RAILWAY MANAGEMENT SYSTEM

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Tittle: Railway management database system

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Abstract

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

This project contains introduction to the Railway reservation system. It is the computerized system of reserving the seats of train seats in advance. It is mainly used for long route. Online reservation has made the process for the reservation of seats very much easier even before.

In our India, there are number of counters for the reservation of the seats and one can easily make reservation 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 relational model.

The Indian Railways (IR) carries about 5.5 lakhs passengers in reserved accommodation every day. The Computerised Passenger Reservation System (PRS) facilates the booking and cancellation of tickets from any of the 4000 terminals (i.e. PRS booking window all over the countries). These tickets can be booked or cancelled for journeys commencing in any part of India and ending in any other part, with travel time as long as 72hours and distance upto several thousand kilometers. In the given project we will be developing a website which will help users to find train details, book and cancel tickets and the exact rates of their tickets to the desired destination. With the help of online booking people can book their tickets online through internet, sitting in their home by a single click of mouse. Using their credit cards people can easily get their tickets done within minutes.

Software Requirements Specification

2.1 Development Environments

Hardware

Intel core 2 duo T6400 2.00 GHz with 2GB RAM, 250 GB hard disk space and other

Standard accessories.

Environment and Applications:

- Microsoft Windows 7.
- Microsoft Visual Studio 2010.
- Microsoft SQL Server 2005.
- Microsoft Internet Explorer.

2.2 Operating environment:

Hardware configuration:

The minimum configuration for hardware is given below:

- Intel® Pentium® or higher processor.
- 65 MB RAM or higher

Software configuration:

- Microsoft® Windows® XP or later versions
- A standard web browser.
- .Net framework

List of general and unique services of application

Passengers can book their tickets for the train in which seats are available. For this passenger must provide the desired train number and the date for which ticket is to booked. Before booking a ticket for a passenger, the validity of train number and booking date is checked. Once tarin number and date are validated, seats availability will be checked. If yes, the ticket is booked with confirm status and corresponding ticket ID is generated which is stored along with other details of the passengers. The ticket once booked can be cancelled at any time. For this, the passenger has to provide the ticket ID. The ticket ID is searched and the corresponding record is deleted.

ENTITES	ATTRIBUTES
User	**User_id** Password First_name Last_name Gender Age Email Aadhar_no Mobile_no City State Pincode Security_ques Security_ans
passenger	**Passenger_id** Name Gender Age Pnr_no Seat_no Booked_by Reservation_status

OBJECTIVE

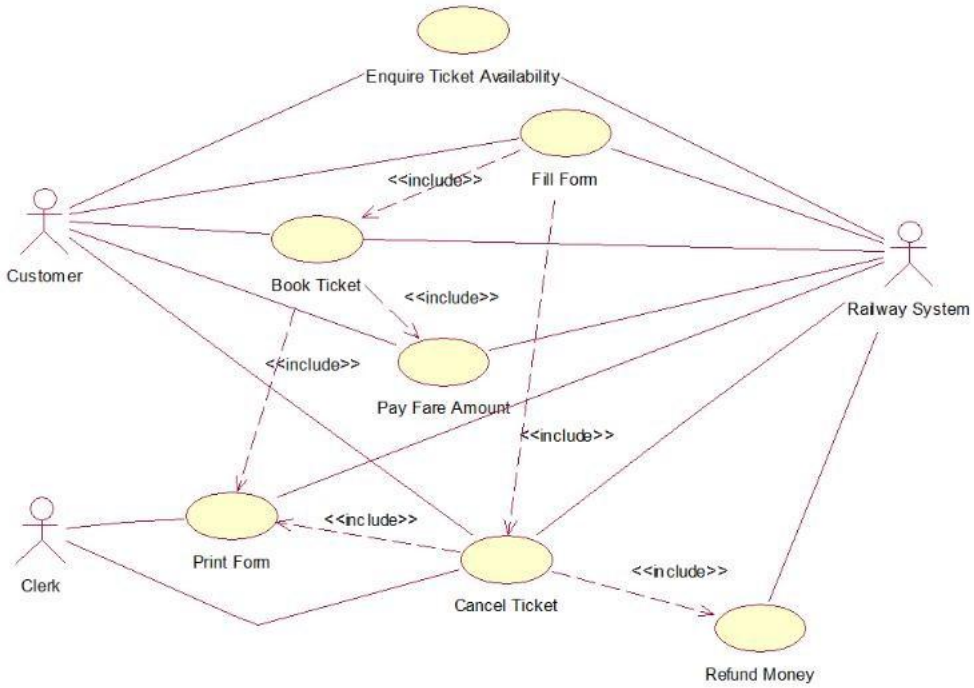
The objective of the online railway ticket reservation system

