INDIAN INSTITUTE OF TECHNOLOGY MANDI

FLIGHT SEARCH ENGINE

WINGS

INDEX

1. Abstract 4
2. Introduction 5
3. Methodology 6
4. Results / Output 9
5. Conclusion / Summary 18

ABSTRACT

A flight search engine named Wings has been created . The engine aids in checking availability of seats in displayed list of aircrafts on receiving information such as source airport, destination airport , date and time of required flight.

Languages such as HTML, CSS and JAVA Script have been used to design the frontend of the system whereas PHP and MY SQL has been used to design and connect the system to the backend of the system. The system is fully working and stores the input provided by the user to the database (The specific tables created to store this data). It also displays the required data on clicking the corresponding buttons to execute required queries.

The engine has been connected to a login and sign-up system. The user will have to sign-up for the first time and can login from then onwards. The main page asks the user for the specifications of the airlines and the seat he/she wants to book and displays and books the seat accordingly. The booking page confirms the booking by sending a mail to the user.

INTRODUCTION

The flight search engine makes it very easy for the user to search for and book flights very conveniently and comfortably. The users can login (or signup and hence login) to the system anytime they wish to search for the flights or book them. The users will just have to mention the specifications of the seat that they wish to book and the corresponding seat and its price will be made available to them. Seeing if seat is available or not and the price of a seat, the user can decide if or not he/she wishes to book the seat. In case he/she does, he/she can book the ticket by clicking on booking button after confirming the details. The user will then receive a confirmation mail from the engine and the seat will be booked for him/her and won't be shown to any other user.

The engine consists of a signup and login page which ensures that user signs up with a unique user name and his/her username and password is saved in the database . So, in order to check the flights when the user would login into the platform, the login page would make sure that the user is able to enter only if the username and password is correct. The signup page ensures that the password that user sets is strong enough.

The Main Page of the engine consist of a Search Flight box in which user can fill in the data such as Origin, Destination, Date of Flight, No. of passenger & Class Type. The details entered will be passed on to the database which searches for the flights with the required attributes. The user is redirected to Flights page. On the Flights Page, if there is a flight on the required date then it will be visible to the user. The Flights are available in the format of Cards which contains details of the flight such as Price, Class, Departure Date, Arrival Date, Time, Seats Available, etc. The user can select the flight to book from the cards and Click on Book Now button to book that particular Flight.

The booking page opens when a particular flight card is chosen and Book Now option is clicked. This page takes the email and telephone number for correspondence and takes the names of the passengers travelling. The number of passengers is input in the earlier pages. So, this page generates as many name inputs as the number of passengers input in the previous page. This is realised using a simple php for loop.

This form also contains a BOOK NOW button. When this is pressed, the data collected is relayed to the next page where the php code sends a mail and updates the corresponding tables.

METHODOLOGY

Various features of our flight search engine along with the methodology used are as follows-

1. On loading the window, a loading animation occurs. It has been applied by creating a JavaScript function (along with a CSS transition to control time and motion of the circles and the airplane icon embedded using font-awesome) that will be executed on “window.onload”. Linear gradient has been applied to make the frontend look good.
2. Two buttons for signup and login have been added to the webpage and an animation has been added to the airplane to make it seem in motion. <button> attribute has been used to create buttons and < a href=” ”> has been used to link these buttons to signup and login page respectively. The animation on the airplane image has been set using translate, translateY and rotate attributes in CSS file.
3. The signup page has a form which is connected to submit.inc.php (used to store data in the database and connect to database using dbh.inc.php file) using <form action="submit.inc.php" method="post"> attribute. The designing of the page has been done using CSS and html. The password input tag also checks the strength of password and displays it. This has been done using a JavaScript function which is connected to input tag using the class id of the tag.
4. The login page lets user enter username and password and checks if the username and corresponding password are available in the database. If the user enters correct details, it leads user to the main page. If user enters wrong password, it prompts him/her to re-enter the correct password. And if the username is not stored in the system, it leads user to signup page and asks him/her to register first. The function for checking has been made using PHP whereas the designing of the page and form has been done using CSS and HTML.
5. The username entered is checked in the database. If the same username is present in the database, the page redirects to a prompt asking the user to register using a different username as this username is already taken.
6. Now as the user has entered the main page it has a form which asks for user input as source , destination, number of persons for which the seats availability (1-4) per account need to be checked ,cabin class which is available in three types as Economy, Business , First and asks the user to input the data in YYYY-MM-DD in text form.

