LOVELY PROFESSIONAL UNIVERSITY

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RAILWAY RESERVATION SYSTEM

PROJECT

PROGRESS REPORT

The Railway Reservation System facilitates the passengers to enquire about the trains available on the basis of source and destination, Booking and Cancellation of tickets, enquire about the status of the booked ticket, etc. The aim of case study is to design and develop a database maintaining the records of different trains, train status, and passengers.

This project contains Introduction to the Railways reservation system .It is the computerized system of reserving the seats of train seats in advanced. It is mainly used for long route. On-line reservation has made the process for the reservation of seats very much easier than ever before.

In our country India, there are number of counters for the reservation of the seats and one can easily make reservations and get tickets. Then this project contains entity relationship model diagram based on railway reservation system and introduction to relation model .There is also design of the database of the railway reservation system based on relation model. Example of some SQL queries to retrieves data from rail management database.

- This website is basically concerned with the reservation of railway tickets to the passangers.

- In this we are discussing that how the reservation is done online.

- What are the process for reservation?

- In this report we mentioned the important tags we used to make our website easy for the users to access and do their reservations.

- We also used some very good tags of CSS to make our website look attractive and easily accessible.

- In this website we are going to cover all the entities related to reservation-

  - Meals
  - Holiday packages
  - Service at station
  - Homes
  - Contact us
  - Book your ticket

IMPORTANCE OF WEBSITE

- All the manual work should be converted into computerized so that the load of the employees should decrease,working at railway stations fpr the reservations.
- The database should be completely stored in the computers intead of

- Ease to do reservations and fats accessing of information.
- Centralized management reporting and decision support.
- Accurate and timely control program.
- To make it easy for fast processing and modification.
- Easy retrieval of accounts.
- To make the railway system interactive.
- Quick heedback.

Features

- Searching of data is easy.
- Passengers do not have to wait for a long time.
- Information is accurate.
- It is a fast process.
- Data efficiency is more.

Final list of relationships

- books-temary relationship betweenUSER,TRAIN, PASSANGER and TICKET.
- Starts-Between TRAIN and STATION.

- Reaches-Between TRAIN and STATION.
- Cancel-Between USER and TICKET.
- Stops-Between TRAIN and STATION.

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) TRAIN_CLASS

```
create table Train_class (Train_ID int not null, Fare_Class1 int not null, Seat_Class1 int not null, Fare_Class2 int not null, Seat_Class2 int not null,Fare_Class3 int not null, Seat_Class3 int not null, primary key(Train_ID))
```

3) DAYS_AVAILABLE

```
Create table Days_Available(Train_ID int not null, Available_days varchar(20), primary key(Train_ID))
```

4) STATION

```
Create table Station(Staiton_ID int not null, Station_Name varchar(25), primary key(Station_ID) )
```

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
```

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) )
```