Project is to design software to fully automate the process of issuing a railway ticket.

That is:-

1. To create a database of the trains
2. To search the trains it's arrival and departure time, distance between source and destination.
3. To check the availability of the ticket.
4. To calculate fare.
5. To book the ticket.
6. To cancel the ticket if necessary.

USECASE DIAGRAM



- Admin User can search ticket, view description as selected ticket, add ticket, update ticket, and delete ticket.
- It shows the activity flow of editing, adding, and updating of customer.
- User will be able to search and generate report of payment, booking, tarin schedule.
- All objects such as (Ticket, Customer, Train Schedule) are interlinked.
- It shows the full description and flow of ticket, booking, tarin schedule, payment, customer.

DESIGN

Detailed design specification:

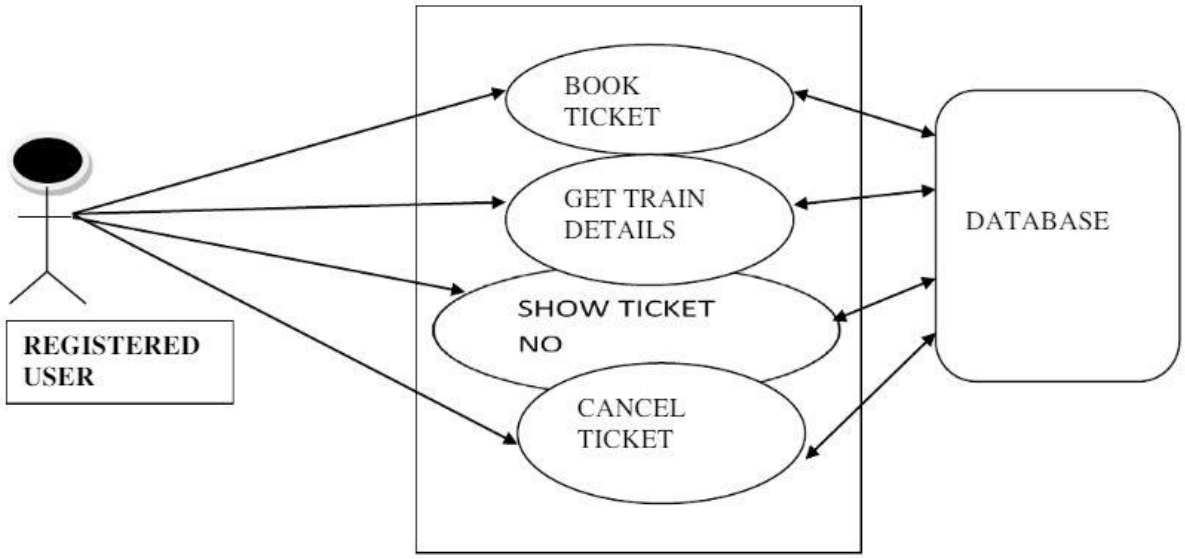


Fig: User's Booking Window

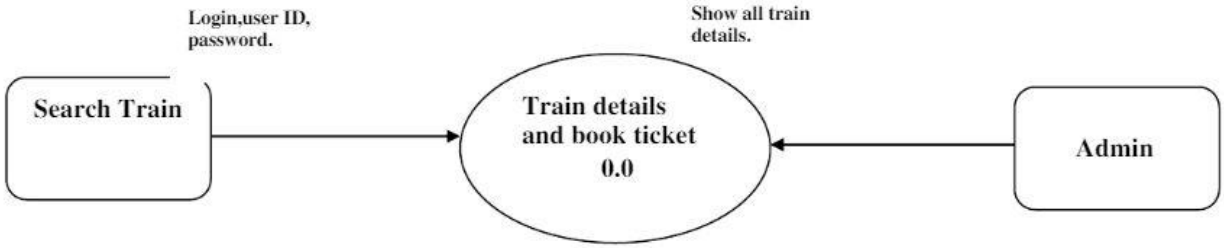


Fig: Context Diagram

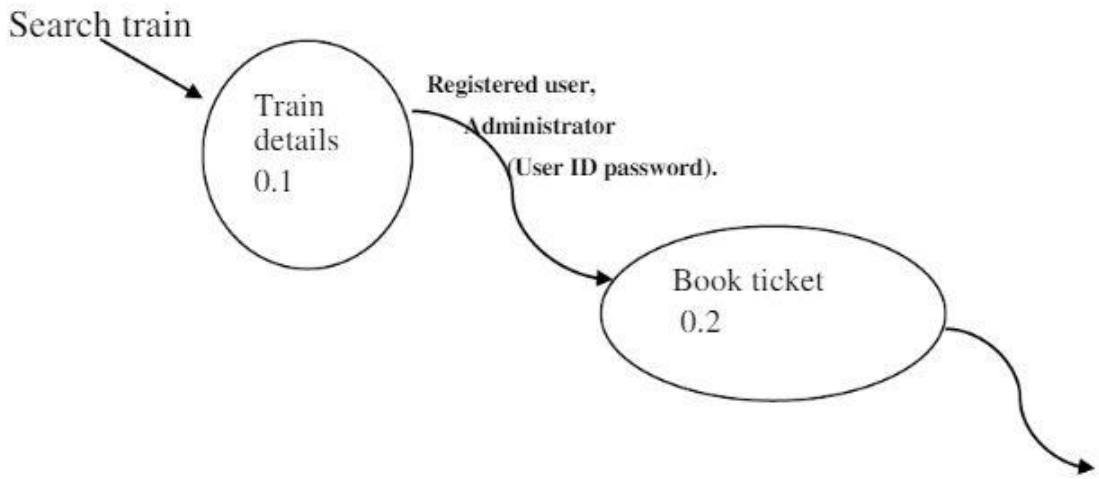


Fig: Level 1 DFD

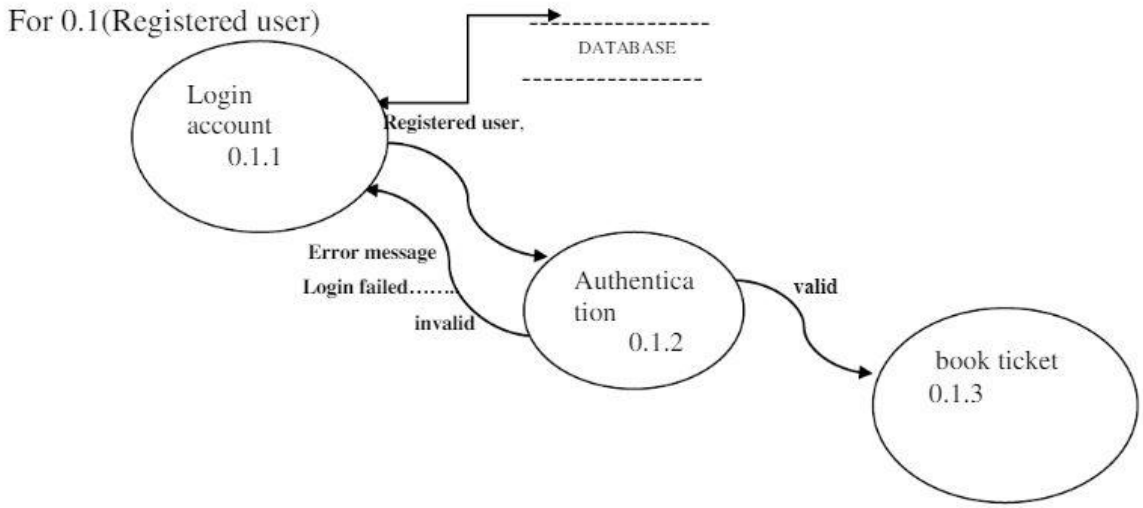
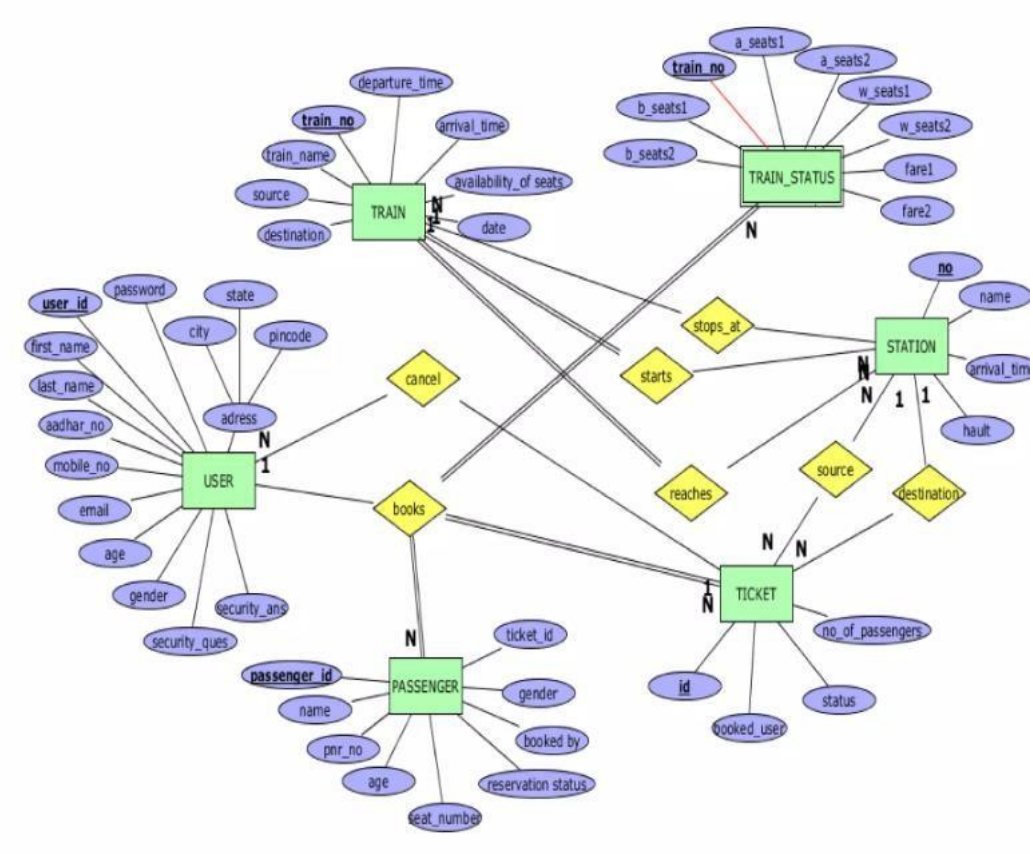


