Vidya Jyothi Institute of Technology

(Accredited by NAAC & NBA , Approved By A.I.C.T.E., New Delhi, permanently affliated JNTUH)

(AUTONOMOUS)

Department of Computer Science & Engineering

Innovative /Student Centric Teaching Method Form

Innovative Technique implemented: Case Based Learning

Subject: Database Management Systems

Name of the Faculty: B.Sailaja

Class/ Section: II B.Tech II-Sem

Implementation:

Students of 4 made a group and analyze the case study**.**

Our Report introduces railway reservation system with an objective to identify the fields required for reservation system of railways .The main objectives are as follows :

1 To reserve tickets for the seats

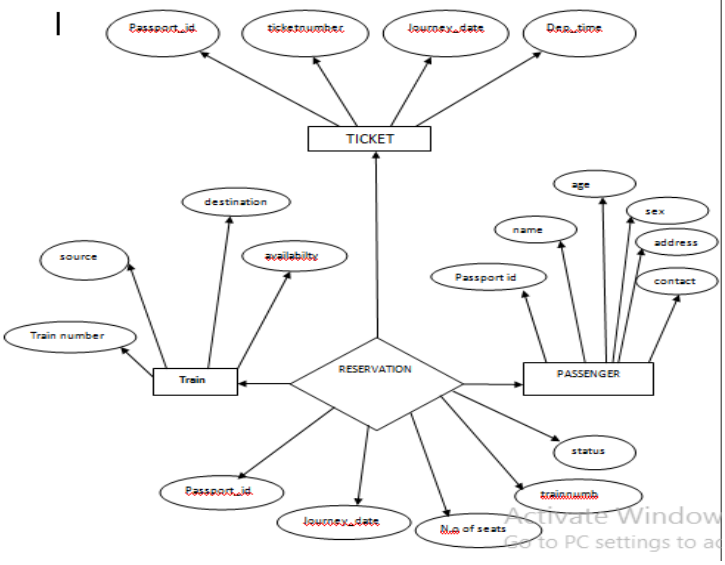
2 To cancel tickets for the seats

PURPOSE:

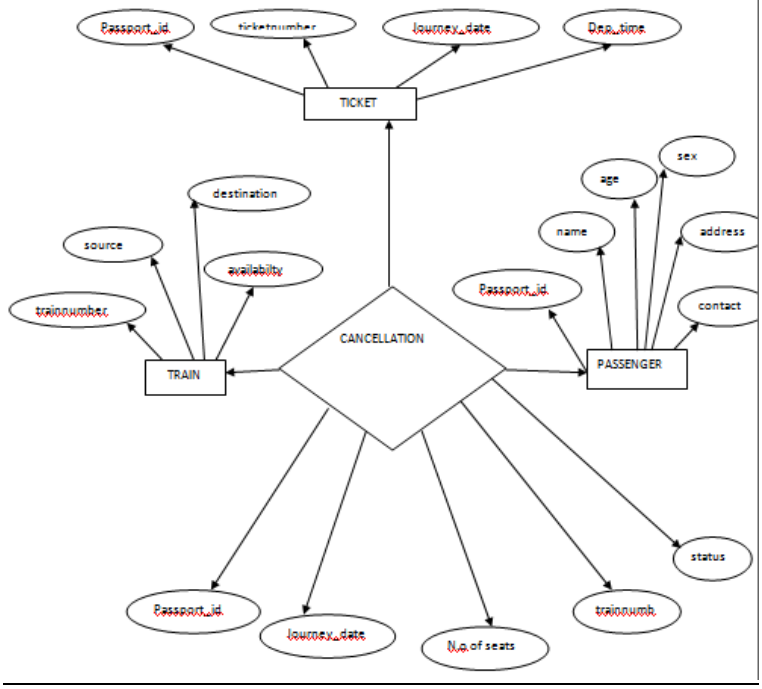
The purpose of this report is to describe the fields taken to create a Railway Reservation System and railway cancellation sql's which provides train details, ticket details, passenger details, reservation of tickets and cancellation of ticket .

E-R Diagram :

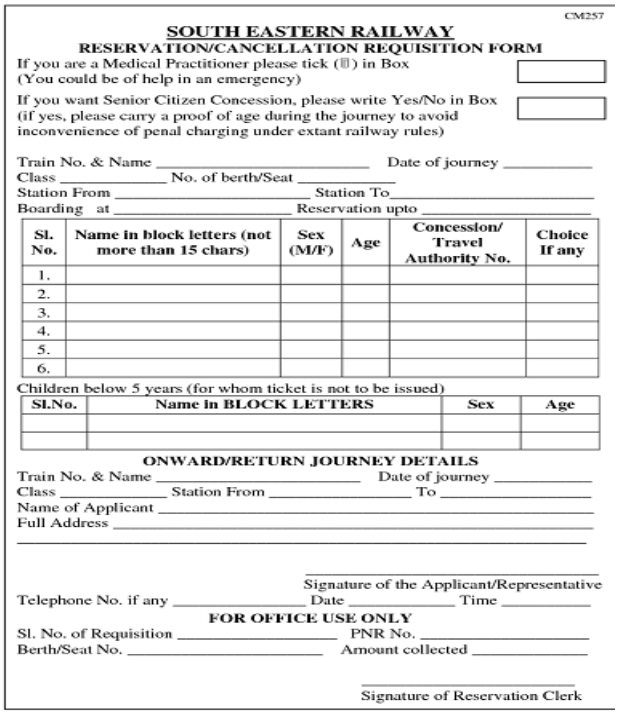
ER DIAGRAMS FOR TRAIN RESERVATION APPLICATION



ER DIAGRAMS FOR TRAIN CANCELLATION APPLICATION



Fields Identified for reservation of railways:



CM257

SOUTH EASTERN RAILWAY

RESERVATION/CANCELLATION REQUISITION FORM

If you are a Medical Practitioner please tick (✓) in Box (You could be of help in an emergency)

If you want Senior Citizen Concession, please write Yes/No in Box (if yes, please carry a proof of age during the journey to avoid inconvenience of penal charging under extant railway rules)

Train No. & Name _____ Date of journey _____
Class _____ No. of berth/Seat _____
Station From _____ Station To_____
Boarding at _____ Reservation upto _____

Sl. No.	Name in block letters (not more than 15 chars)	Sex (M/F)	Age	Concession/ Travel Authority No.	Choice If any
1.					
2.					
3.					
4.					
5.					
6.					