7. About page contains a brief overview of our project. When the about link is clicked, the names of team members is also displayed.
8. In this page we have also attached a switch account button in navbar so if the user has to sign in with a different account he/she can sign in from there and on hovering these buttons we have given CSS effect of opacity there.
9. After entering the required details the user click on “Search Flights” button and all the data entered is directed to a action.php file. In comd.php file database connection take place for that user and entered data and php variables are created for user entered data. If it is not connected then it shows connection failed. If the desired flights are not available, the site displays the message ‘No Flights available’.
10. Then this comd.php file is included in action.php file. In action.php file a SQL query runs for data(php variable) and suitable flights as per the user are shown to the user in the form of cards which show all flight details like to, from, price, flight No., Departure time , arrival, time and then user has to choose the any suitable flight as per his convenience and then clicks Book now button.

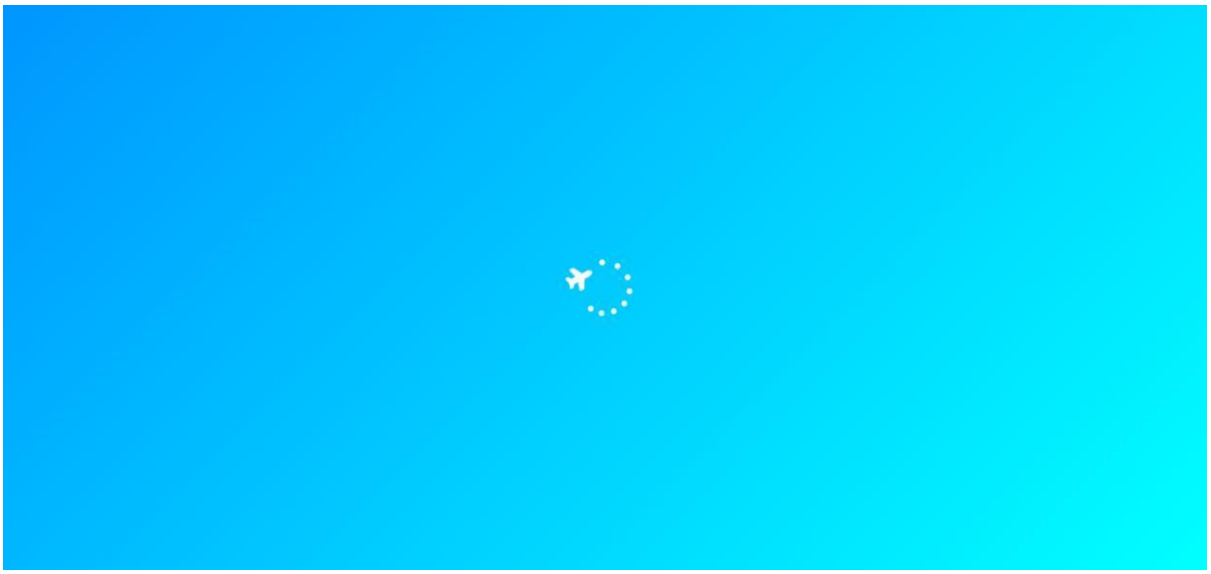
Note-For convenience database has data only for flights of 4 companies (Air India, Spice Jet, Vistara, AirAsia India) between (Delhi, Kolkata, Chennai, Mumbai) and (Kabul, Sydney, Dhaka, Toronto) from 1 December 2021 to 4 December 2021.

