



RAILWAY BOOKING SYSTEM

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PROJECT DESCRIPTION

The motive of the project is to facilitate the user (passenger) to enquire about the trains on the basis of source and destination, provide booking and cancellation of tickets, View all his bookings at the moment. A superuser generally known as admin is allowed to manage trains ,users and bookings. This basically reflects admin moderation of the site.

The aim is to design and develop a database maintaining the records of different trains, details of the trains and users and their bookings.

LIST OF ASSUMPTIONS

The Railway booking system in real life is complex in nature and can't be implemented as a college level project :(

We discover a need to make certain assumptions so as to make ourselves a working model or rather a simulation :P

Here are the list of assumptions

- If a train runs on a day, it is available to book 24/7
- There are no in-between stoppages between the source and destination provided
- Booking of a ticket doesn't require exhaustive details of the passengers as they would require in real life scenario
- There is only a single class of travel available in the train, similar to local trains
- Once created, the train details can't be updated by the admin

The records in the database are of users, trains, booking, seats booked.

- users :

Users entity set consists of admins as well as general users.

The users entity comprises of username, gender, age , email, password for the user account, role (admin/ general user)

- train :

Train entity set consists details of all the running trains. The train entity comprises of train_id, train_name, source, destination, number of seats available ,fare, days of the run.

- bookings:

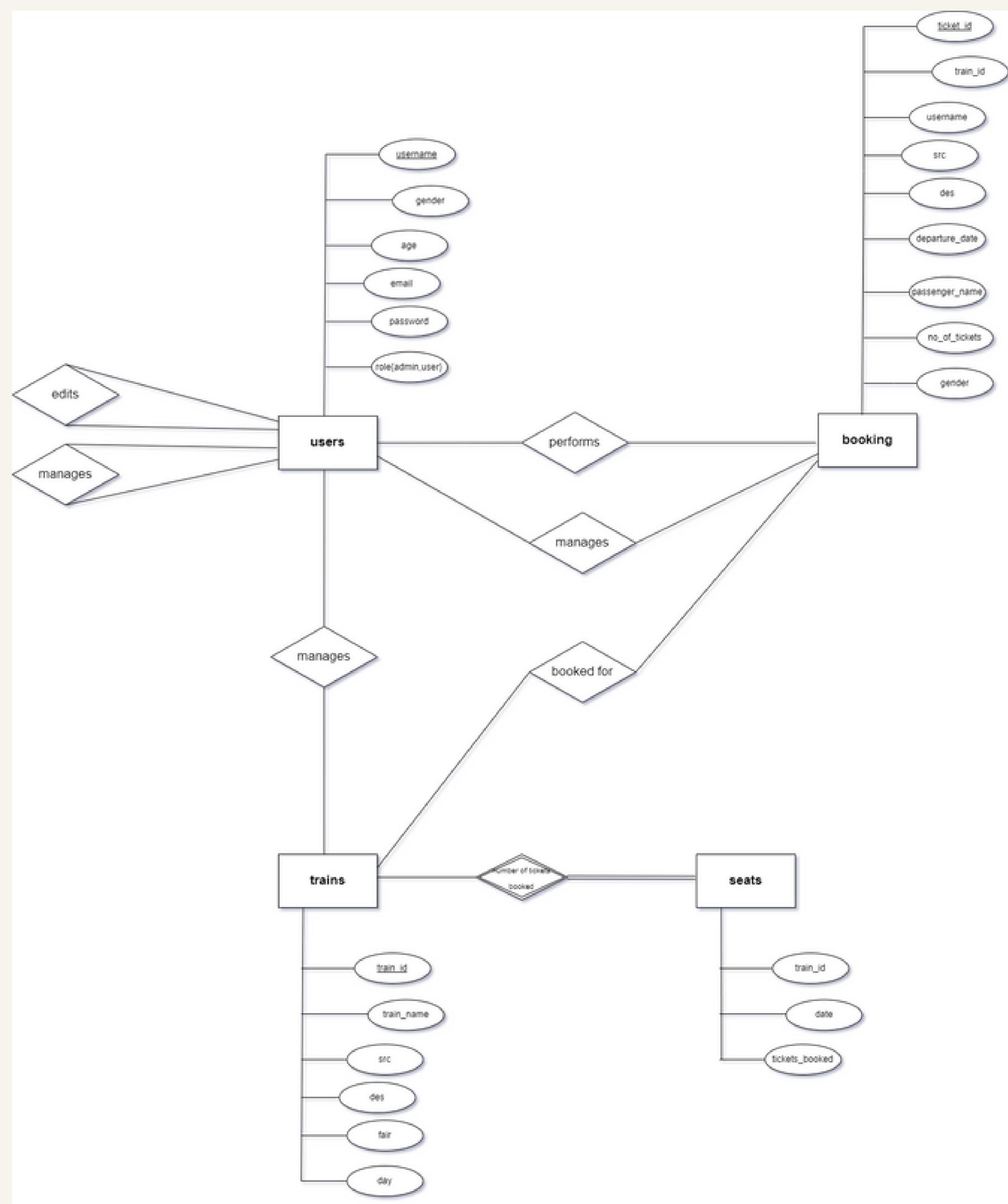
booking entity set consists of information regarding train tickets booked by general users. The booking entity comprises of ticket_id, train_id , username, source, destination, departure_date, passenger_name, number_of_tickets_booked, gender.
- seats:

seats entity set consists information regarding tickets booked for a particular train on a particular date. The seats entity comprises of train_id, date_of_journey, tickets_booked.

LIST OF RELATIONSHIPS

- books - user books train tickets
- cancel - user cancels tickets
- tickets_booked - seats booked in train
- booking - ticket booking happens for a train by user
- edit - user edits user profile
- delete - user deletes users/trains
- manage - user manages users/trains

ER Diagram



SCHEMAS

TABLE - USERS

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action | |
|---|----------|---------------------------------|--------------------|------------|------|---------|----------|--|--|---|
| 1 | username | varchar(255) | utf8mb4_general_ci | | No | None | |  Change |  Drop |  |
| 2 | gender | enum('Male', 'Female', 'Other') | utf8mb4_general_ci | | No | None | |  Change |  Drop |  |
| 3 | age | int(4) | | | No | None | |  Change |  Drop |  |
| 4 | email | varchar(255) | utf8mb4_general_ci | | No | None | |  Change |  Drop |  |
| 5 | password | varchar(255) | utf8mb4_general_ci | | No | None | |  Change |  Drop |  |
| 6 | role | enum('0', '1') | utf8mb4_general_ci | | No | 0 | |  Change |  Drop |  |

SCHEMAS

TABLE - TRAIN

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|------------|---|--------------------|------------|------|---------|----------|--|--|
| 1 | train_id | varchar(40)  | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 2 | train_name | varchar(40) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 3 | src | varchar(40) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 4 | des | varchar(40) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 5 | seats | int(4) | | | No | None | |  Change |  Drop  |
| 6 | fare | int(7) | | | No | None | |  Change |  Drop  |
| 7 | day | set('Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat', 'Sun') | utf8mb4_general_ci | | No | None | |  Change |  Drop  |

