

A Project Report on:

# “A-Z of Travel Planning”

Submitted by:

**Rohan Jiju(18EC138)**

**Roshan Rangarajan(181EC139)**

**Saikumar Dande (181EC140)**

**Chandravaran V. K. (181EC156)**

IV SEM B.TECH.

*Under the guidance of*

**Dr. Ajay Pratap**

**Department of CSE, NITK Surathkal**

*in partial fulfilment for the award of the minor degree  
of  
Bachelor of Technology  
in  
Computer Science and Engineering*

At



**Department of Computer Science and Engineering at  
National Institute of Technology Karnataka, Surathkal**

*June 2020*

## **Abstract:-**

So our aim is to make a DBMS system where you can plan a trip to a particular city and you can get the local train, taxi, hotel and other necessities, also you can plan the whole trip by connecting to various cities and see other necessities there. Basically we are trying to cover everything you need for a trip.

We will make a database for cities and the relevant information such as hotels, attractions, restaurants, and make a database for transportation. Users will be able to pick the cities they would like to go to and all the places they want to visit.

This project aims to give all the information required to a user, to pick and plan to some extent where he or she would like to plan their next trip, it is to make sure the person has a single place to view and access data, we will also be including a way for people who are from a particular city to be able to add them self to the database so, this will make sure the database is up to date and people get the best resources.

## **Motivation:-**

Have you ever planned a trip to a place with rich heritage? Then there were probably 2 things you would have done, first being you went to a travel agency and picked up a travel plan for that place or you would have started searching online in many places, for example you would search for the tourist attractions in that place and decide what all you would want to visit after many hours of google searching, then you would go IRCTC to book your ticket to that place, this is something that can be done but the biggest problem that arises will be after getting there you will need to know the local methods of getting to the the various tourist places, again take out your phone and search for either local buses or taxi people, because we all know that auto drivers always charge more for tourists.

Now the problem with using a traveling agencies is that you will never get your money's worth, but that is not so important, the most fundamental thing is lost which is the fun and excitement of planning a trip and being able to be flexible with the schedule and including small places and attractions which will not be there in the travel plan, and to add then it would cost more money which won't be worth it.

Traveling is all about the excitement and uncertainty of a place which should be savoured at the fullest and this can only happen when you plan a trip by yourself, that is why we came up with this idea as it removes the fact of multiple searches which is the tedious part of the traveling, and keeps all the information we need at one place, and heightens the enjoyment of traveling to various places.

## **Existing Approaches:-**

In recent times, there has been a huge increase in the thirst for travel. People have been excited by the prospect of visiting different attractions and experiencing different cultures. Due to this increase in tourism, there has been an increase in demand for websites or applications which helps the tourist in planning their trip.

Due to this, there has been a surge of resources which help a customer select a hotel or advise them on the key tourist attractions as well as suggesting places to dine and experience the local cuisine. There has also been a significant increase in websites that guide the user on the best mode of transport, routes to reach the destination and food ordering restaurants.

However, there have been quite a few limitations to most of these websites. Some websites focus on only one of the tourists' requirements. For example, websites like irctc only allow the user to book trains, expedia majorly focuses on booking flights whereas apps like ola and uber focus on booking taxis. Websites like Rome2rio help combine all modes of transport in one and give the user a variety of routes to reach their destination, but still don't help in booking restaurants or give places of attraction to visit.

Zomato and swiggy help give the user a wide range of culinary options but are only available in a lot of the major cities till now. Trivago enables the tourist to choose the right hotel, but again highlights the limitation pointed out

earlier. Another point about these upcoming websites is that they often focus on international travel and locations a lot and inevitably sometimes leave the information on indigenous places lacklustre. Moreover, some websites are not stable and often crash due to an inadequate database management system.

However, some websites like makemytrip and tripadvisor have done an excellent job in addressing the problems pointed out in the above paragraphs. But in the face of the global pandemic the world is facing right now, there is a change in the perception of people to travel. There is a requirement for safer methods of travel, as well as a cleaner interface promoting domestic places of travel in our beautiful and vast country.