Children below 5 years (for whom ticket is not to be issued)

Sl.No.	Name in BLOCK LETTERS	Sex	Age

ONWARD/RETURN JOURNEY DETAILS

Train No. & Name _____ Date of journey _____
Class _____ Station From _____ To _____
Name of Applicant _____
Full Address _____
_____

_____
Signature of the Applicant/Representative

Telephone No. if any _____ Date _____ Time _____

FOR OFFICE USE ONLY

Sl. No. of Requisition _____ PNR No. _____
Berth/Seat No. _____ Amount collected _____

_____
Signature of Reservation Clerk

From the above train ticket we can write down the fields required for our train reservation ticket and train cancellation ticket and the passenger information required to book tickets.

1 The fields required for Train are : **Train ID,Train name,Source,Destination,Departure Time.**

2 The fields required for Passenger are : **Name,Age,Gender,Seat_number,Passenger-ID .**

3 The fields required for Tickets are : **Ticket ID,Seat No.,Date of journey,Class.**

4 The fields required for Reservation are : **Ticket ID,Passenger ID,Train ID,Date of reservation.**

5 The fields required for Cancellation are : **Ticket ID,Passenger ID,Train ID,Date of Cancellation.**

Creating Tables using DDL Statement's :

1.Train :

1) TRAIN

```
create table Train (Train_ID int not null, Train_name varchar(50) not null, Train_type varchar(50) not null, Source_stn varchar(30) null, Destination_stn varchar(30) null, Source_ID varchar(8) null, Destination_ID varchar(8) null, primary key(Train_ID), foreign key(Source_ID) references Station(Station_ID) on update cascade on delete cascade, foreign key (Destination_ID) references Station(Station_ID) on update no action on delete no action)
```

2.Passenger :

5) PASSENGER

```
create table Passenger ( PNR varchar(25) not null, Seat_number int not null, Passenger_name varchar(30) not null, Age int not null, Gender varchar(8) not null, Train_ID int not null,foreign key(Train_ID) references Train(Train_ID) on update cascade on delete cascade, primary key(PNR, Seat_number) )
```

3.Passenger Ticket :

6) PASSENGER_TICKET

```
create table Passenger_ticket ( PNR varchar(25) not null, Source_ID varchar(8) not null, Destination_ID varchar(8) not null, Class_type varchar(50) not null, Reservation_status varchar(25) not null, Train_ID int not null,foreign key(Train_ID) references Train(Train_ID) on update cascade on delete cascade, primary key(PNR) )
```

4.Reservation :

7) RESERVATION

```
create table Reservation (Train_ID int not null, Available_Date varchar(20) not null, EmailID varchar(30) not null, PNR varchar(20) not null, Reservation_Date text not null, Reservation_Status varchar(20) null, foreign key(Train_ID,Available_Date) references Train_status1 (Train_ID,Available_Date) on update cascade on delete cascade, foreign key(EmailID) references User_table(EmailID) on update cascade on delete cascade, primary key(Train_ID,Available_Date,EmailID,PNR) )
```

TABLE STRUCTURE AND DESIGN :

The tables with the above fields and the data types required for it are as shown below :

1.Train Table :

Column Name	Data Type	Allow Nulls
Train_ID	int	☐
Train_name	varchar(50)	☐
Train_type	varchar(50)	☐
Source_stn	varchar(30)	☑
Destination_stn	varchar(30)	☑
Source_ID	varchar(8)	☑
Destination_ID	varchar(8)	☑
		☐

Primary key : Train_ID

2.Passenger Table :

Column Name	Data Type	Allow Nulls
PNR	varchar(25)	☐
Seat_number	int	☐
Passenger_name	varchar(30)	☐
Age	int	☐
Gender	varchar(8)	☐
Train_ID	int	☐
Booked_By	varchar(30)	☑
		☐

Primary key : PNR,Seat_number

Foreign key :Train_ID

3.Ticket Table :

Column Name	Data Type	Allow Nulls
PNR	varchar(25)	☐
Source_ID	varchar(8)	☐
Destination_ID	varchar(8)	☐
Class_type	varchar(50)	☐
Reservation_status	varchar(25)	☐
Train_ID	int	☐
Booked_By	varchar(30)	☑

Primary key :PNR

Foreign key :Train_ID

4.Reservation Table :

Column Name	Data Type	Allow Nulls
Train_ID	int	☐
Available_Date	varchar(20)	☐
EmailID	varchar(30)	☐
PNR	varchar(20)	☐
Reservation_Date	text	☐
Reservation_Status	varchar(20)	☑

Foreign key:Train_ID,PNR,available_date,Email_ID

5.Cancellation Table :

	Column Name	Data Type	Allow Nulls
▶🔑	Train_ID	int	☐
🔑	Available_Date	varchar(20)	☐
🔑	EmailID	varchar(30)	☐
🔑	PNR	varchar(20)	☐
	cancellation_Date	text	☑

Outcome: Facilitates collaborative learning in the classroom. Provides students with hands-on learning opportunities to connect and apply their theoretical understanding.

Course Instructor **HOD-CSE**