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) )
```

8) TRAIN_STATUS

```
create table Train_status3 (Train_ID int not null, Available_Date varchar(20) not null,
Booked_seats3 int null, Waiting_seats3 int null, Available_seats3 int null, primary
key(Train_ID,Available_Date), foreign key(Train_ID) references Train(Train_ID) on update
cascade on delete cascade)
```

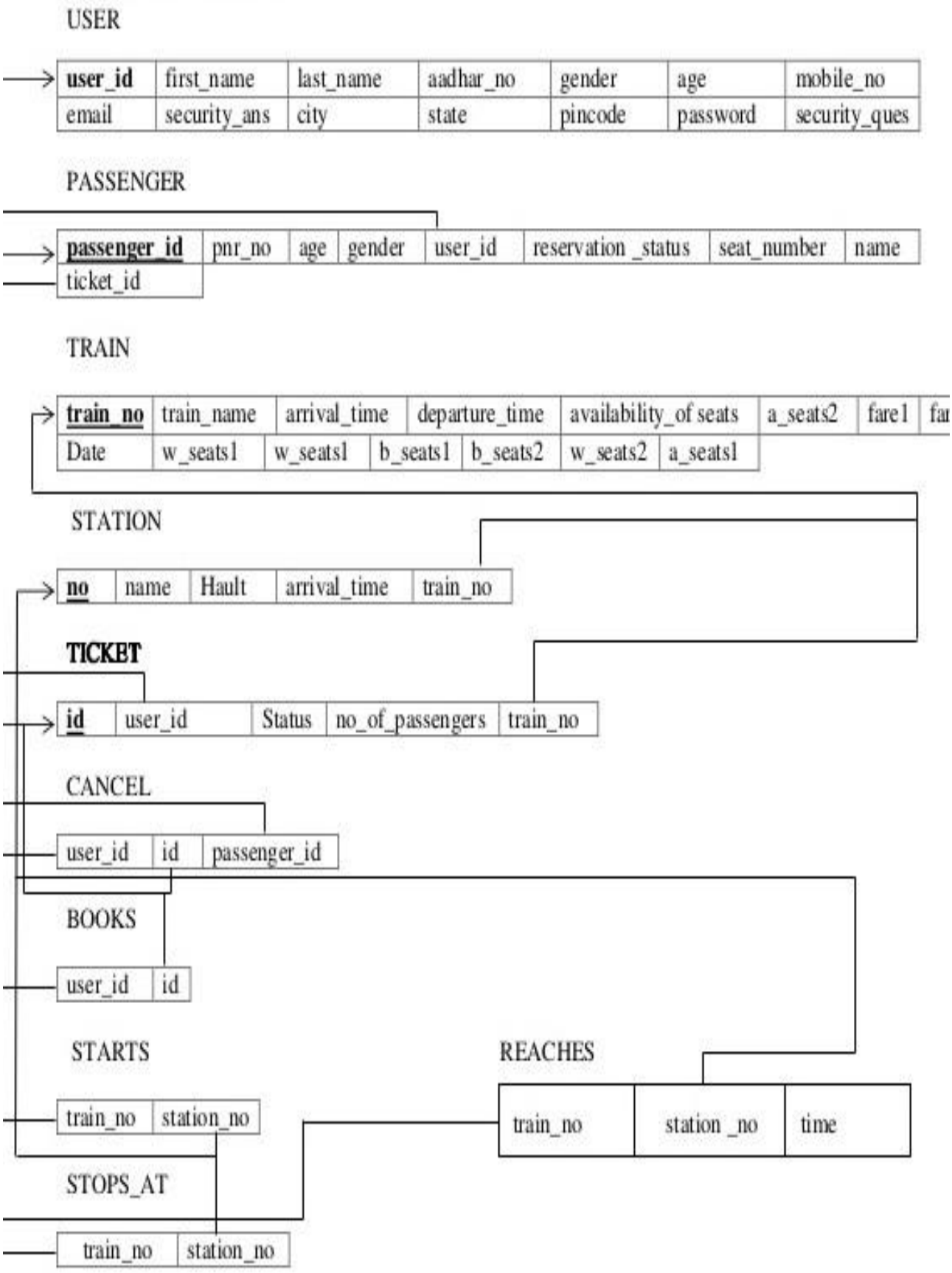
9) ROUTE

```
create table Route (Train_ID int not null, Stop_number int not null, Station_ID varchar(8) not
null , Arrival_time text not null, Departure_time text not null, Source_distance int not null,
primary key(Train_ID,Stop_number), foreign key(Train_ID) references Train(Train_ID) on
update cascade on delete cascade)
```

10) ROUTE_HAS_STATION
create table Route_HAS_Station (Train_ID int not null,Station_ID varchar(20) not null, Stop_number int not null, primary key(Train_ID, Station_ID))

11) USER
Create table User_table (EmailID varchar(30) not null, Password varchar(15) not null, FullName varchar(30) not null, Gender varchar(8) not null, Age int not null, Mobile varchar(14) not null, City varchar(20) not null, State varchar(25) not null, Security_question varchar(40) not null, Security_answer varchar(20) not null)

12) ADMIN
create table Admin_table (User_ID varchar(20) not null, Password varchar(15) not null, primary key(User_ID))


USER
user_id
first_name
last_name
aadhar_no
gender
age
mobile_no
email
security_ans
city
state
pincode
password
security_ques
PASSENGER
passenger_id
pnr_no
age
gender
user_id
reservation _status
seat_number
name
ticket_id
TRAIN
train_no
train_name
arrival_time
departure_time
availability_of seats
a_seats2
fare1
Date
w_seats1
w_seats1
b_seats1
b_seats2
w_seats2
a_seats1
STATION
no
name
Hault
arrival_time
train_no
TICKET
id
user_id
Status
no_of_passengers
train_no
CANCEL
user_id
id
passenger_id
BOOKS
user_id
id
STARTS
train_no
station_no
REACHES
train_no
station _no
time
STOPS_AT
train_no
station_no

Reservation queries

- Read data from station table and get source station ID.
- Read dada from station table and get destination station ID.
- Get list of trains available on a particular date between a pair of stations.
- Get seat status from table train status and display it when user selects the class from dopdownlist provided.
- Calculate fair form the journey distance from the selected source and destination stations.

- After fair calculation,add passengers details to successfully complete the reservation process.

Cancellation queries

- When user cancels a ticket,the PNR status is set as CANCELLED.
- With the cancellation of one ticket,available seats in train status table for that specific train should increase and booked seats should decrease by 1.

Codes