## **Proposed Innovation:-**

As pointed out in the above section, there has been an increase in trip planners, but there are still some limitations which can be fixed and improved on. Especially in the current environment the world is in with the pandemic, it is of vital importance to follow in the Prime Minister's ideology of 'Atma Nirbhar Bharat' and help promote domestic travel instead of international. As a result, our website emphasises and focuses on the incredible attractions of our beautiful country.

In addition, our website has a simple but aesthetically pleasing interface so as to let the user have a pleasant stress-free experience. Moreover, as the pandemic causes concerns with airports and air travel, we have chosen to focus on travel by hired taxis or by the appropriate trains.

Firstly, our model allows users to make changes to their travel plan on the fly, by giving them relevant information on where they are and places they may want to go, and the necessary means to get there. We do not put restrictions on the itinerary as other trip planners have and give an easy to use travel guide.

Our model was created in oracle, where the ER diagram for our schema was created, then entries for our tables were made in excel and was connected to the front end, Javascript. The model was created without having to use sql commands to create the tables, as we directly created the ER diagram. The model is normalized to the best of our abilities to avoid having redundant entries.

As it is not possible for every single city, location or tourist attraction to be added immediately, we have implemented a feature where anybody who has information about a new place, or attractions in an already existing city. This is also convenient for new businesses like hotels or restaurants who can then add their establishment easily using our website.

Moreover, in our website we have made sure to let the user select between vegetarian and non-vegetarian options for the dining options. We have also given the user the rating for restaurants, tourist attractions and hotels so the user can have a range of options. The places to visit also have a closing time and opening time so the tourist can plan their itinerary accordingly without wasting time during their visit.

The current model used has a few setbacks. Due to the complexity of figuring out travel options from one city to another, we have instead opted to restrict travel options only from one state to another, and have given user inputted trains to get from one state to another. This is not scalable and if we want to be more precise or give more diverse options, because for example, one train is not working at a particular time, it would be better to use a shortest path solution while just giving trains with their stops and the time taken as nodes and edges. This would also allow us to output multiple options for paths instead of just whatever was written into the database. Our model also does not check for time until the train becomes available for us to board, and thus lacks output based on current real world conditions. Our current model also does not include important factors such as entry fee or a short description of the attractions, and has only some of the total number of states and tourist attractions that India can offer.

## Outcomes:-

The following are the details of the database used for this project as well as the front-end interface which was implemented:-

