

EXTERNAL DB SUBMISSION REPORT

RAILWAY TIMETABLE

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Introduction

This is a web-based Java Application project which will help in viewing train schedule and checking seat availability for them as well. Users can book, cancel and view their tickets. We will also be able to do various queries on trains and stations regarding fare, train status and distance between the stations. Effectively is a mini version of indianrailways.gov.in.

Product Description

Our application project does the following things :

- a) Train availability between two stations with seat availability for AC and sleeper classes
- b) Finding a train route given a train id
- c) Fare enquiry for a train
- d) The train running status
- e) Distance between any two given stations
- f) A login portal which allows us to book, view and cancel our tickets.

WELCOME SCREEN

Welcome to Indian Railways

Trains between two stations(with seat availability)

Train route

Fare enquiry for a train

Train status

Distance between two stations for a train

Login/Signup

Now let us see through each of these various features in detail :

A) TRAIN AVAILABILITY BETWEEN TWO STATIONS

Input Screen:

Train Between Stations

Date(yyyy-mm-dd)

From station id

To station id

[back](#)

Output Screen:

Trains available between two stations

Train Id	Departure Time	Arrival Time	AC availability	Sleeper availability
1	04:15:00	02:00:00	WL23	WL0
2	09:10:00	14:00:00	AV30	AV45

[back](#)

Here, we give the date for which we want to see the seat availability of the trains and also the source station and the destination station. For this query, we first search for the given date, the trains which run. Among those trains, we scan through the route and see which trains go through the source and destination stations. After selecting those trains, we display them here. Now, to get seat availability, we scan through the seat availability of each station for the corresponding train id and find the maximum amount of tickets booked for a given station. We take the difference between the total seat capacity and the total amount of tickets booked for a given station. If this is positive, this means seat is available and we show it with “AV”, if this is negative this means we are currently on Waiting List shown by “WL”.

B) TRAIN ROUTE

Input Screen:

Train Route

Enter train id

[back](#)

Output Screen:

Route for a train

Train Id	Station Id	Arrival Time	Departure Time
1	2	04:00:00	04:15:00
1	3	04:20:00	04:30:00
1	4	04:35:00	04:40:00
1	6	02:00:00	02:05:00
1	5	02:45:00	03:30:00

[back](#)

Here we give the train id as input and we get the route of the train as output which also shows the arrival time and departure time for each given station. For this query, we go to the route table and for the given station id we find out the arrival time and departure time and then order by arrival time to sort it out and print it in the table format in the output screen.

C) FARE ENQUIRY

Input Screen:

Fare Enquiry

Enter train id

From station id

To station id

[back](#)

Output Screen:

Fare inquiry for a train

AC: Rs.200

Sleeper: Rs.150

General: Rs.100

[back](#)

Here, we give the train id and the source station id and the destination station id as input and we get the corresponding fare for AC, Sleeper and General class. For this query, we go to the corresponding train id and check the fare at the source station and the destination station, then we find out the difference of the fares as the fare is cumulative. We do this for AC, Sleeper and General entries for each stations and print the result on the output.

D)TRAIN RUNNING STATUS

Input:

Train Status

Enter train id

Enter date

Enter time

[back](#)

Output:

Train status

Station name1	Departure Time	Station name2	Arrival Time
2	04:15:00	3	04:20:00

[back](#)

For the train running information we give the train id, date and time for which we want to enquire. In the output, we show the station from where the train has left along with the departure time and also the next arrival time of the train at the next station. For, this query, for a given train id, we will see if the given date and time falls within any two given stations in the route of the train. If it matches, we find the corresponding station id which will be the departure station and the arrival station and print the departure and arrival time for that given train.

E) DISTANCE BETWEEN TWO STATIONS

Input:

Distance Between Stations

Enter train id

[back](#)

Output:

Distance between two stations for a train

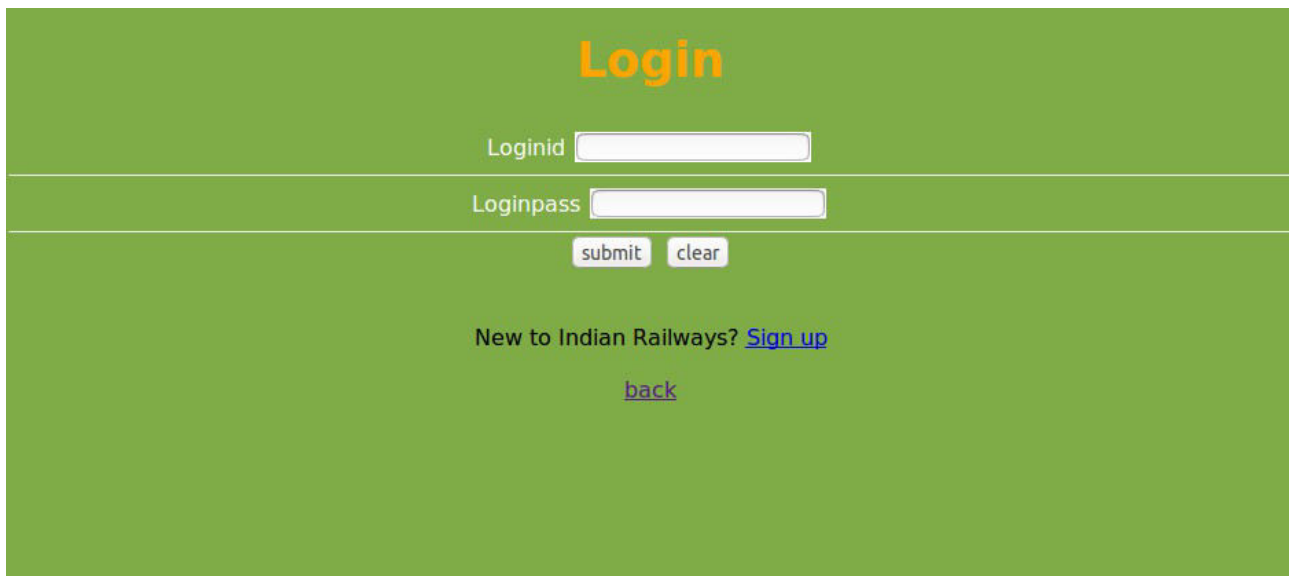
Station Id1	Station Id2	Distance
2	3	200
3	4	12
4	6	578
6	5	345

[back](#)

Here, we give the train id and we get the route off the train which shows us the distance between two consecutive stations. For this query, for a given train id, we search the route of the train and get the corresponding station through which this train passes. Now, we go to the track table and find the values of the distances between two stations.

F) LOGIN PORTAL

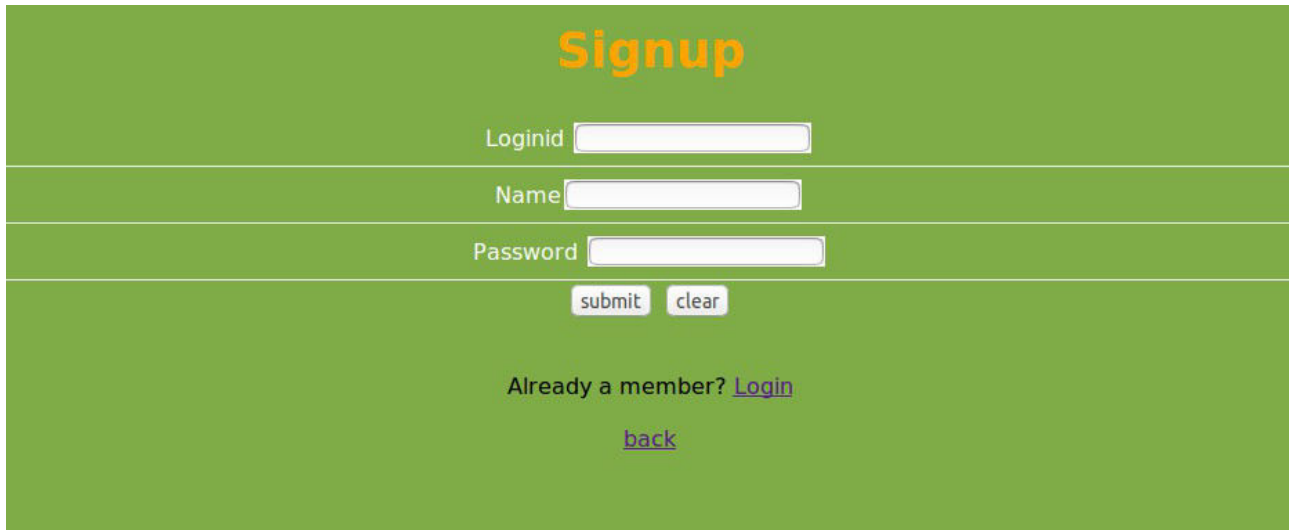
Login Screen:



The login screen has a green background. At the top, the word "Login" is written in large orange font. Below it, there are two input fields: "Loginid" and "Loginpass", both with white text and white borders. Under the "Loginpass" field, there are two buttons: "submit" and "clear", both with white text and green borders. At the bottom, there is a link "New to Indian Railways? [Sign up](#)" and a link "[back](#)".