```
<!DOCTYPE html>

<html lang="en">

<head>

  <title>INDIAN RAILWAY</title>

  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width, initial-scale=1">

  <style>
    * {

      box-sizing: border-box;

    }
```

```
body {

    font-family: Arial, Helvetica, sans-serif;
    background-color: rgb(140, 141, 141);

}

/* NAVBAR Styleing */

ul {
    list-style-type: none;
    margin: 10px;
    padding: 10px;
    overflow: hidden;
    border: 1px solid #e7e7e7;
    background-color: #c4bdbd;
    position: -webkit-sticky;
    /* Safari */
    position: sticky;
    top: 0;
    font-size: 1.8rem;
    /* z-index: -1; */
    opacity: 0.900;
}
```

```
ul:hover {
    list-style-type: none;
    margin: 10px;
    padding: 10px;
    overflow: hidden;
    border: 1px solid #e7e7e7;
    background-color: #383737;
    position: -webkit-sticky;
    /* Safari */
    position: sticky;

    top: 0;
    font-size: 1.8rem;
    /* z-index: -1; */
    opacity: 0.899;
}

li {
    float: left;
}

li a {
    display: inline-block;
    color: rgb(7, 7, 7);
    text-align: center;
```

```
    padding: 14px 16px;
    text-decoration: none;
    text-shadow: 2px 2px 4px #0a5a9c;
}

li a:hover:not(.active) {
    background-color: rgb(216, 206, 206);
}

li a.active {
    color: white;
    background-color: rgb(27, 27, 27);
}

li a.active:hover {
    color: rgb(252, 244, 244);
    background-color: rgb(62, 63, 65);
}



/* Style the header */

header {

    background-color: #666;
```

```
  padding: 30px;

  text-align: center;

  font-size: 35px;

  color: white;

}

.backimg img {
  width: 1000px;
  height: 500px;
}



/* Create two columns/boxes that floats next to each other */

#forms {

  float: left;

  width: 30%;
```

```
  height: 350px;
  /* only for demonstration, should be removed */
  background: #ccc;
  padding: 10px;
}

/* Style the list inside the menu */
forms ul {
  list-style-type: none;
  padding: 0;
}

article {
  float: left;
  font-size: 1.6rem;
```

```
    padding: 20px;

    width: 70%;

    background-color: #a79d9d;

    height: 320px;
    /* only for demonstration, should be removed */

}



/* Clear floats after the columns */

section:after {

    content: "";

    display: table;

    clear: both;

}
```

```
/* Style the footer */

footer {

  background-color: #777;

  padding: 10px;

  text-align: center;

  color: white;

}

/* for meal */
#grad1 {
  /* height: 200px; */
  background-color: red;
  /* For browsers that do not support gradients */
  background-image: linear-gradient(rgb(73, 138, 150), rgb(85, 182, 199), rgb(167, 142, 142), rgb(127, 171, 179), rgb(119, 170, 179), rgb(51, 153, 172), rgb(33, 93, 204));
  /* Standard syntax (must be last) */
}

#meals {
```

```
    margin: 10px;
    display: flex;
}

#meals .box {
    border: 2px solid brown;
    border-radius: 25px;
    padding: 10px 8px 15px 10px;
    margin: 4px;
    background-color: rgb(134, 166, 226);
}

.i4th {
    width: 410px;
    height: 280px;
    padding: 7px 5px 9px 5px;
}

.i5th {
    width: 410px;
    height: 280px;
    padding: 8px 3px 7px 8px;
}

.i6th {
```

```
    width: 410px;
    height: 280px;
    padding: 8px -5px 7px 18px;
}

/* for Holiday package  */
#grad2 {
    /* height: 200px; */
    background-color: red;
    /* For browsers that do not support gradients */
    background-image: linear-gradient(rgb(64, 138, 175), rgb(42, 90, 194));
    /* Standard syntax (must be last) */
}

#holiday {

    margin: 10px;
    display: flex;
}

#holiday .box {
    border: 2px solid brown;
    border-radius: 25px;
    padding: 10px 8px 15px 10px;
    margin: 4px;
```

