINT manifest\_un UNIQUE ( passenger\_id, cruise\_id )

TABLE has(

manifest\_id NUMBER(7) NOT NULL,

cruise\_id NUMBER(6) NOT NULL

PRIMARY KEY(manifest\_id, cruise\_id)

)

TABLE cruise(

cruise\_id NUMBER(6) NOT NULL,

cruise\_name VARCHAR2(80) NOT NULL,

cruise\_description VARCHAR2(200) NOT NULL,

cruise\_departure\_datetime DATE NOT NULL,

cruise\_duration NUMBER(2) NOT NULL,

ship\_code NUMBER(4) NOT NULL

PRIMARY KEY(cruise\_id)

ship.ship\_code->cruise\_ship\_code

)

TABLE reserved\_by(

cruise\_id NUMBER(6) NOT NULL,

cabin\_no NUMBER(5) NOT NULL,

PRIMARY KEY(cruise\_id, cabin\_no)

)

TABLE cabin(

ship\_code NUMBER(4) NOT NULL,

cabin\_no NUMBER(5) NOT NULL,

cabin\_capacity NUMBER(1) NOT NULL,

cabin\_class CHAR(1) NOT NULL

PRIMARY KEY(ship\_code, cabin\_no)

ship.ship\_code->cabin\_ship\_code

)

CONSTRAINT cabin\_class\_chk CHECK ( cabin\_class IN ( 'B', 'F', 'T', 'S' ) )

TABLE disable\_cabin(

ship\_code NUMBER(4) NOT NULL,

cabin\_no NUMBER(5) NOT NULL,

auxiliary\_facilities CHAR(1)NOT NULL

PRIMARY KEY(ship\_code, cabin\_no)

ship.ship\_code->cabin\_ship\_code

)

CONSTRAINT chk\_auxiliary\_facilities CHECK ( auxiliary\_facilities IN ( 'Y', 'N', 'U' ) )

TABLE smoking\_cabin(

ship\_code NUMBER(4) NOT NULL,

cabin\_no NUMBER(5) NOT NULL,

ashtrays CHAR(1)NOT NULL

PRIMARY KEY(ship\_code, cabin\_no)

ship.ship\_code->cabin\_ship\_code

)

CONSTRAINT chk\_ashtrays CHECK ( ashtrays IN ( 'Y', 'N', 'U' ) )

TABLE contains(

ship\_code NUMBER(4) NOT NULL,

cabin\_no NUMBER(5) NOT NULL,

PRIMARY KEY(ship\_code, cabin\_no)

)

TABLE ship(

ship\_code NUMBER(4) NOT NULL,

ship\_name VARCHAR2(20) NOT NULL,

ship\_guest\_capacity NUMBER(4) NOT NULL,

country\_code CHAR(2) NOT NULL

PRIMARY KEY(ship\_code)

counrty.country\_code->ship\_country\_code

)

TABLE sails(

ship\_code NUMBER(4) NOT NULL,

cruise\_id NUMBER(6) NOT NULL

PRIMARY KEY(ship\_code, cruise\_id)

)

TABLE country(

country\_code CHAR (2),

country\_name VARCHAR2 (40)

PRIMARY KEY(country\_code)

)

TABLE registers(

country\_code CHAR (2),

ship\_code NUMBER(4) NOT NULL

PRIMARY KEY(country\_code, ship\_code)

)

**Functional Dependencies**

passenger(passenger\_id, passenger\_fname, passenger\_lname, passenger\_dob, passenger\_gender, passenger\_contact)

FD:

passenger\_id-> passenger\_fname, passenger\_lname, passenger\_dob, passenger\_gender, passenger\_contact

For this FD, passenger\_id as primary key can map to other attributes uniquely.

manifest(manifest\_id, passenger\_id, cruise\_id, manifest\_board\_datetime, ship\_code, cabin\_no)

FD:

manifest\_id -> passenger\_id, cruise\_id, manifest\_board\_datetime, ship\_code, cabin\_no

For this FD, manifest\_id as primary key can map to other attributes uniquely.

cabin(cabin\_no, ship\_code, cabin\_capacity, cabin\_class)

FD:

cabin\_no, ship\_code -> cabin\_capacity, cabin\_class

For this FD, cabin\_no and ship\_code combine can determine cabin\_capacity, cabin\_class. Because in different ship the cabin number maybe same, so need use the two together.

disable\_cabin(cabin\_no, ship\_code, auxiliary\_facilities)

FD:

cabin\_no, ship\_code -> auxiliary\_facilities

For this FD, For this FD, cabin\_no and ship\_code combine can determine auxiliary\_facilities.

smoking\_cabin(cabin\_no, ship\_code, ashtrays)

FD:

cabin\_no, ship\_code -> ashtrays

For this FD, For this FD, cabin\_no and ship\_code combine can determine ashtrays.

cruise(cruise\_id, cruise\_name, cruise\_description, ship\_code, cruise\_depature\_datetime, cruise\_duration)

FD:

cruise\_id -> cruise\_name, cruise\_description, ship\_code, cruise\_depature\_datetime, cruise\_duration

For this FD, cruise\_id can determine cruise\_name, cruise\_description, ship\_code, cruise\_depature\_datetime, cruise\_duration

ship(ship\_code, ship\_name, ship\_guest\_capacity, country\_code)

FD:

ship\_code -> ship\_name, ship\_guest\_capacity, country\_code

For this FD, ship\_code can determine ship\_name, ship\_guest\_capacity, country\_code

country(country\_code, country\_name)

FD:

country\_code -> country\_name

For this FD, country\_code can determine country\_name

**NORMALIZATION**