11. When the Book Now button in a particular flight card is selected, all the data from the previous page and action.php page is relayed to index_.php file using the php post method. The data relayed includes the number of passengers, the flight chosen, to and from cities and the travel date.
12. As the index_.php file opens, a form appears. We work on styling of page to make it more catchy. We used linear gradient to make background more attractive. In same way we used different attributes like border-radius, text-algin, padding to make page looks more superior. This form requires the user to enter an email id (where the confirmation email will be sent) and a telephone number (for documentation purposes). The user is required to enter the names of all the passengers. The number of passenger name inputs created is obviously equal to the number of passengers chosen in the main.html file. The php variable $iterations keeps track of the number of passengers travelling. The maximum passenger count is 4 while the minimum passenger count is 1. Most of this code runs under the php script. That is why php echo function is used

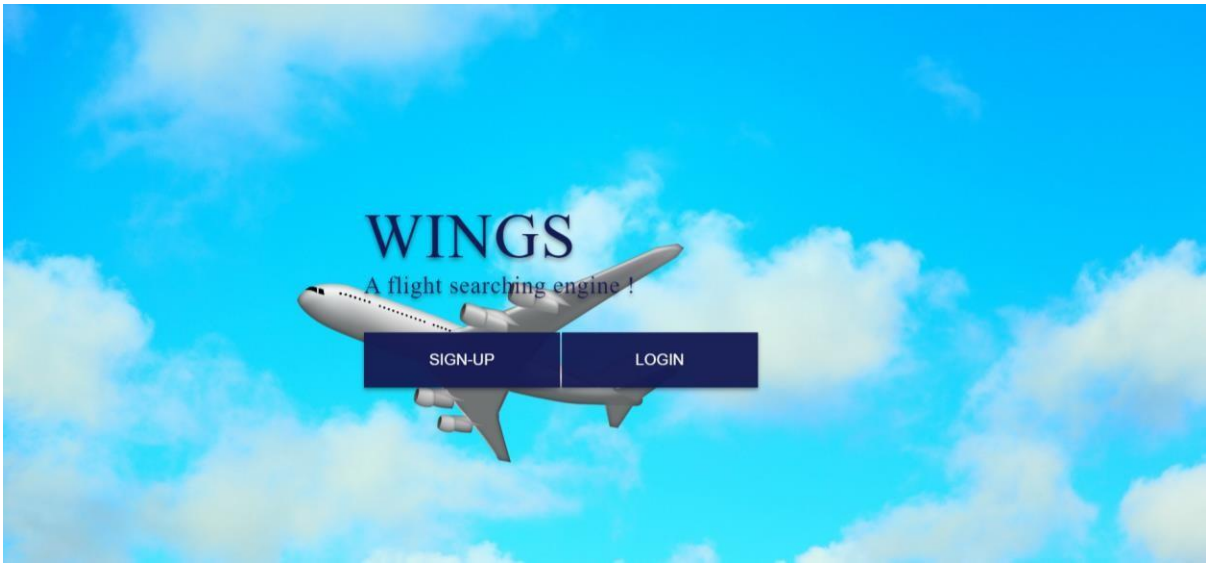
to render the form on the screen. After the user enters all the names, S/he is required to press the Confirm Ticket button.