```
    background-color: rgb(134, 166, 226);
  }

  /* for services at stations  */
  #grad3 {
    /* height: 200px; */
    background-color: red;
    /* For browsers that do not support gradients */
    background-image: linear-gradient(rgb(116, 117, 117), rgb(117, 117, 122), rgb(85, 85, 87), rgb(47, 48, 48), rgb(8, 8, 8));
    /* Standard syntax (must be last) */
  }

  #free {

    margin: 10px;
    display: flex;
  }

  #free .box {
    border: 2px solid brown;
    border-radius: 25px;
    padding: 10px 8px 15px 10px;
    margin: 4px;
    background-color: rgb(134, 166, 226);
  }
```

```
    /* Responsive layout - makes the two columns/boxes stack on top of each other instead of next to each other, on small screens */

    @media (max-width: 600px) {

      nav,
      article {

        width: 100%;

        height: auto;

      }

    }
  </style>

</head>

<body>
```

```
<ul id="home">
    <li><a class="active" href="#imgm">Home</a></li>

    <li><a href="#grad1">MEALS</a></li>
    <li><a href="#grad2">HOLIDAY PACKAGE </a></li>
    <li><a href="#grad3">SERVICES AT STATION </a></li>
    <li><a href="#forms">BOOK NOW</a></li>
    <li><a href="#contact">CONTACT US</a></li>
</ul>

<header>
    <div class="backimg" id="imgm"> <img src="https://5.imimg.com/data5/WX/MM/MY-40171335/irctc-api-500x500.jpg"
        alt="sorry connect your image first">
    </div>

</header>

<section>
    <style>
      .text {
        background-color: black;
        color: blanchedalmond;
        padding: 10px;
```

```
    margin: -4px;
    border-radius: 10px;
  }
</style>

<nav id="forms">
  <hr>

  <H3>BOOK YOUR TICKET HERE</H3>
  <hr>

  <form>

    <label for="fname"></label><br>

    <input type="text" id="fname" class="text" name="fname" placeholder="From " ; " ><br>

    <label for=" lname"></label><br>

    <input type="text" id="lname" class="text" name="lname" placeholder="To"><br>

    <label for="fname">dd-mm-yy:</label><br>

    <input type="text" id="fname" class="text" name="fname"><br> <br>
```

```
<select id="CLASS" class="text">

<option class="text" value="volvo">ALL CLASS</option>

<option class="text" value="SLEEPER">SLEEPER</option>

<option class="text" value="3AC">3AC</option>

<option class="text" value="2AC">2AC</option>

</select><br>

<br> <a class="text" href="#home"

style="color: rgb(24, 24, 23); background-color: darkgray; border: 2px solid black; text-decoration: none; font-size: 1.6rem ; padding: 5px; margin-top: 15px; border-radius: 18px; font-family: fantasy; ">SUBMIT</a>

</form>

</form>

</nav>
```

```
    <article>

      <h2>HOLIDAYS</h2>

      <H1>TOURIST TRAIN</H1>

      <H1>MAHARAJAS EXPRESS</H1>

      <H1>NATIONAL PACKAGE</H1>

    </article>

  </section>

  <section id="grad1">
    <h1 style="font-family: fantasy; font-size: 2.8rem; text-align: center; background-color: rgb(42, 149, 153);">
      LIP LICKING MEALS </h1>
    <div id="meals">

      <div class="box">
        <img src="https://img.theweek.in/content/dam/week/news/sci-tech/2019/October/indian-railways-train-irctc-catering-trains-food-shut.jpg"
          class="i4th" alt="image is not avalaible yet">
        <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> MIX MEALS </h2>
```

```
        </div>

        <div class="box">

          <img src="https://images.indianexpress.com/2018/06/irctc-indian-railways-food-menu-for-rails-app.jpg"

            alt="image is not avalaible yet" class="i5th">

          <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> WIDE RANGE OF FOOD </h2>



        </div>

        <div class="box">

          <img src="https://4.bp.blogspot.com/-TSLBMF4qYE8/VZmPdjKawzI/AAAAAAAAAWg/TrS07_a9LSs/s1600/Indian-Railways-longest-running-non-stop-train.jpg"

            class="i6th ">

          <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> BEST IN QUALITY</h2>



        </div>

      </div>


    </section>


    <section id="grad2">

      <h1 style="font-family: fantasy; font-size: 2.8rem; text-align: center; background-color: rgb(42, 149, 153);">