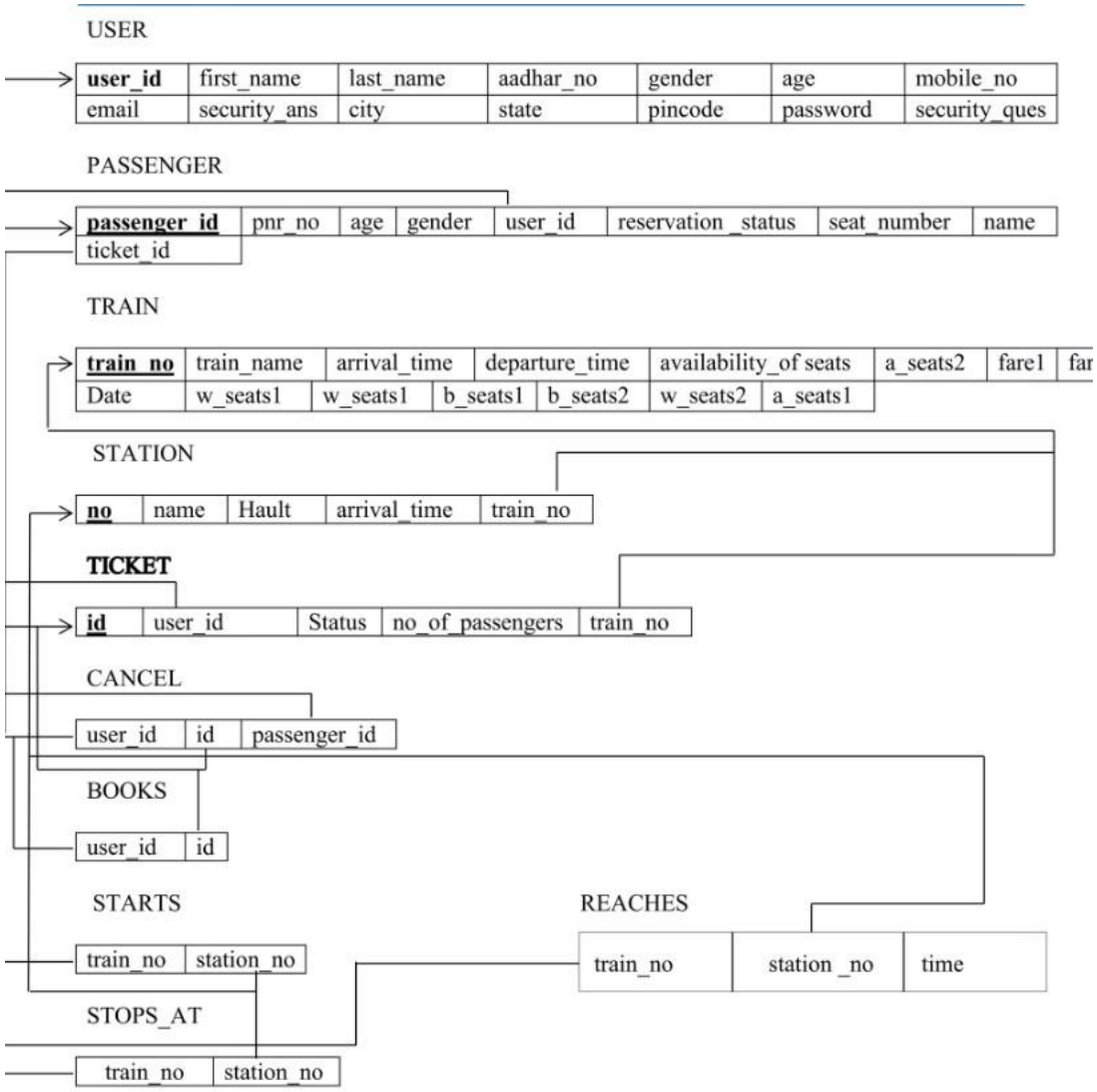
Fig: Level 2 DFD

ER Diagram



- The details of stations are store into the station tables respective with all tables.
- Each entity contains primary key and unique keys.
- The entity customers, timetable has bonded with stations, booking entities with foreign key.
- There is one-to-one and one-to-many relationships available between train_status, tarins, passenger, stations.
- All the entities stations, status, passengers are normalized and reduce duplicacy of records.