If you already have a login id and password, you can directly login, otherwise you can create your own account to sign up.

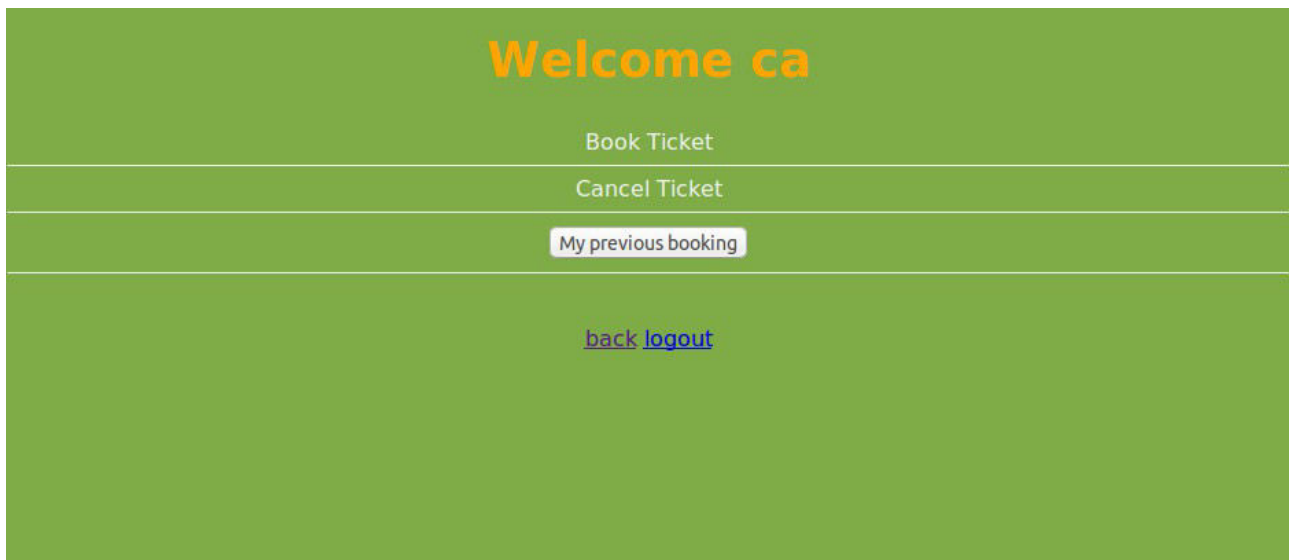
Sign Up:



The sign up screen has a green background. At the top, the word "Signup" is written in large orange font. Below it, there are three input fields: "Loginid", "Name", and "Password", all with white text and white borders. Under the "Password" field, there are two buttons: "submit" and "clear", both with white text and green borders. At the bottom, there is a link "Already a member? [Login](#)" and a link "[back](#)".

If you are a new member, you first need to register here. Here, you give your login id, name and password and create a new account. If, another user exists with a same login id, you will be given proper error msg. After signing up, you can login into your account to book, view or cancel your tickets.

Home Screen After Signup:

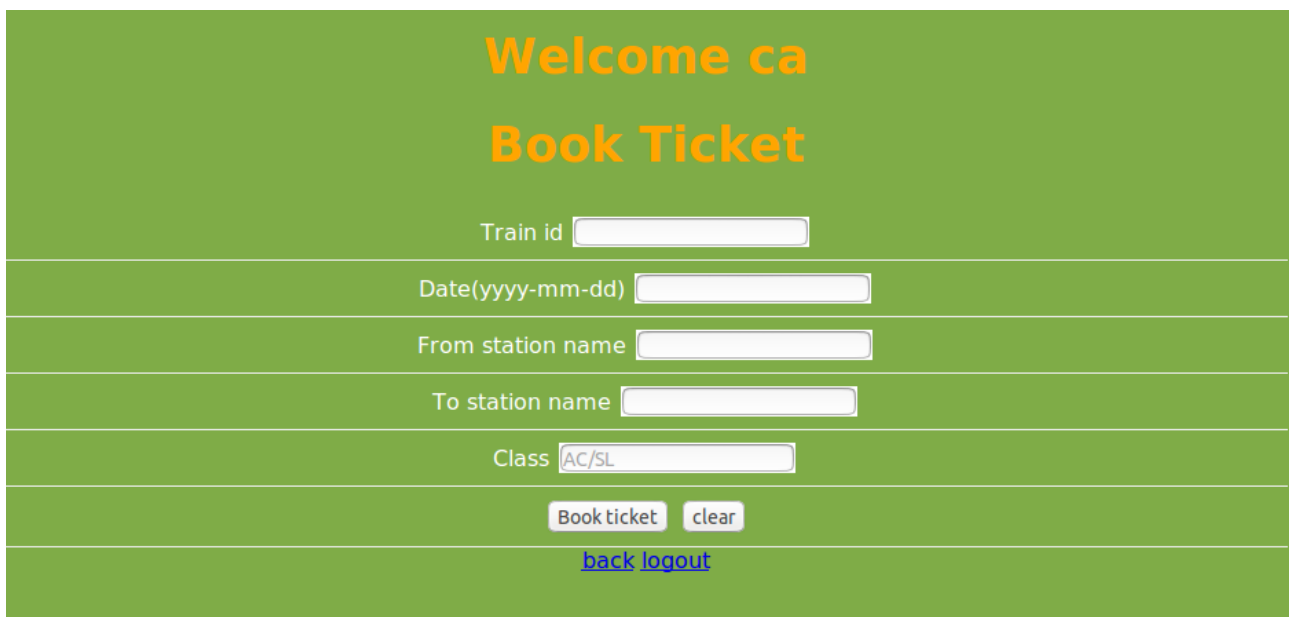


The image shows a green-themed home screen for a train booking application. At the top, it says "Welcome ca" in orange. Below this, there are three buttons: "Book Ticket", "Cancel Ticket", and "My previous booking". At the bottom, there are two links: "back" and "logout".

This home screen provides you with three options :

- a) Book a new ticket
- b) Cancel a previous booked ticket
- c) View all your previous bookings

Booking Portal :



The image shows a green-themed booking portal. At the top, it says "Welcome ca" in orange. Below this, it says "Book Ticket" in orange. There are five input fields: "Train id", "Date(yyyy-mm-dd)", "From station name", "To station name", and "Class". Below the input fields, there are two buttons: "Book ticket" and "clear". At the bottom, there are two links: "back" and "logout".

Here, we can fill up all the required parameters and book our ticket. The parameters to be filled are:

- a) Train ID
- b) Date
- c) Source Station
- d) Departure Station
- e) Class

Cancel Ticket :

Welcome ca

Cancel Ticket

PNR

[back](#) [logout](#)

Here, you enter the PNR number of the booked ticket and your ticket will be cancelled. You can verify the same from your previous bokkings.

Previous Booking :

