

Exercise-2

Railway Reservation System -(Redesigning IRCTC database)

Train(train Number, name, source, destination, start_time, reach_time, traveltime, distance, class, days, type)

Ticket(PNRNo, Transactionid, from_station, To_station, date_of_journey, class date_of_booking, total_ticket_fare, train number)

Passenger(PNR No, Serial no, Name, Age, Reservation_status)

Train_Route(Train_No, route_no, station_code, name, arrival_time, depart_time, distance, day)

Train_Ticket_fare(Train_No, class, base_fare, reservation_charge, superfast_charge, other_charge, tatkal_charge, service_tax)

WEEK-1

1. Create all the tables specified above. Make underlined columns as primary key.(use number, number(m,n), varchar(n), date, time, timestamp datatypes appropriately)

Insert atleast 5 rows to each table. (Check www.irctc.co.in website for actual data)

1. Use Interactive insertion for inserting rows to the table.
2. Use ADT(varray) for class and days column in Train table.

WEEK-2

Write simple DDL/DML Queries to

1. Remove all the rows from Passenger table permanently.
2. Change the name of the Passenger table to Passenger_Details.
3. List all train details.
4. List all passenger details.
5. Give a list of trains in ascending order of number.
6. List the senior citizen passengers details.
7. List the station names where code starts with 'M'.
8. List the trains details within a range of numbers.
9. Change the super fast charge value in train fare as zero , if it is null.
10. List the passenger names whose tickets are not confirmed.
11. List the base_fare of all AC coaches available in each train.

Find the ticket details where transaction id is not known.

1. Use Interactive updation for updating the seat no for particular PNR NO.
2. Find the train names that are from Chennai to Mumbai, but do not have the source or destination in its name.
3. Find the train details that are on Thursday(Use the ADT column created).

WEEK-3

Create (Alter table to add constraint) the necessary foreign keys by identifying the relationships in the table.

1. Add a suitable constraint to train table to always have train no in the range 10001 to 99999.
2. Add a suitable constraint for the column of station name, so that does not take duplicates.
3. Change the data type of arrival time, depart time (date -> timestamp or timestamp to date), and do the necessary process for updating the table with new values.
4. Add a suitable constraint for the class column that it should take values only as 1A, 2A, 3A, SL, C.
5. Add a not null constraint for the column distance in train_route.