13. When the Confirm Ticket option is clicked, the form in the index_.php file relays all the data collected from the previous pages and this page to index1_.php using the php post method. All this data is obtained and stored in variables in the index1_.php. The first and last names of all the people is received as an array from the index_.php file.
14. Once all the data is obtained and saved in variables, the mail segment is executed. The mail variables are entered. The body of the mail contains an html segment which describes the structure of the mail. If the mail is sent successfully, a message is displayed. The message displays that the ticket has been booked and the email has been sent. The email is obviously sent to the email id entered in the previous page. If for some reason the email delivery fails, only the message declaring that the ticket has been booked gets displayed.
15. Styling of Congratulation Page is done with ava.css file. To make Background more attractive we used image named as sky1.jpg. we used different colour for different class which makes our page to look one step ahead. Image is added in middle of page using <img> tag. For different class like center, content, header we used different font size which gives better look to congratulation page.
16. Next, the database entry and update section is run. The details of the passengers are entered in the passengers table in the database database_1 using the php mysql connection.
17. Next, the flights table in the same database is updated so that the number of seats in the table gets reduced by the number of seats booked in the class chosen in the airplane chosen on the date chosen.This marks the conclusion of the code.

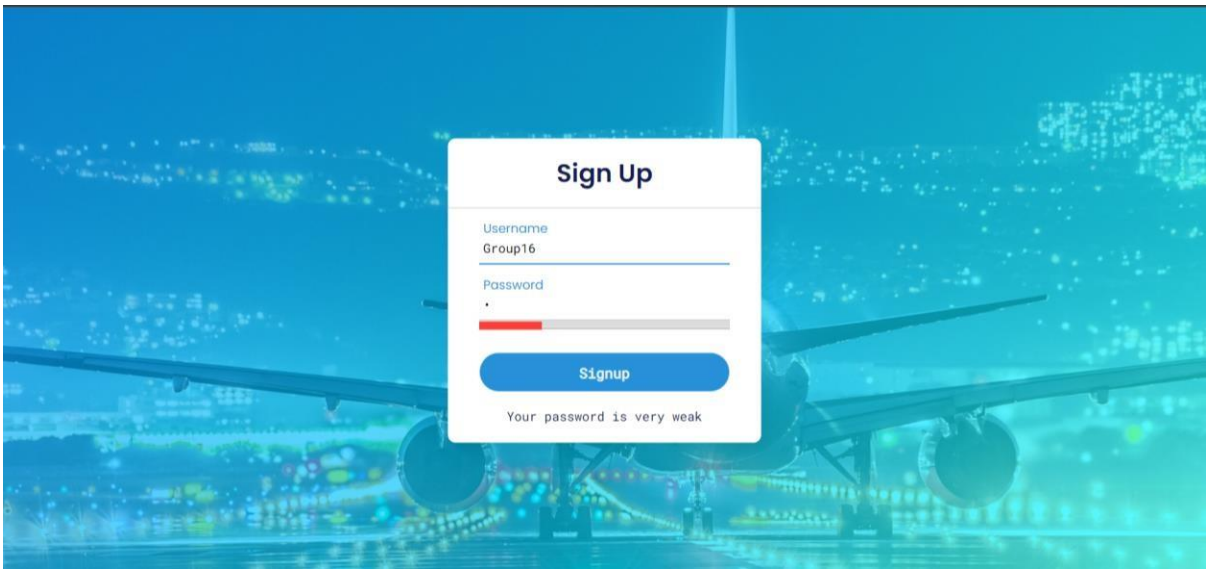
RESULTS / OUTPUTS



