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 cheking seat availabilty 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 :

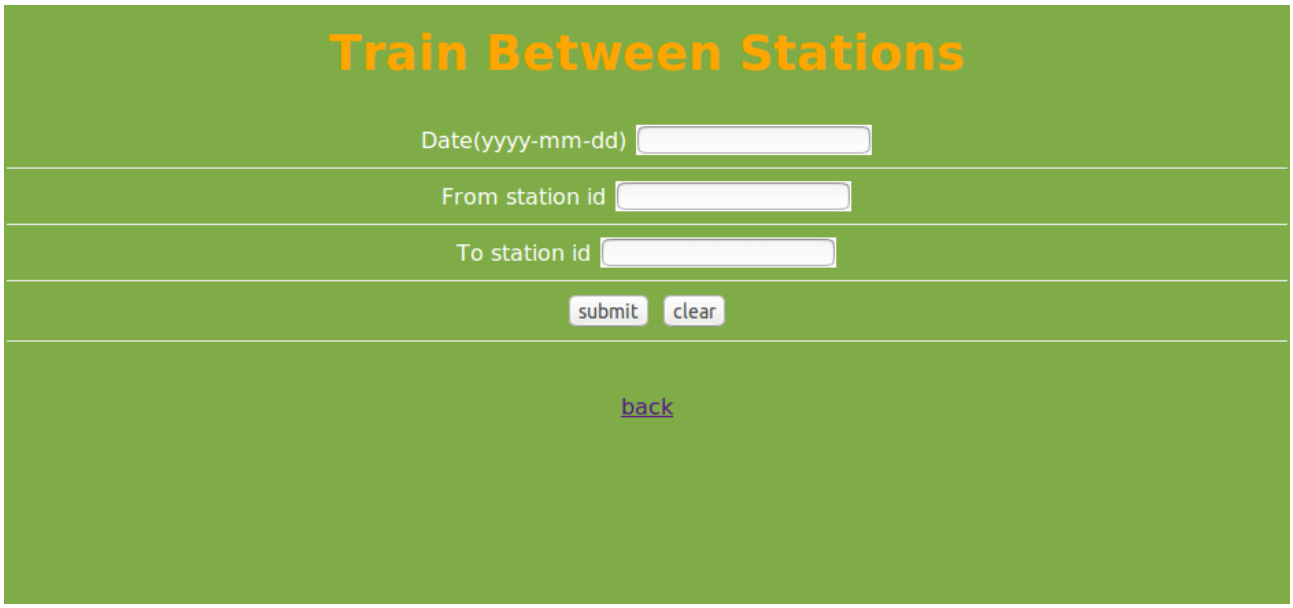
a) Train availablity between two stations with seat availability for AC and sleeper classses
b) Finding a train route given a train id
c) Fare enquiry for a train
d) The train running status
e) Distance between any two given stations
f) A login portal which allows us to book, view and cancel our tickets.

WELCOME SCREEN

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

A) TRAIN AVAILABILITY BETWEEN TWO STATIONS

Input Screen:

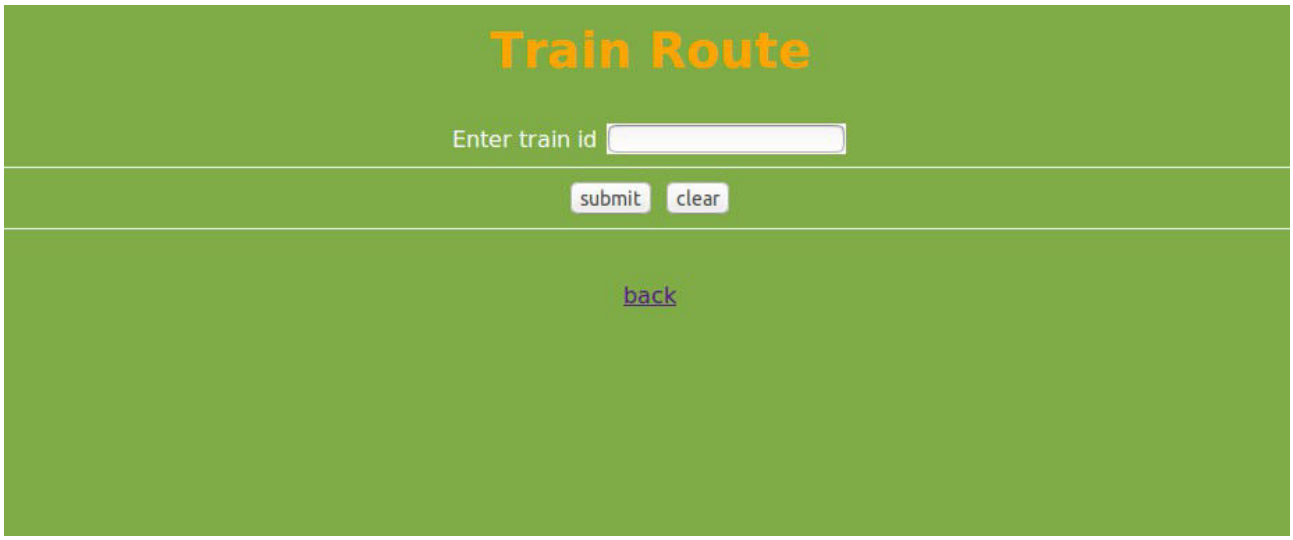


Output Screen:

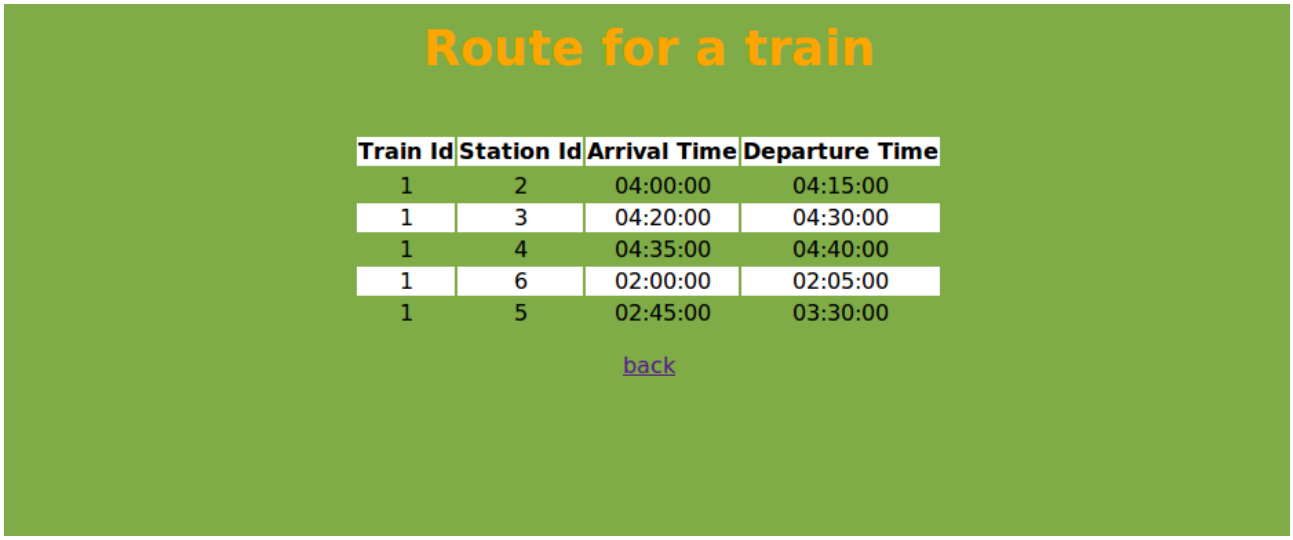
Here, we give the date for which we want to see the seat availability of the trains and also the source station and the destination station. For this query, we first search for the given date, the trains which run. Among those trains, we scan through the route and see which trains go through the source and destination stations. After selecting those trains, we display them here. Now, to get seat availablity, 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 in 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:



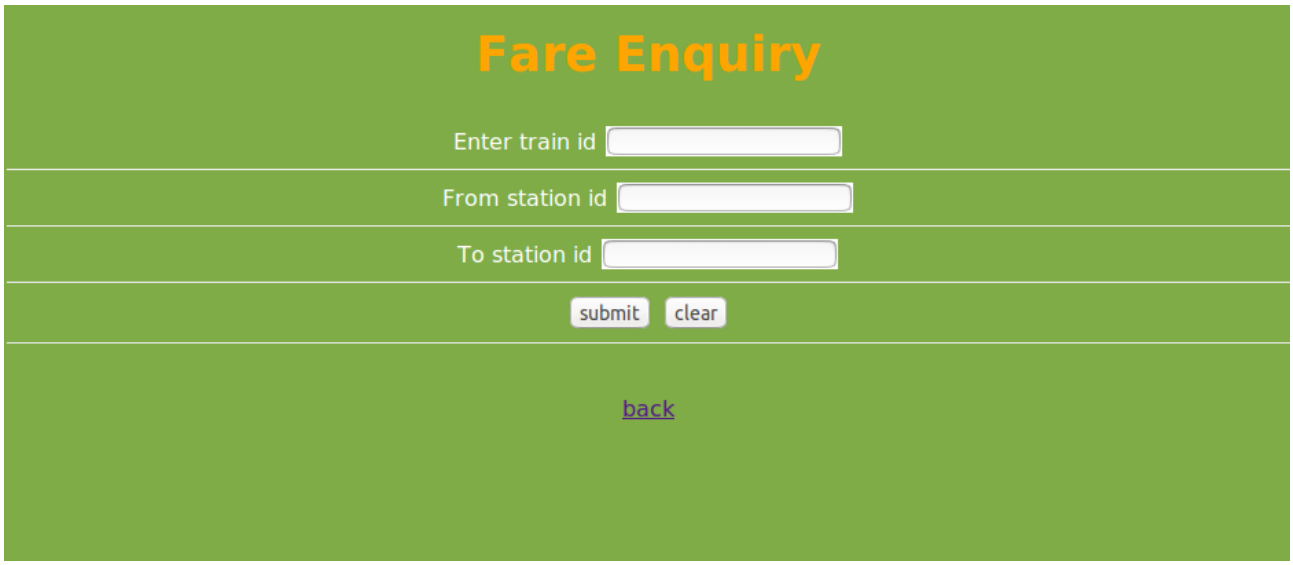
Output Screen:



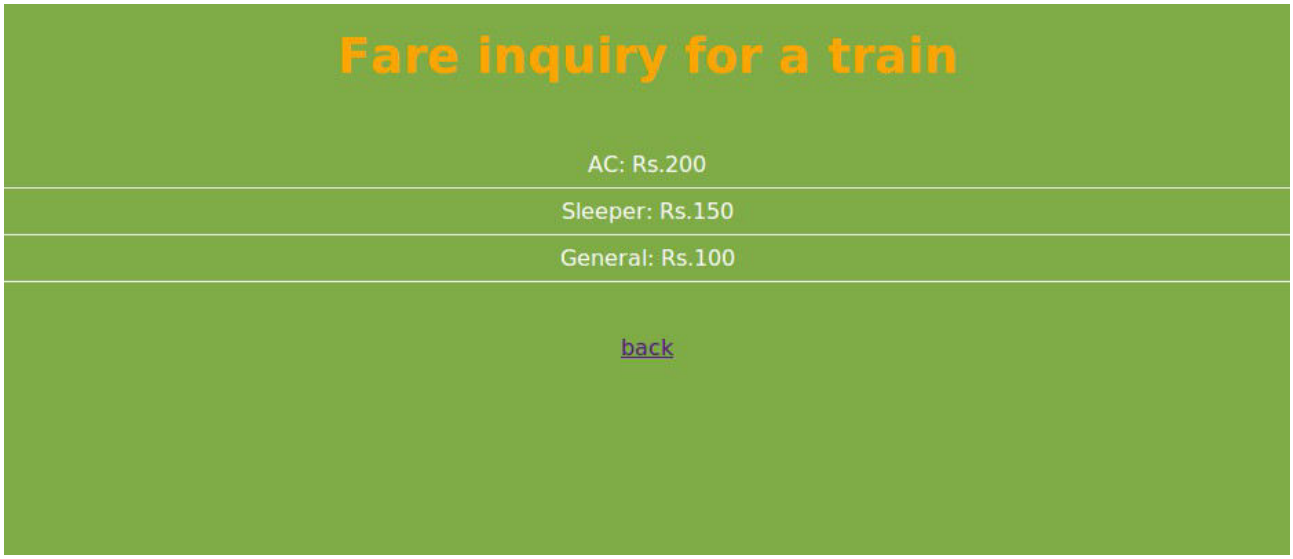
Here we give the train id as input and we get the route of the train as output which also shows the arrival time and departure time for each given station. For this query, we go to the route table and for the given station id we find out the arrival time and departure time and then order by arrival time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

C) FARE ENQUIRY

Input Screen:



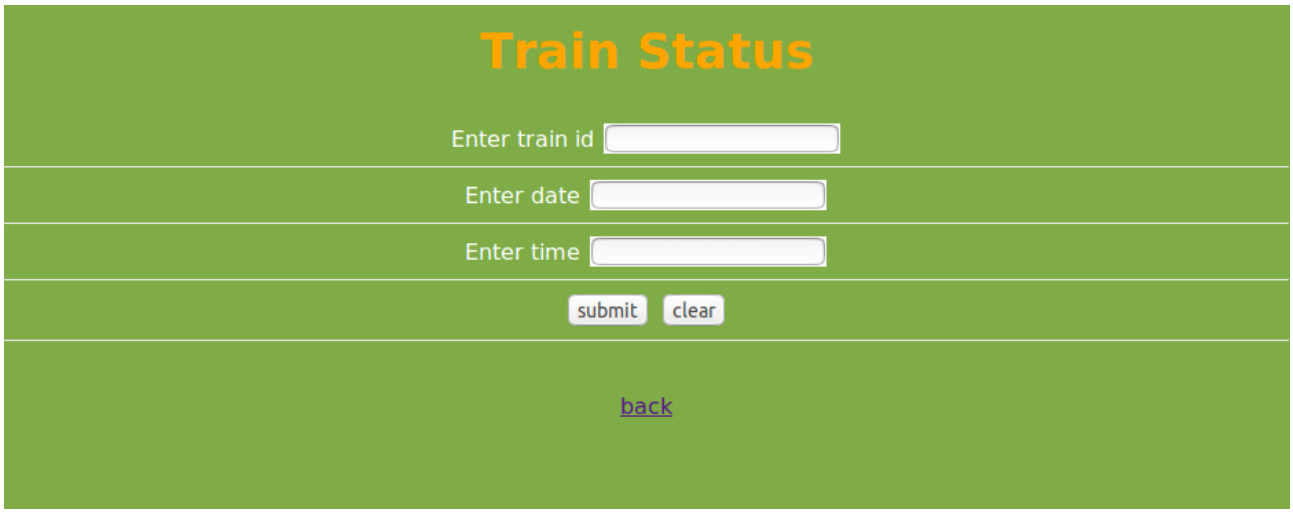
Output Screen:



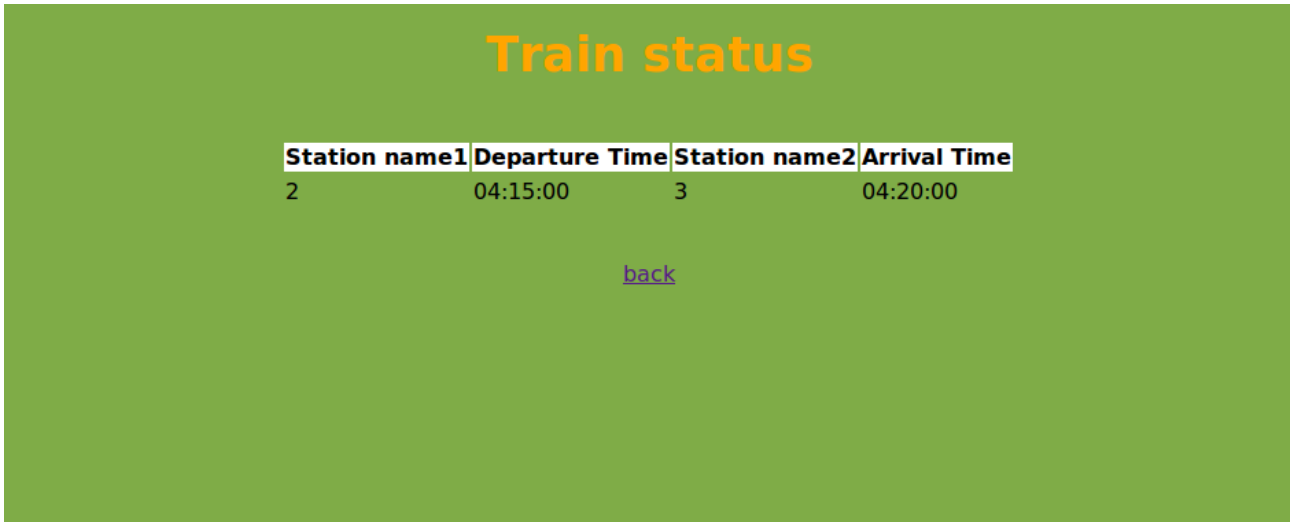
Here, we give the train id and the source station id and the destination station id as input and we get the corressponding fare for AC, Sleeper and General class. For this query, we go to the corresponding train id and check the fare at the source station and the destination station, then we find out 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:



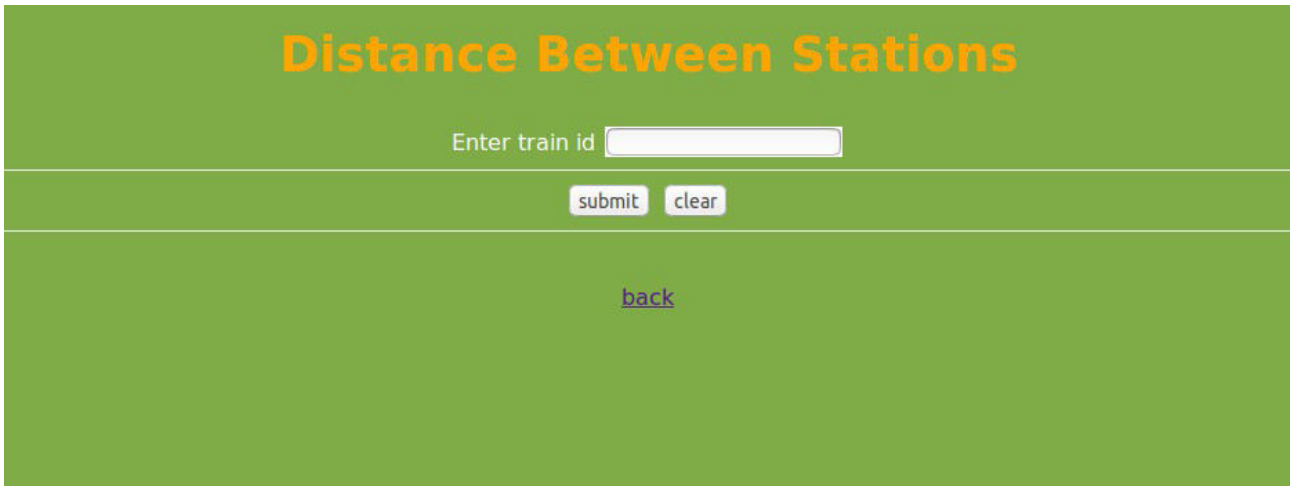
Output:



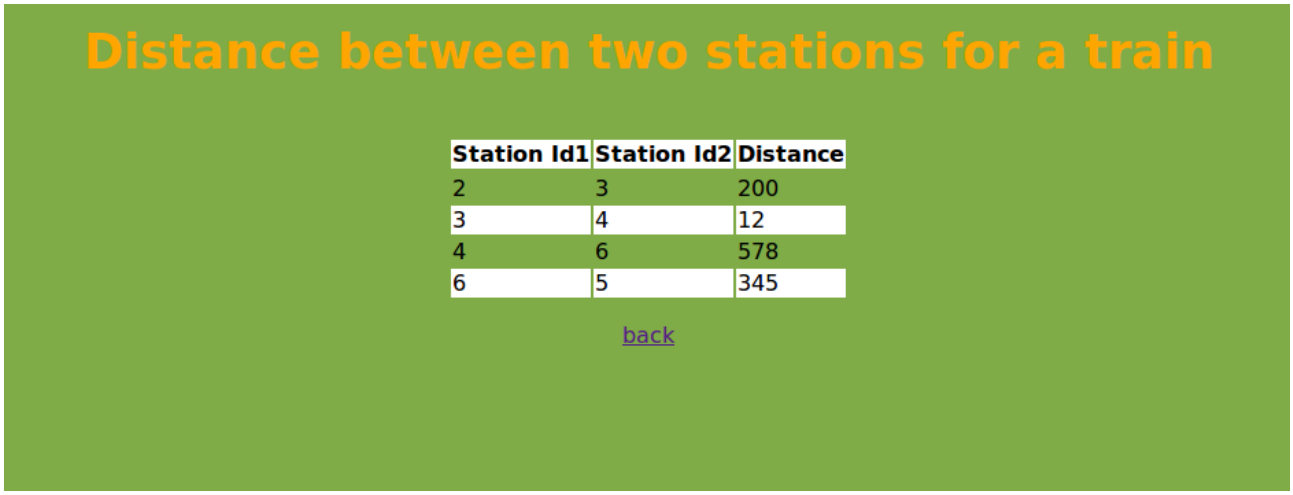
For the train running information we give the train id, date and time for which we want to enquire. In the output, we show the station from where the train has left along with the departure time and also the next arrival time of the train at the next station. For, this query, for a given train id, we 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:



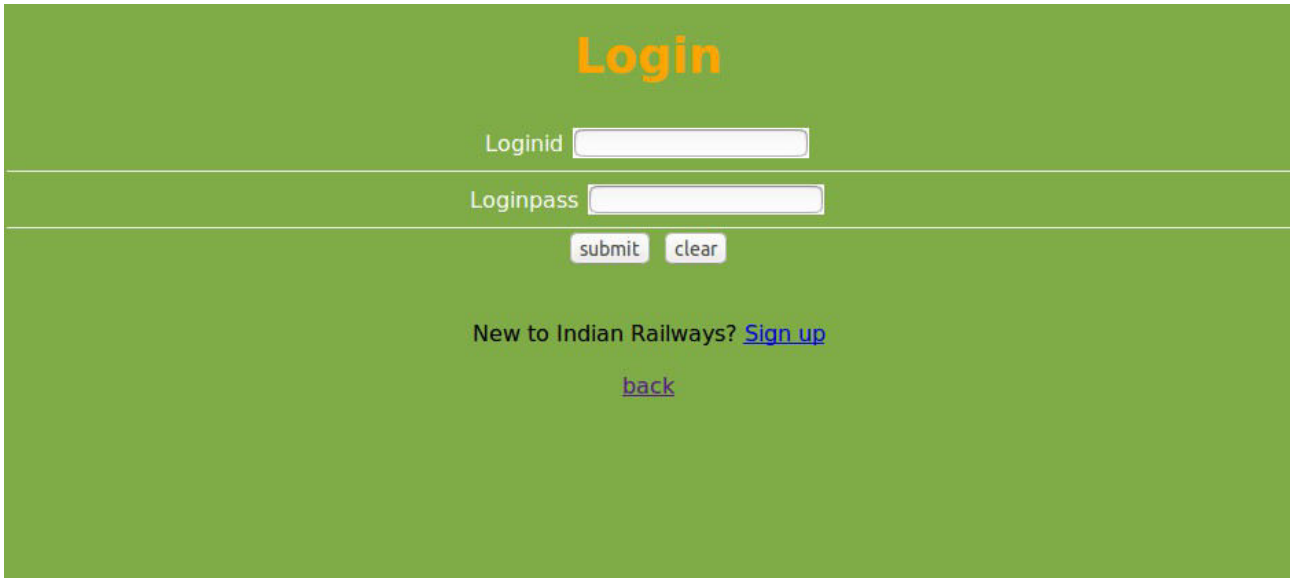
Output:



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.

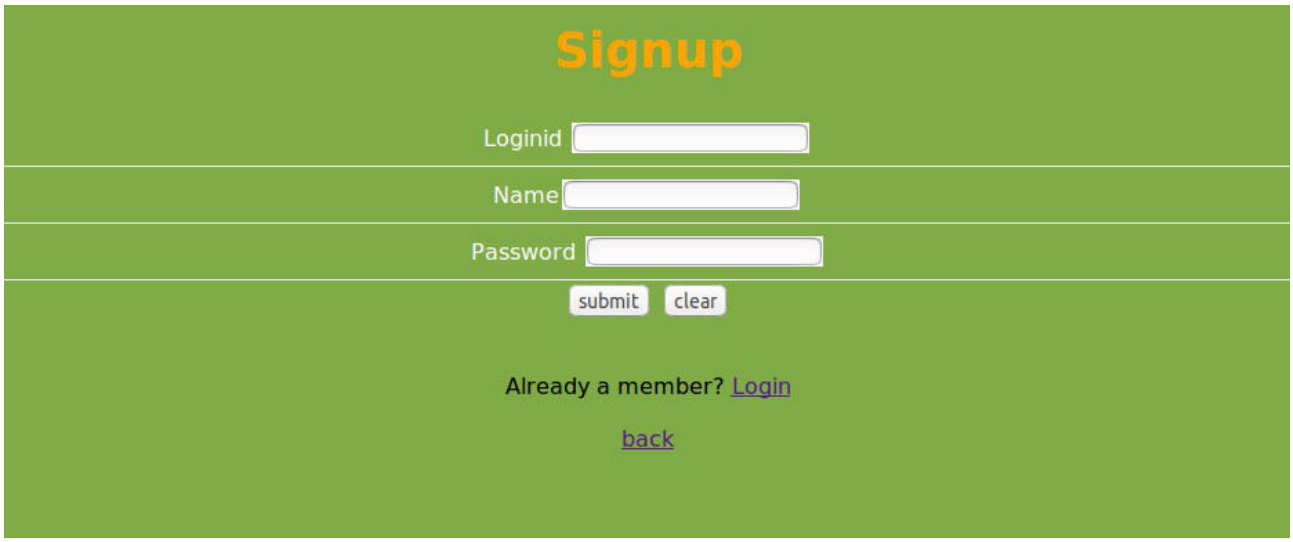
F) LOGIN PORTAL

Login Screen:



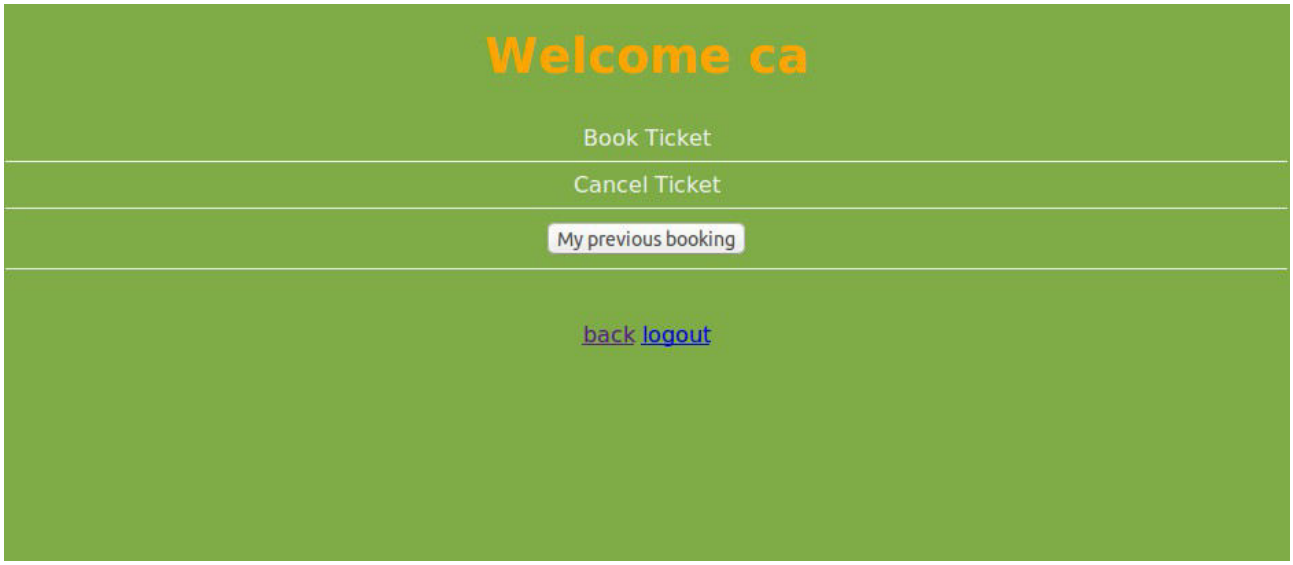
If you already have a login id and password, you can directly login, otherwise you can create your own acccout to sign up.

Sign Up:



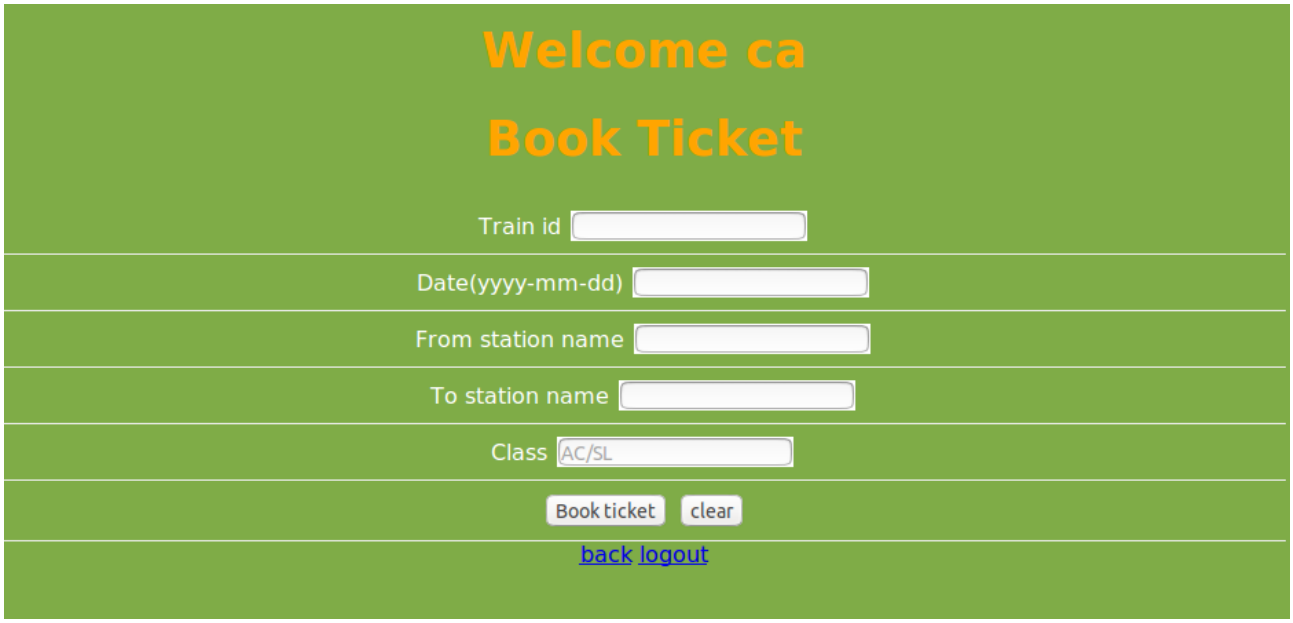
If you are a new member, you first need to register here. Here, you give your login id, name and password and create a new account. If, another user exists with a same login id, you will be given proper error msg. After signing up, you can login into your account to book, view or cancel your tickets.