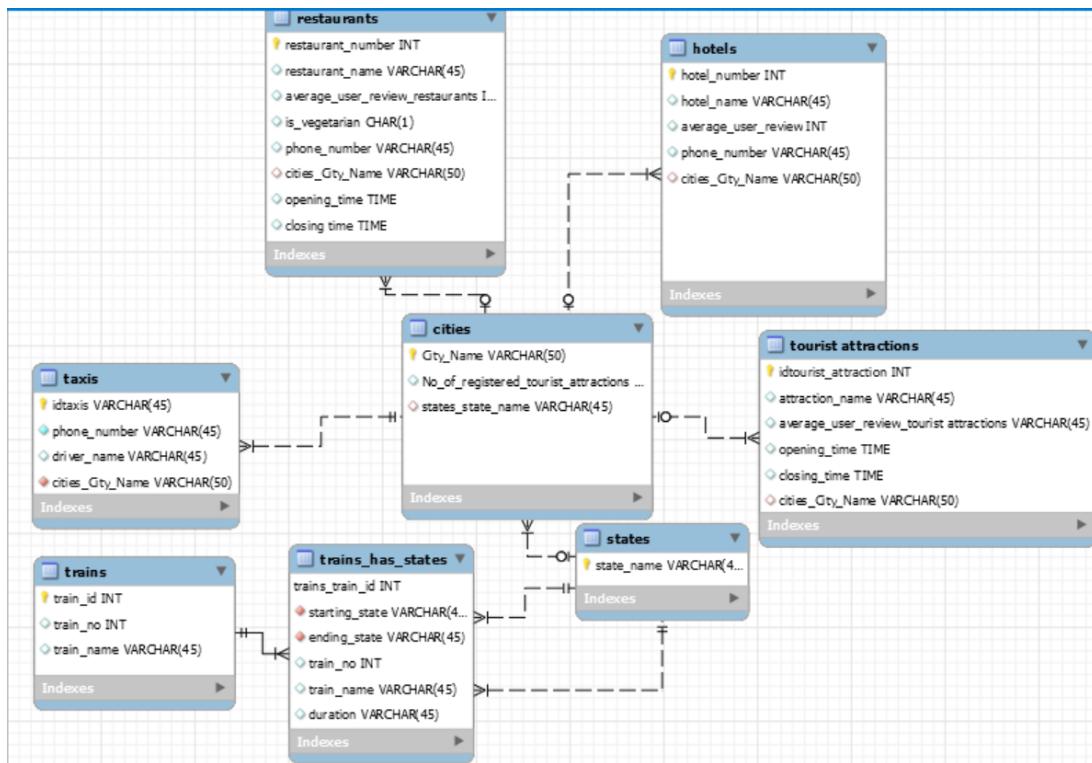


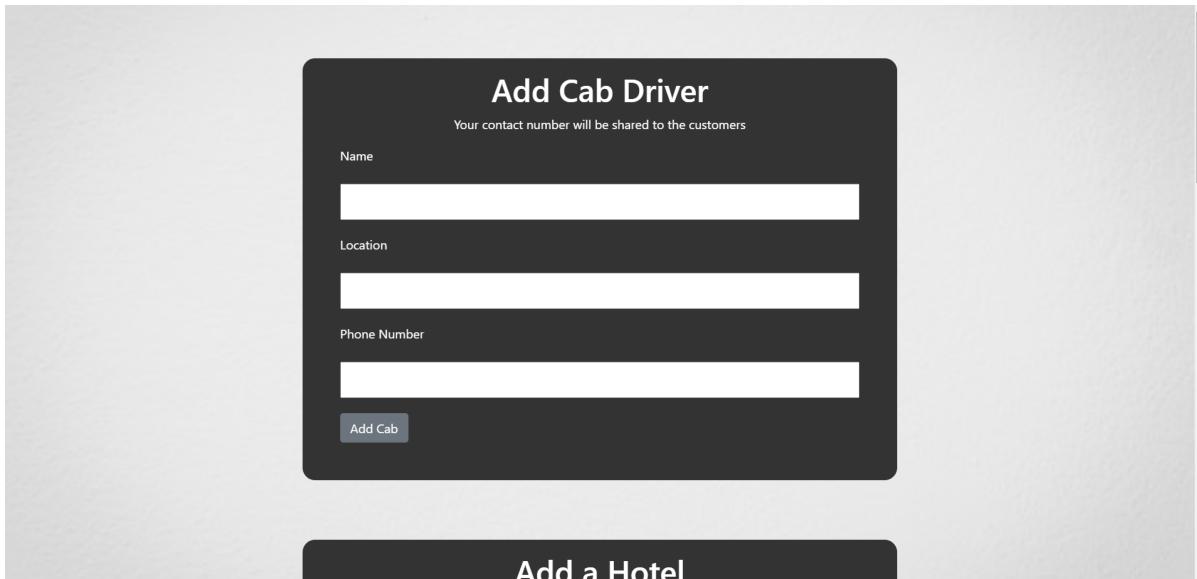
Fig 1.1

This is the ER diagram for our project. The central table contains cities which are basically the tourist locations that will be in our database. The cities will be foreign key to restaurants, hotels, tourist attractions and taxis. But for the trains we have used a unique way in determining the train to go to a particular place, first step was looking at the states in which the tourist cities are part of, then we have a list of all the trains to which we connect from one state to another, and using states and the train\_id as foreign keys to a new table we have the table trains\_has\_states table so when the user inputs the cities in the front end the states are taken and the respective train is given as an output.



Fig 1.2

This is the main page of our website. There are 2 ways in which you can access the different pages one is using the top links or the links at the bottom of the page, there is an option to register yourself using the add option at the top.