SCHEMAS

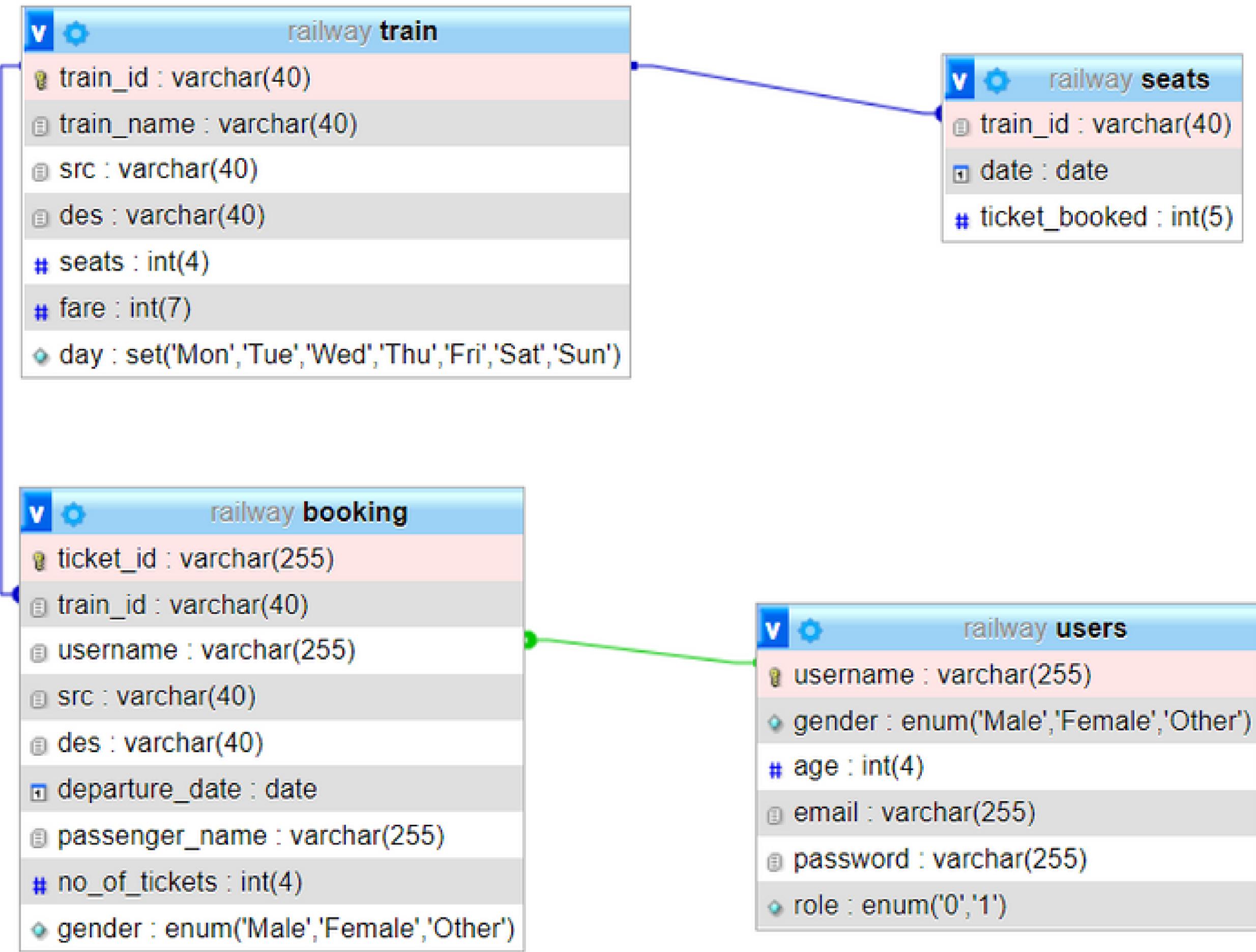
TABLE - BOOKING

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|----------------|---------------------------------|--------------------|------------|------|---------|----------|--|--|
| 1 | ticket_id | varchar(255) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 2 | train_id | varchar(40) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 3 | username | varchar(255) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 4 | src | varchar(40) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 5 | des | varchar(40) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 6 | departure_date | date | | | No | None | |  Change |  Drop  |
| 7 | passenger_name | varchar(255) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 8 | no_of_tickets | int(4) | | | No | None | |  Change |  Drop  |
| 9 | gender | enum('Male', 'Female', 'Other') | utf8mb4_general_ci | | No | None | |  Change |  Drop  |

SCHEMAS

TABLE - SEATS

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|---------------|-------------|--------------------|------------|------|---------|----------|--|--|
| 1 | train_id | varchar(40) | utf8mb4_general_ci | | No | None | |  Change |  Drop  |
| 2 | date | | | | No | None | |  Change |  Drop  |
| 3 | ticket_booked | int(5) | | | No | None | |  Change |  Drop  |



WORKING OF THE SITE

Pages

For user

- Signup
- Login
- Check availability of trains
- Book tickets
- Cancel tickets
- View bookings
- Edit profile
- Change password
- Logout

For Admin

- Signup
- Login
- Manage trains
- Manage Users
- Manage bookings
- Edit profile
- Change password
- Manage Admins
- Logout

- User

FLOW OF THE SITE

1. **SignUp:** After submitting a form a request is sent to the database to insert a row in the users table with provided user details
2. **Login:** After successfully registering on the site, users needs to login using the registered username and password
3. **Availability:** user can check for the availability of trains on the basis of source and destination, date of travel
4. **Book:** If the desired train is available user can go ahead and book the ticket for that train on the date of his liking
5. **Cancel :** If the user wants to cancel the booked ticket he can do so by clicking on the appropriate button
6. **View:** user can all his bookings at the moment
7. **Edit:** Profile: user can change his information by heading to the edit profile page

FLOW OF THE SITE

1. **Login:** Admin needs to login using the registered username and password
2. **Manage-trains:** Admin can add or delete train
3. **Manage-users:** Admin can add or delete users
4. **Manage-Admins:** Admin can add or delete an admin
5. **Cancel:** Admin can cancel the booked ticket he can do so by clicking on the appropriate button
6. **View:** View tickets booked by a particular user or for a particular train
7. **Edit-Profile:** user can change his information by heading to the edit profile page