Home Screen After Signup:



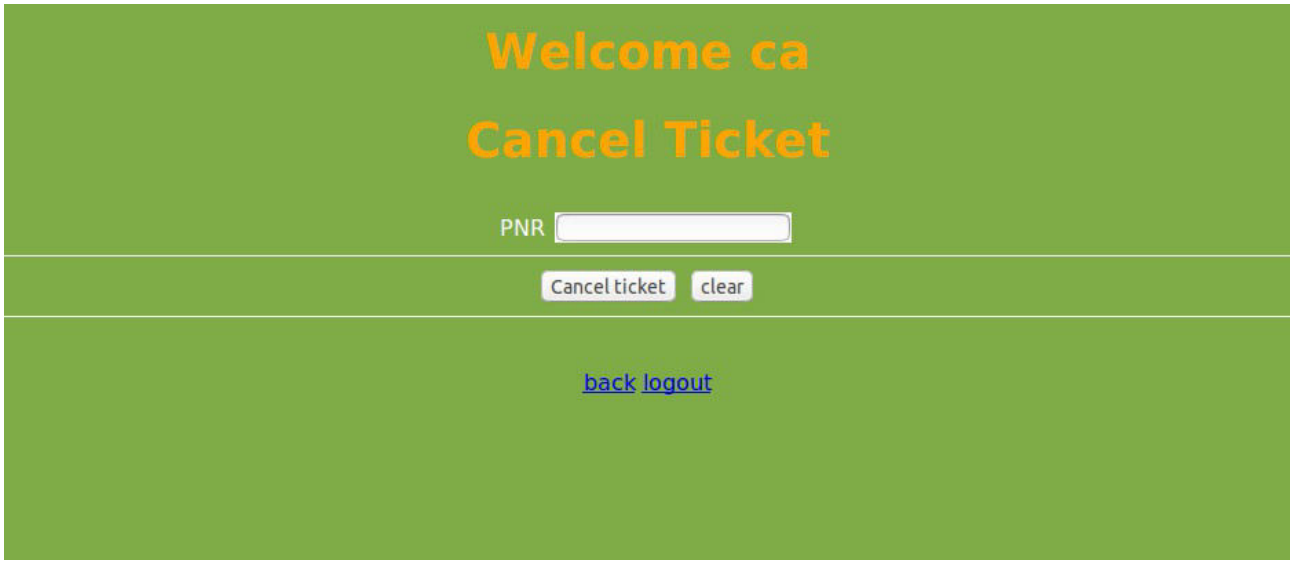
This home screen provides you with three options :
a) Book a new ticket
b) Cancel a previous booked ticket
c) View all your previous bookings

Booking Portal :



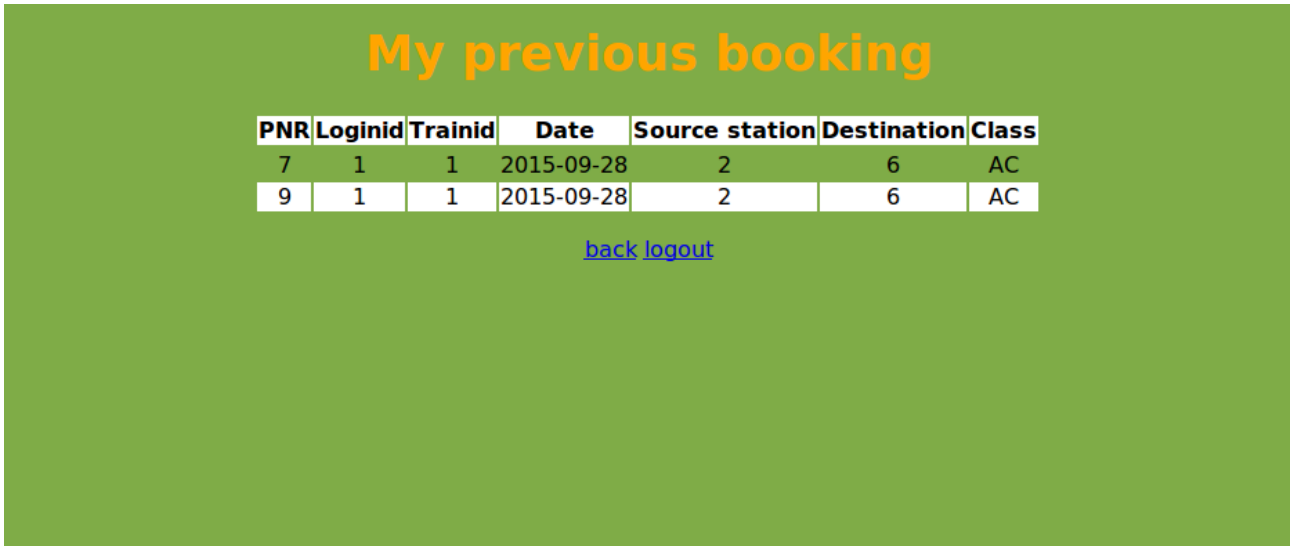
Here, we can fill up all the required parameters and book our ticket. The parameters to be filled are:
a) Train ID
b) Date
c) Source Station
d) Departure Station
e) Class

Cancel Ticket :