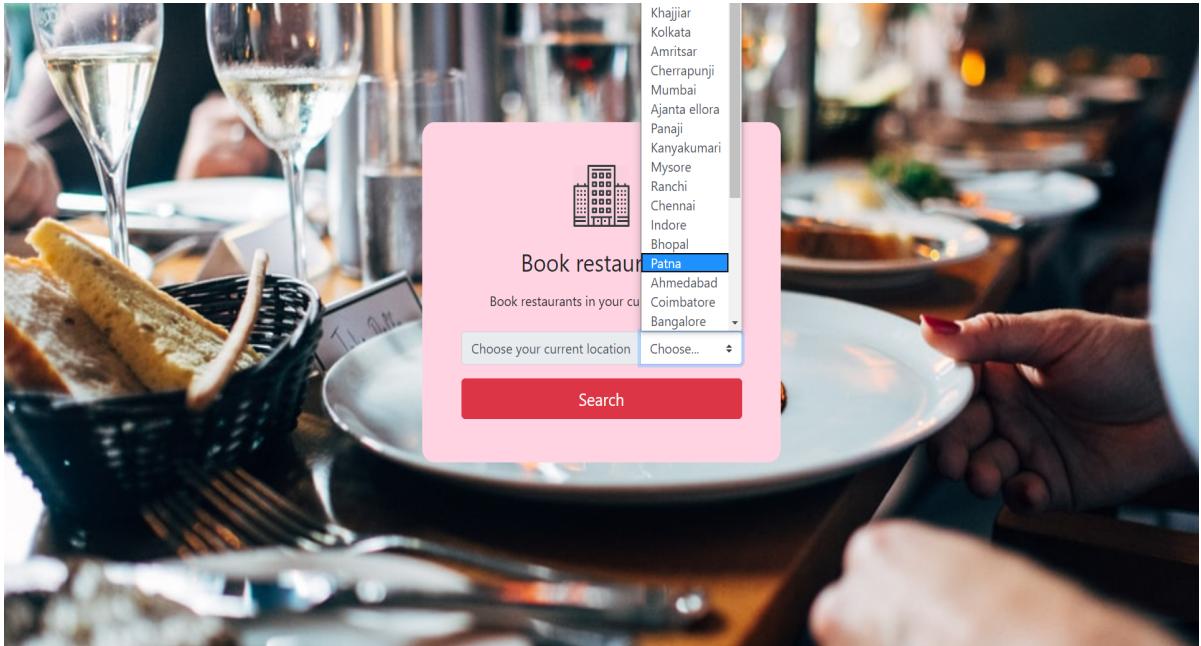


**Fig 1.3**

The user can add data into the website and they will get added to the database. Once the user clicks add option in the main page he will be directed to a page where he can either add a cab driver or a hotel or a restaurant. If the user does not enter the required data for a given form, then the user will be redirected to the same page and will be notified to add the remaining data in it.

```
let post = {phone_number: req.body.phone_number, driver_name:  
req.body.driver_name, cities_City_Name: req.body.cities_City_Name};  
  
let sql = 'INSERT INTO taxis SET ?';  
  
let query = db.query(sql, post, (err, results) => {  
  
if(err) throw err;  
  
res.sendFile(path.join(p, "\index.html"));  
});
```

The above code is used to add data into the database and redirect the user to the main page. The post variable holds the data which should be added into the database. This is an example code for adding cabs into the database.