DESIGN OF THE SITE

ISM Railway [Home](#) [Admin Login](#) [User Login](#) [SignUp](#)

CREATE AN ACCOUNT

Enter Username

Gender

Age

Enter Email

Enter Password

Re-Enter Password

Already have an account? [Login here](#)

SIGN-IN AS USER

Enter Username

Enter Password

Login

Do not have an account? [SignUp](#) here

SIGN-IN AS ADMIN

Enter Username

Enter Password

Login

Trains Running

 ISM104 - Emerald Express

Availability - Tue,Wed,Thu

Emerald -> NLHC

Ticket Price - ₹ 5

Book Ticket

 ISM107 - Library Express

Availability - Mon,Wed,Sun

Library -> NLHC

Ticket Price - ₹ 20

Book Ticket

Trains Between Stations

Enter Source



Enter Destination

dd-mm-yyyy



Check Trains

Enter Train Name or No.

Enter Train Name or No.

Check Trains

TICKET BOOKING FORM

| | |
|-------------------|---|
| Train ID | <input type="text" value="Enter Train ID"/> |
| Select Date | <input type="text" value="dd-mm-yyyy"/> |
| Name | <input type="text" value="Enter Passenger Name"/> |
| Gender | <input type="button" value="Male"/> |
| Number of tickets | <input type="text" value="1"/> |

Ticket booking history

| Ticket ID | Train Name | Passenger Name | Source | Destination | Departure Date | Number of Tickets | Actions |
|------------|-----------------|----------------|---------|-------------|----------------|-------------------|---------|
| 1668618766 | Amber Express | Sai nikhil | Amber | NLHC | 2022-11-21 | 3 | |
| 1668618786 | Jasper Express | revanth | Jasper | NLHC | 2022-11-21 | 2 | |
| 1668618828 | Library Express | Kiran | Library | NLHC | 2022-11-21 | 4 | |

USER INFORMATION

| | |
|-----------|---------------|
| User Name | User |
| Email | user@user.com |
| Gender | Male |
| Age | 19 |
| Phone | 123 456 7890 |

CHANGE PASSWORD

Enter Old Password

Enter New Password

Re-Enter New Password

Change

EDIT YOUR PROFILE

Enter New/Old Username

Enter New/Old Email

Update

ADD TRAIN

Train ID

Train Name

Source

Destination

Fare

Day Mon Tue Wed Thu Fri Sat Sun

Number of seats

Insert

| Available Trains | | | | | | | Search |
|------------------|------------------|----------|-------------|-----------------|------|---------|--------|
| Train ID | Train Name | Source | Destination | Availability | Fare | Actions | |
| ISM101 | Amber Express | Amber | NLHC | Mon,Tue | 10 | | |
| ISM102 | Jasper Express | Jasper | NLHC | Mon,Tue,Fri | 5 | | |
| ISM103 | Rosaline Express | Rosaline | NLHC | Tue,Sat,Sun | 20 | | |
| ISM104 | Emerald Express | Emerald | NLHC | Tue,Wed,Thu | 5 | | |
| ISM105 | Ruby Express | Amber | Ruby | Fri,Sat,Sun | 25 | | |
| ISM106 | Diamond Express | Diamond | NLHC | Mon,Tue,Thu,Sun | 15 | | |
| ISM107 | Library Express | Library | NLHC | Mon,Wed,Sun | 20 | | |

ADD ADMIN

Gender

Male

Age

>17 yrs

Add

| Username | Gender | Age | Email | Actions |
|----------|--------|-----|---------------|---|
| User | Male | 19 | user@user.com |   |

PRINT TICKET

Users can print the details of the booked ticket

The screenshot shows a web browser window with a dark theme. The title bar reads "print.php". The main content area displays a receipt for a train ticket. At the top center, it says "ISM Railways". Below that, in green text, it says "Status of Payment : Payment Successful". A table follows, listing the following information:

| | |
|---------------------|---------------|
| Ticket ID : | 1668618766 |
| Train No : | ISM101 |
| Train Name : | Amber Express |
| Passenger Name : | Sai nikhil |
| Source : | Amber |
| Destination : | NLHC |
| Departure Date : | 2022-11-21 |
| Number of Tickets : | 3 |
| Total Amount : | Rs. 30 |

At the bottom, a note in red text reads: "Note : [This receipt is subject to verification, keep your deduction proof of bank with you. May have to produce the same if your receipt comes under scrutiny]".

TECH STACK