Type of Connectivity used for Database Access



FINAL LIST OF RELATION SHIPS:

- books -Ternary relation ship between USER,TRAIN,PASSENGER and TICKET.
- starts –Between TRAIN and STATION
- reaches –Between TRAIN and STATION
- cancel –Between USER and TICKET
- stops_at –Between TRAIN and STATION

OUTPUTS

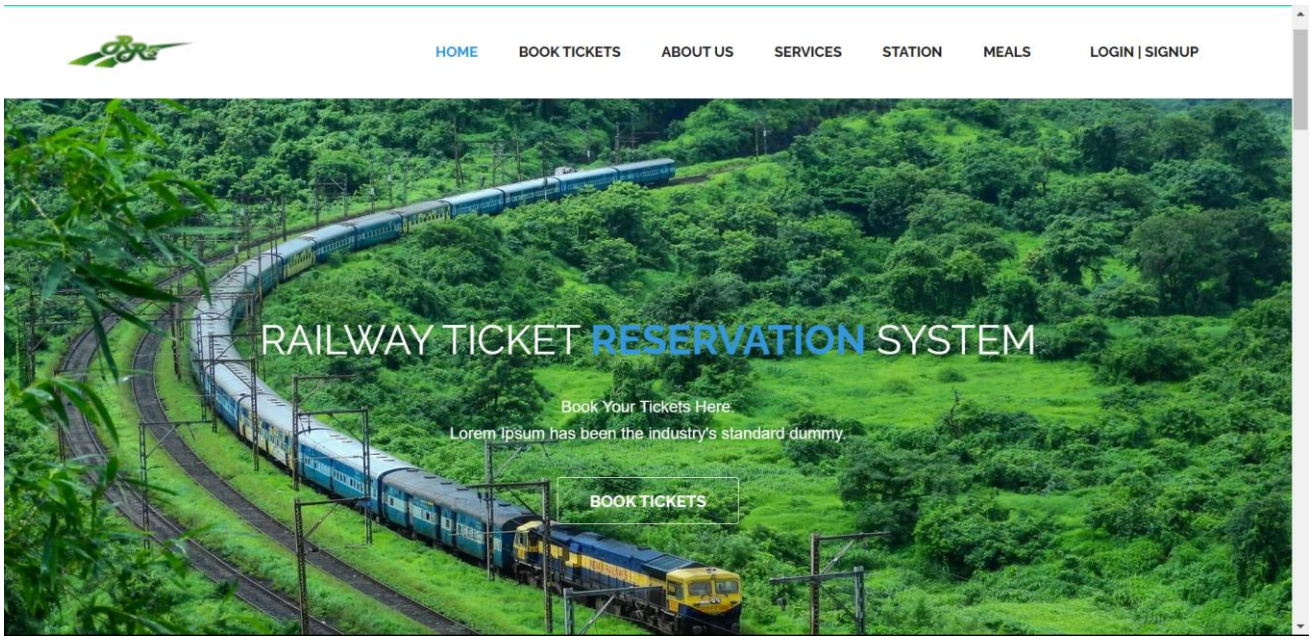


Fig: UI Interface

The user interface of the website , the first page of the website which consists of all features like searching trains, ordering meals , etc.