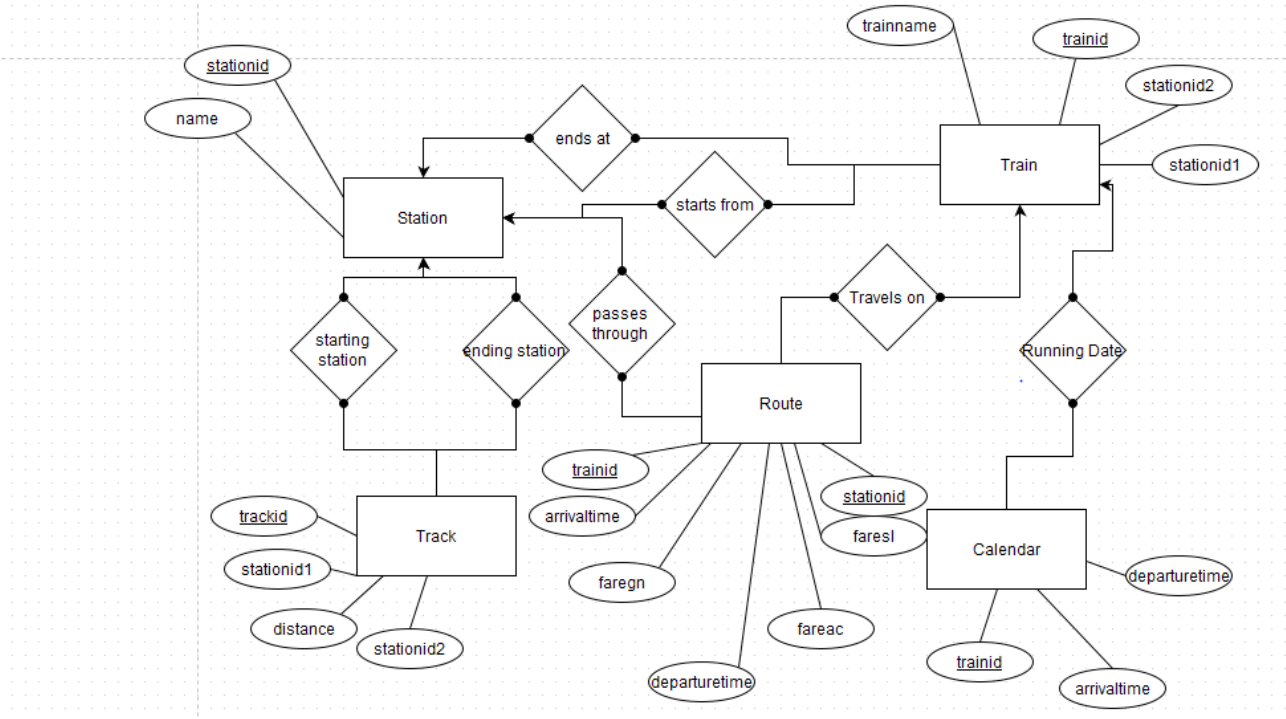
Here, you enter the PNR number of the booked ticket and your ticket will be cancelled. You can verify the same from your previous bokkings.

Previous Booking :



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.

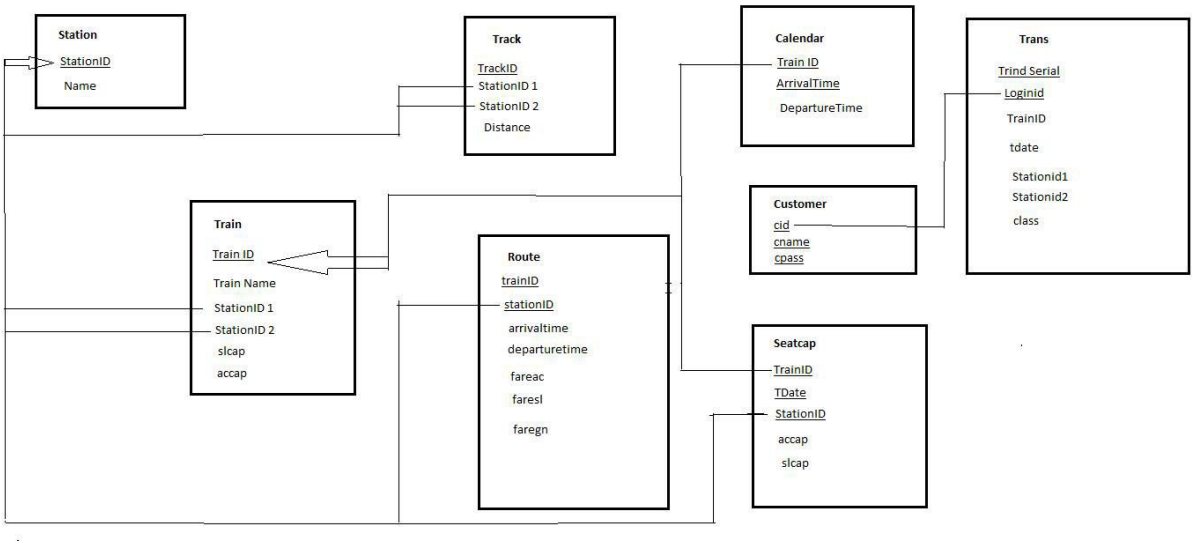
ER MODEL:



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, arrrival 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 Acheive :

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

What We Acheived:

We did **all the above** mentioned features. Additionally, we also did the following:
a) Show seat availability for the trains for AC and sleeper classes
b) A loginSignup portal for the users.
c) Web portal for the users where they can book, cancel and view the tickets.