        EXOTIC HOLIDAYS IN MAHARAJAS EXPRESS</h1>

      <div id="holiday">
```

```
        <div class="box">
          <img src="https://www.maharajasexpress4u.com/wp-content/uploads/2019/09/maharajas-express-train-tj-vj-outside1-e1569691674260.jpg"
            class="i4th" alt="image is not avalaible yet">
          <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> SPEND YOUR HOLIDAYS HERE </h2>

        </div>
        <div class="box">
          <img src="https://qph.fs.quoracdn.net/main-qimg-bbf38a4756e5b10901a41a40d5c4708c.webp"
            alt="image is not avalaible yet" class="i5th">
          <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> SHINING INTERIOR </h2>

        </div>
        <div class="box">
          <img src="https://blog.the-maharajas.com/wp-content/uploads/2014/06/m-d-map.jpg" class="i6th ">
          <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> VISIT TOP TOURIST PLACES OF INDIA
          </h2>

        </div>
      </div>

    </section>
```

```
  <section id="grad3">
    <h1 style="font-family: fantasy; font-size: 2.8rem; text-align: center; background-color: rgb(42, 149,
153);">
      WE PROVIDE BEST SERVICES</h1>
    <div id="free">
      <div class="box">
        <img src="https://psuwatch.com/wp-content/uploads/2019/12/railwire-WiFi-psuwatch.jpg"
          alt="image is not avalaible yet" class="i5th">
        <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> FREE WiFi by Google </h2>

      </div>
      <div class="box">
        <img src="https://i.ytimg.com/vi/B_-D_0eQl7c/hqdefault.jpg" alt="image is not avalaible yet"
          class="i5th">
        <h2 class="h-secendary center" style="background: rgb(44, 172, 177);"> FREE WHEELCHAIR FACILITY
</h2>

      </div>
      <div class="box">
        <img src="https://encrypted-
tbn0.gstatic.com/images?q=tbn%3AANd9GcTLguJ7UbtoknKYGhrV9YNTRCPig8a7KUz-
P9YA4Re5mMcFnwWk&usqp=CAU"
          class="i6th ">
        <h2 class="h-secendary center" style="background: rgb(44, 172, 177);">CCTV SECURITY
        </h2>

      </div>
```

```
    </div>

  </section>

  <footer id="contact" style="color: rgb(32, 32, 32) ; margin: auto;">
    <h2> Full Support </h2>
    <hr>
    <h2> Name-Nitin Sinha </h2>
    <h2> Name-Pranshi Dwivedi </h2>
    <h2> Name-Ashish Prasad Gupta </h2>
    <h2 style="color: rgb(116, 101, 18);">P.no 8789113801 , 7651877853 , 9113104378</h2>
    <h2> <a href=""></a> </h2>

    <p>

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      Designed and Hosted by CRIS</p>

  </footer>

</body>

</html>
```

Customer

- In this part we are covering all the details related to customer required for reservation.
    - Customer_name
    - Customer_id
    - Address
    - Age

- Gender
- Phone No.

Ticket

- This is the part where we are covering the ticket detail.it includes many attributes like id of tickets, class, fare, source stations, destination station etc. ticket can be booked online as well as onsite.
- PNR_no

- Ticket_num
- Source and destination
- Class
- Fare
- Train_id
- Seat_id

Station

In this part we are covering the details of the station ex, station name,number of trains passing or going from the station or coming to

that station,number of platforms,number of lines.

- Station_name
- No. of lines
- Station_id
- No. of platforms

Train

In this part we are covering all the details related to the trains.we are covering train no,train name,no. of passengers traveling through train ,classes is train,route through which the train is going.

- Train_name
- Train_num

Form

Forms are the most important part of reservation.fprms are the source to know the details of the customers.

- Form_name
- Form_id

Class

In this part we are covering the different types of classes that is:

- 1st class
- 2nd class
- Sleeper class
- General class

So,the price depends upon the class the customerselects.General class is the cheapest.

Fare

Fare is the charges spent by the customer.Fare is decided according to the train which is selected by the customer.
For example-we take the example of different trains going from Ludhiana and their different charges/fare.

Time

In this part all the details related to time are covered.

This includes-

- Departure time
- Train id
- Arrival time

Each train has different time.it can be in morning or evening or night.

In our project railway reservation system we have stored all the informatiom about the trains scheduled and the users booking tickets and even status of trains,seats

etc.This database is helpful for the applications which facilitates passengers to book the train tickets and check the details of the trains and their status from their place itself it avoids inconvenience of going to railway stations for each and every query they get.we had considered the most important requirements only,many more featurs and details can’t be added to our project in order to obtain even more user friendly applications. These applications are already in progress and in future they can be upgraded and may become part of amzing technology.

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