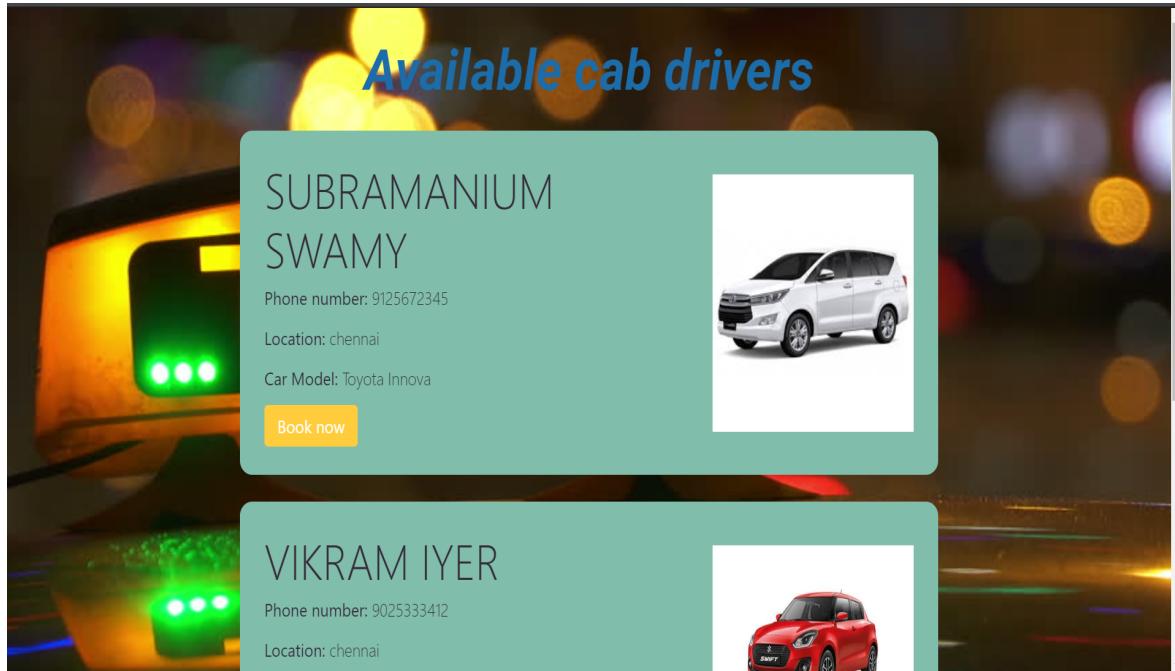


**Fig1.4**

This is how the search page looks for each of the categories but the only changes are the background and the names and colours.