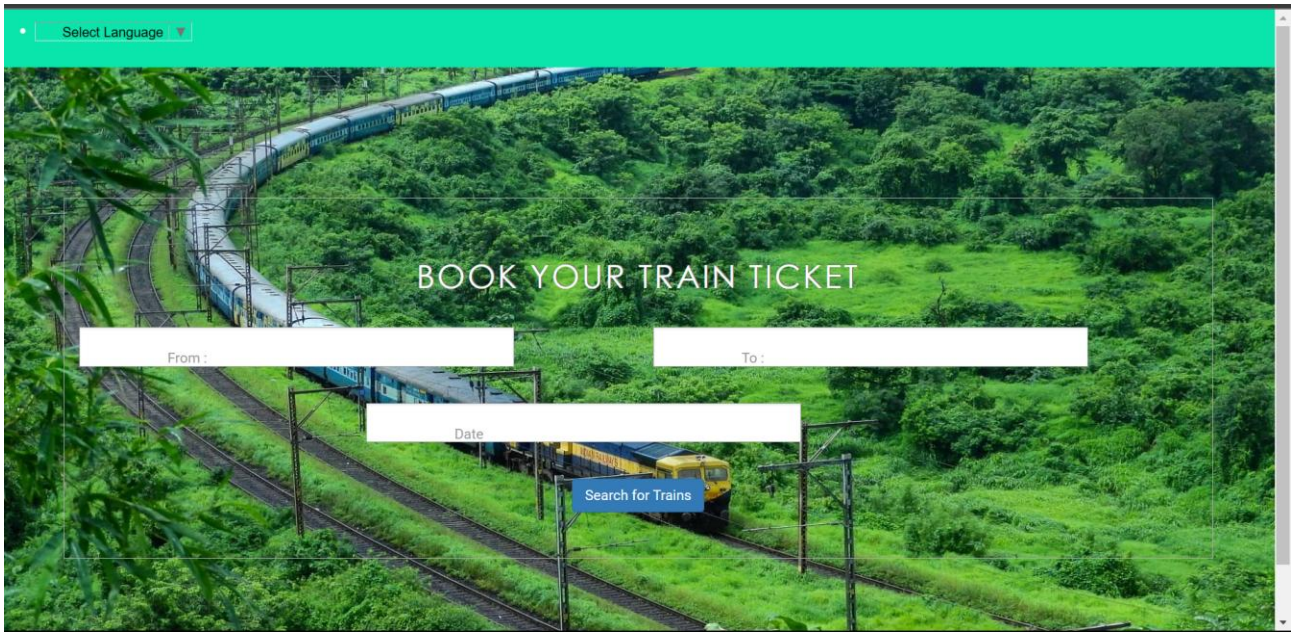


Fig: Booking Interface

The booking interface which gives user's to search the trains from source to destination on a particular date.