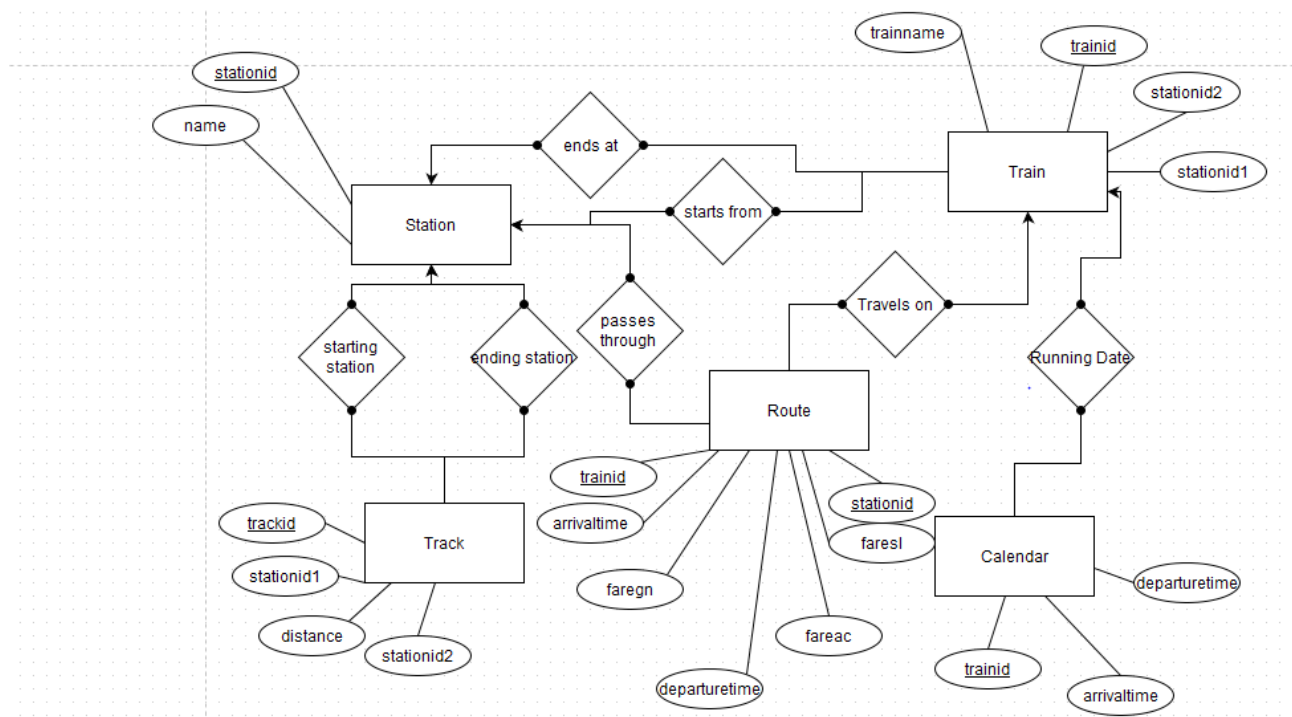
My previous booking

PNR	Loginid	Trainid	Date	Source station	Destination	Class
7	1	1	2015-09-28	2	6	AC
9	1	1	2015-09-28	2	6	AC

[back](#) [logout](#)

Here, we can see all the previous bookings for a ticket for a particular account. Once a ticket is cancelled it is removed from the previous booking portal. From here, we can get the PNR of a particular ticket and canvel it via the cancellation portal if needed.

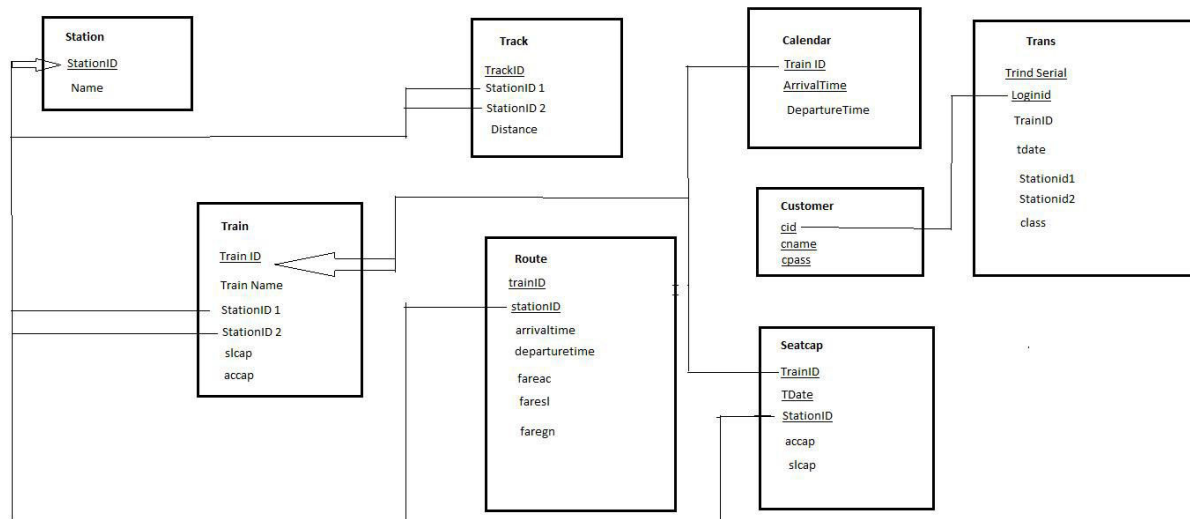
ER MODEL:



TABLES:

- 1.Train:Stores train id,train name AC seat capacity and SL seat capacity
- 2.Station:Stores stationid and station name
- 3.Track: Trackid, stationid1 and stationid2
- 4.Route:Stores trainid, stationid, arrival time and departure time(at the corr. Station) to display the route for a train
- 5.Calendar:Stores the trainid, source date and destination date
- 6.Customer: Stores customer loginid, name and password(encrypted)
7. Seatcap: Stores SL and AC filled seats,trainid, stationid1, stationid2 and date(basically stores number of seats filled in AC and SL between two stations for a train on some date)

DB DESIGN:



What We Aimed to Achieve :

- Trains available between any two stations on a given day
- Display the route(arrival and departure time and date with waiting duration for every station where it stops) of a particular train
- Fare Enquiry for different types of berths between two given stations for a particular train
- Check the status of a particular train and track its position
- Distance between every two adjacent halting stations for any train

What We Achieved:

We did **all the above** mentioned features. Additionally, we also did the following:

- Show seat availability for the trains for AC and sleeper classes
- A loginSignup portal for the users.
- Web portal for the users where they can book, cancel and view the tickets.