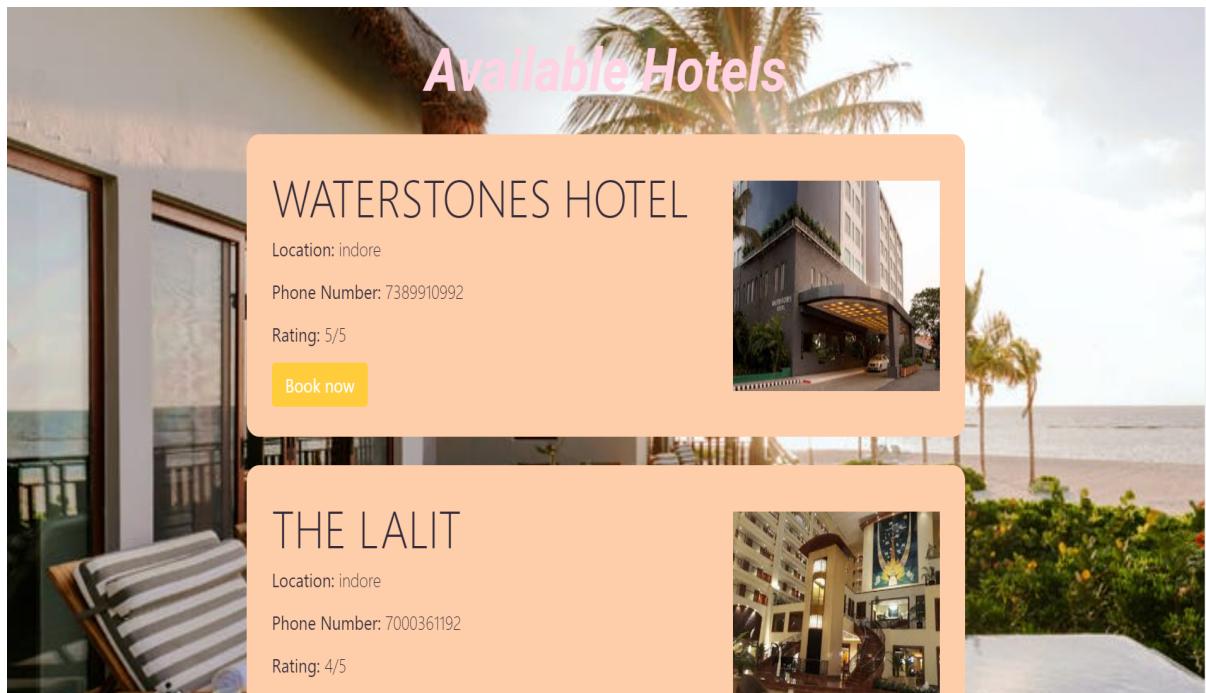
**Fig 1.5**

When a user selects an option restaurant in the main page, he will be directed to a restaurant page where he can choose his location from the dropdown list and click on search, to search for the available restaurant in that location. When you click on book now it will open up the mailbox and they send an email and this is how the booking happens. The query for the the restaurants is `SELECT \* FROM restaurants WHERE cities\_City\_Name = "\${req.body.from}"` where `req.body.from` is the location which user selected.



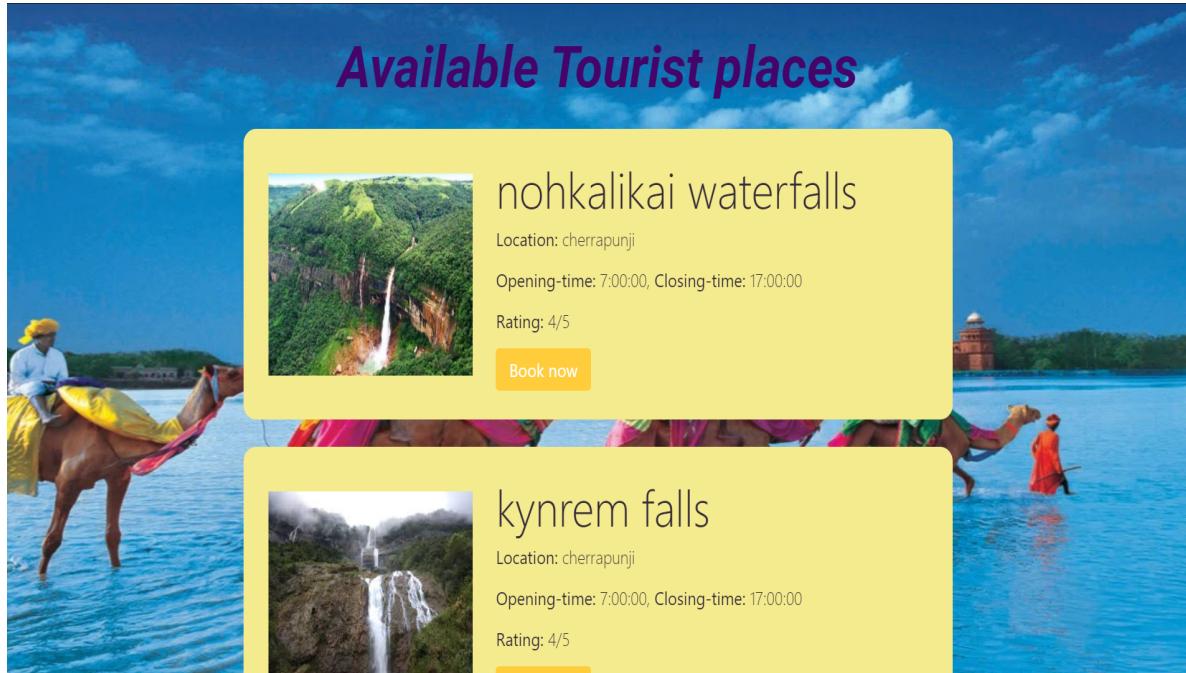
**Fig 1.6**

This is the output of the cabs whenever we search for cabs in a certain area, the sql query will be `SELECT \* FROM taxis WHERE cities\_City\_Name = "\${req.body.from}"` where **req.body.from** is the location that user selected and as you can see we have 3 different types of cars one is innova for huge families then the dizzire for 4 member families then the smallest