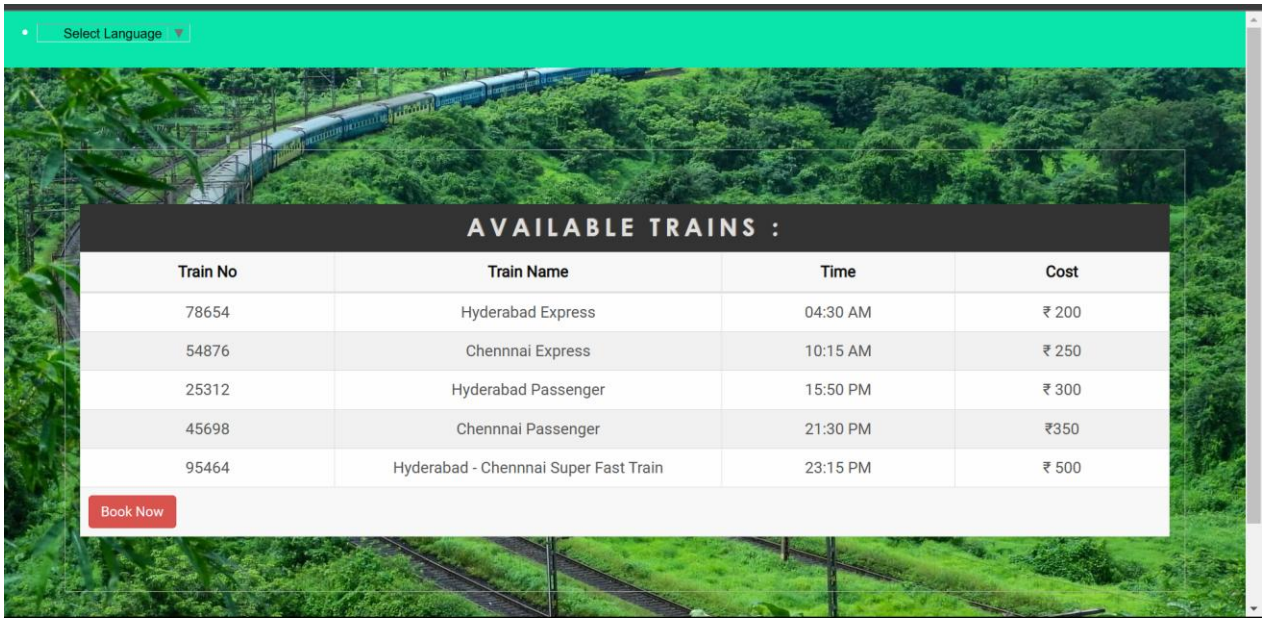


Fig: Trains Database

It consists of all the data of trains , it's time , amount , train no, etc based on what user gave input.

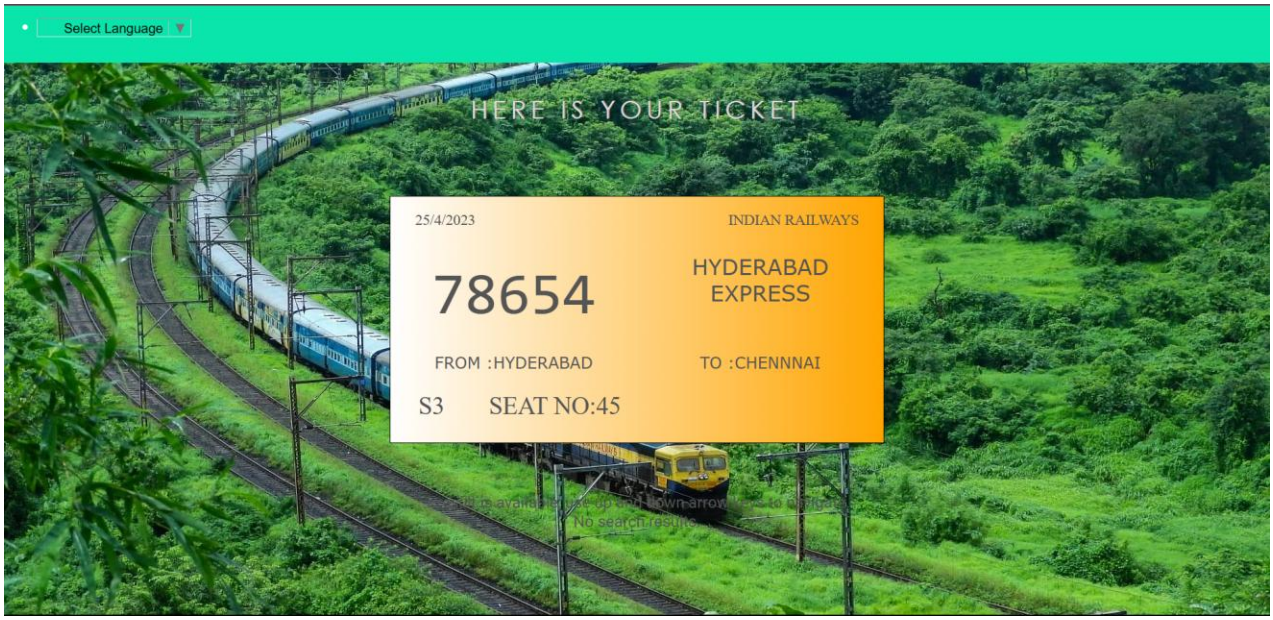


Fig: Output of ticket

The final output ticket will be displayed providing information of train no, time and date, cost , seat no, etc.

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