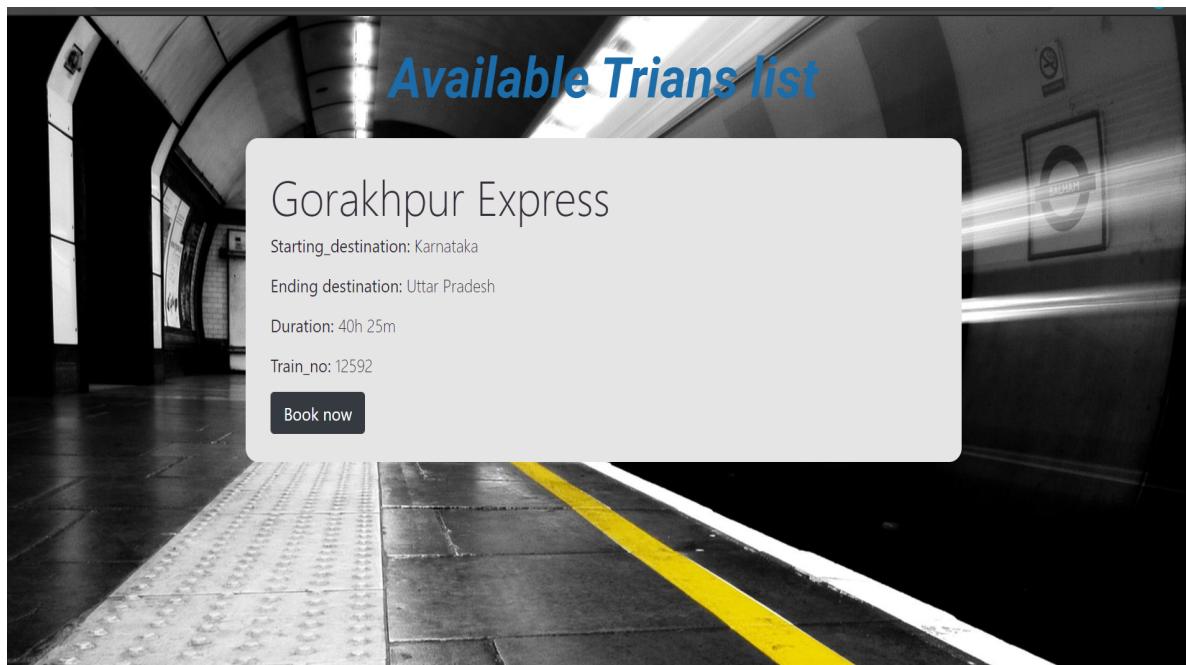
**Fig 1.7**

This is the output we get for hotels and the sql query is `SELECT \* FROM hotels WHERE cities\_City\_Name = "\${req.body.from}"` where **req.body.from** is the location that user selected we also included the photo of the hotel as getting a visual will help the user make a better choice.



**Fig 1.8**

Similarly how we have for hotels this is the output for the tourist attractions at the place and the sql query used for this is `SELECT \* FROM tourist\_attractions WHERE cities\_City\_Name = "\${req.body.from}"` where `req.body.from` is the location which user selected.



**Fig 1.9**

This is the screenshot of the output page of the trains the sql query used here is `SELECT \* FROM trains\_has\_states WHERE starting\_state = "\${req.body.from}" AND ending\_state = "\${req.body.to}"` where `req.body.from` is the location which user selected.

## **Conclusion:-**

The project was completed as expected, with a fully functional front end which allows users to access and update the database, and to plan their trip on the fly.

This model can be expanded to work worldwide by adding new tables, and is scalable. Taking feedback from the user to give personalised suggestions can also be added. Accounting for real world conditions like current time to automatically figure out whether a restaurant is closed or not for example may be added too.

With some more entries, more computational power, a more rigorous relational model and more efficient method for accessing required transportation, this can be of significant help to a traveller.

The code for our project is in the github repo: <https://github.com/chandavaran/A-Z-of-travel-planning>