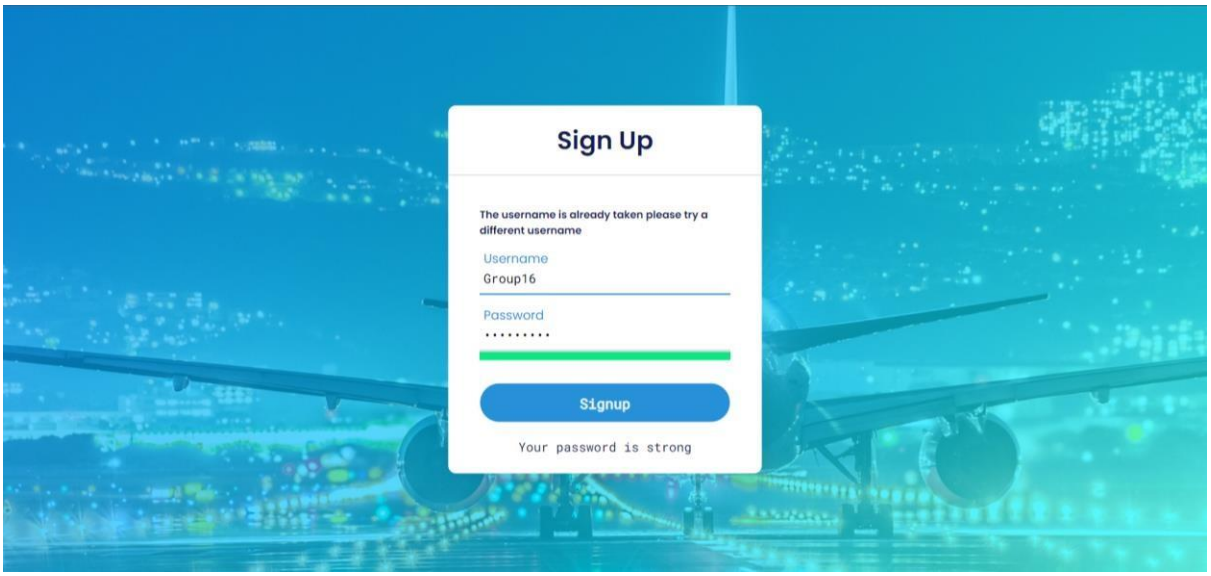
Loading Animation



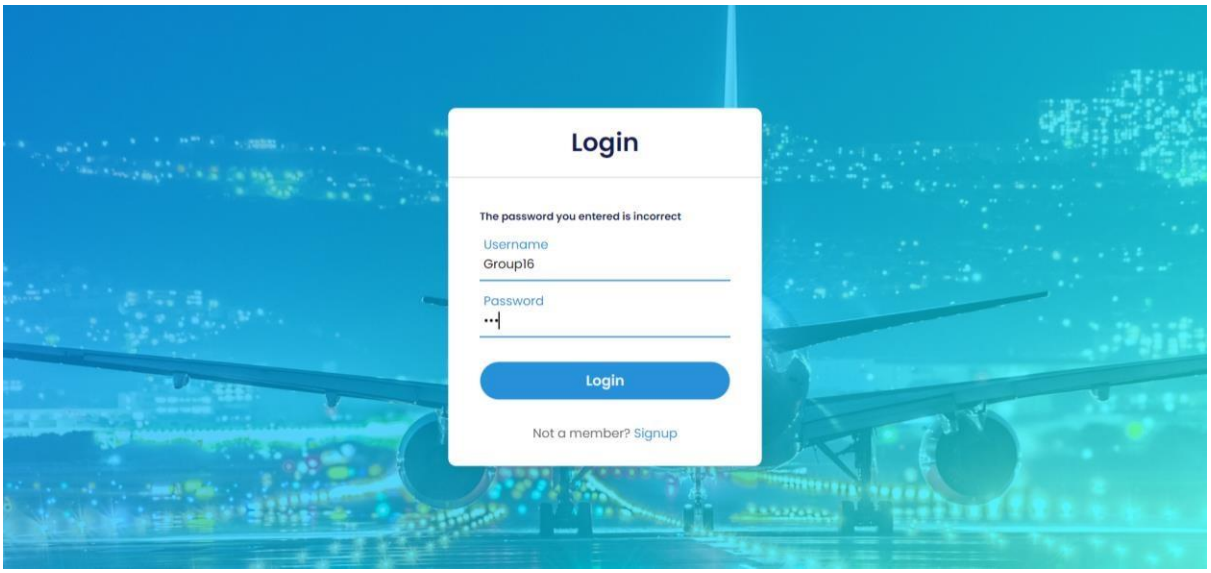
Page linked to login and signup page



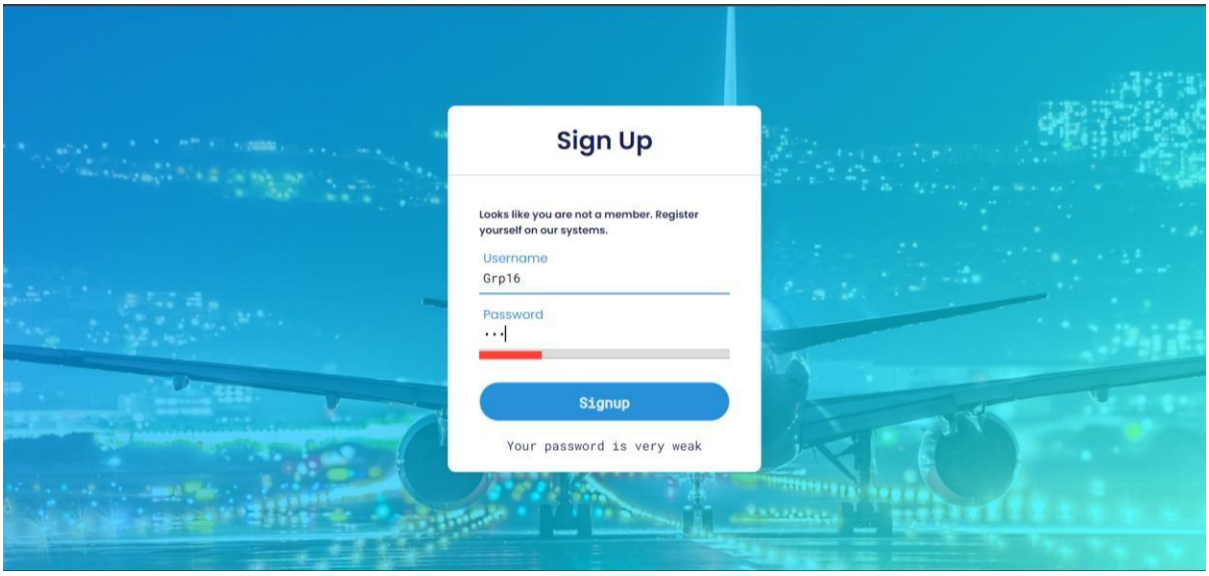
Strength of Password



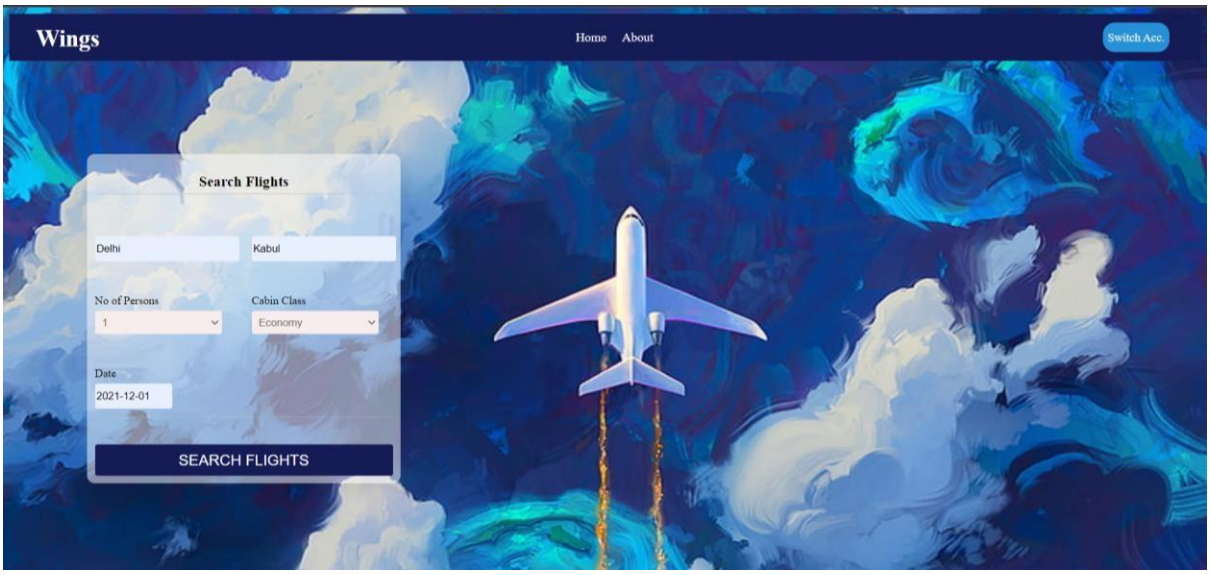
Uniqueness of username



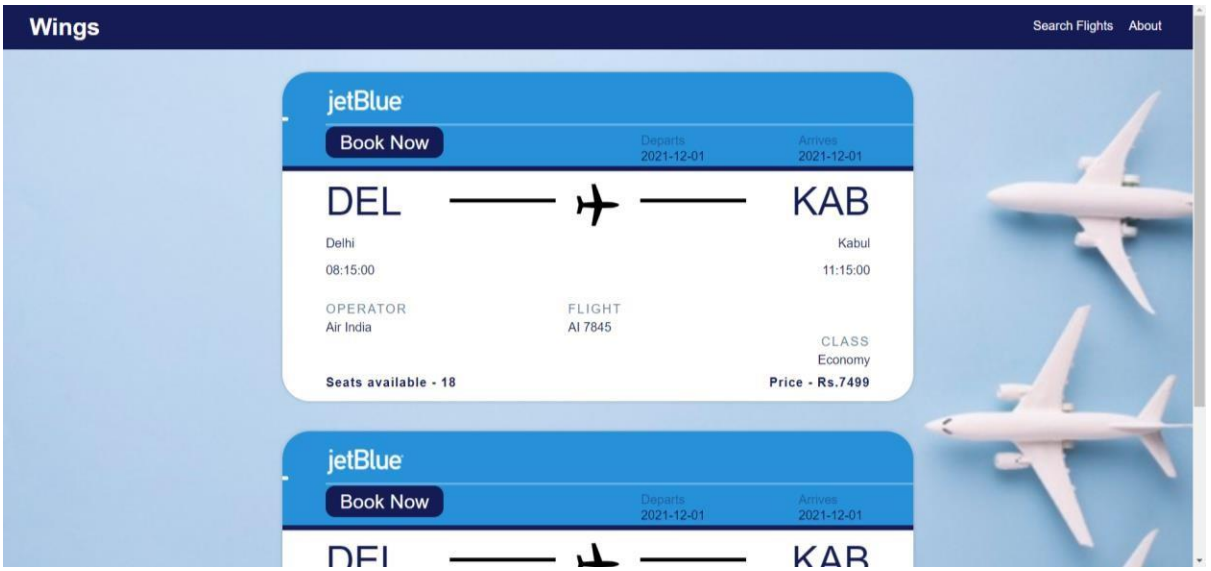
Validity of Password



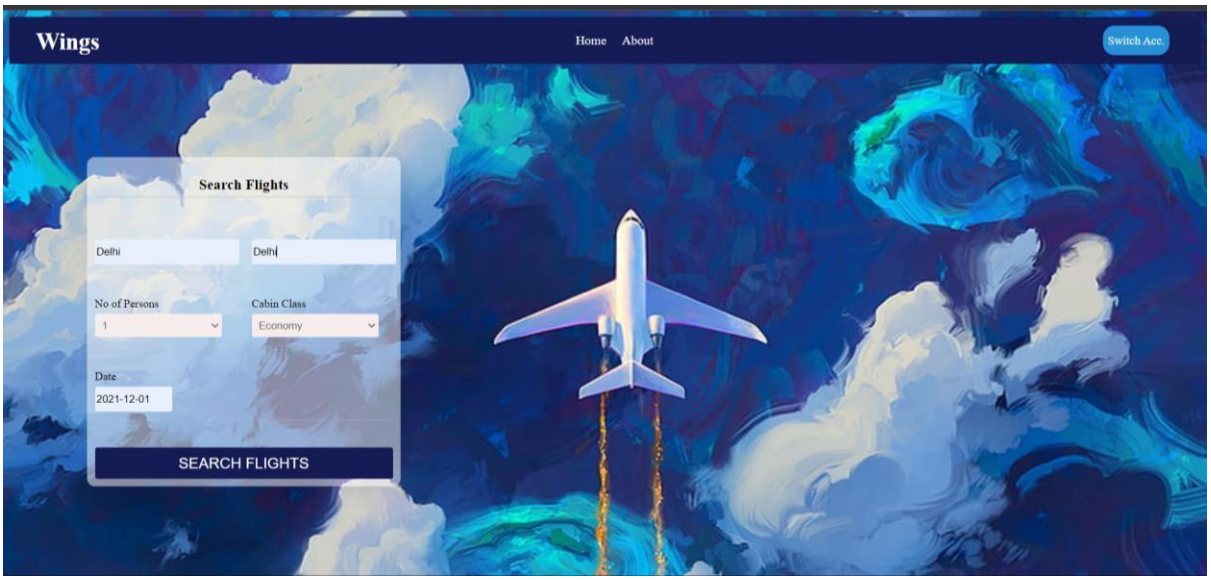
Incorrect Password



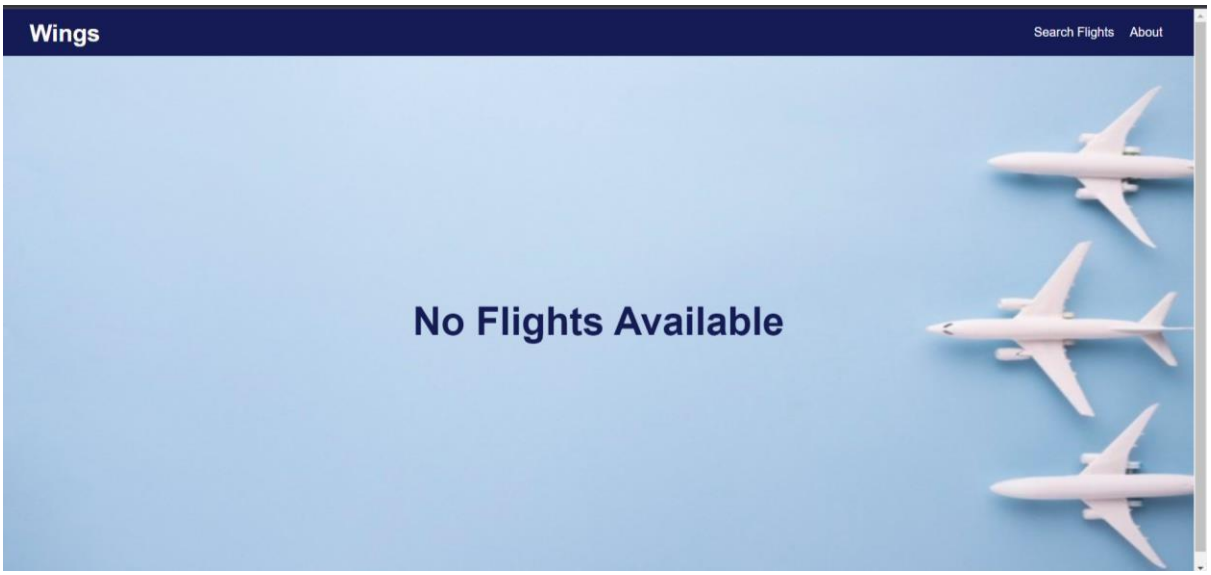
Main page



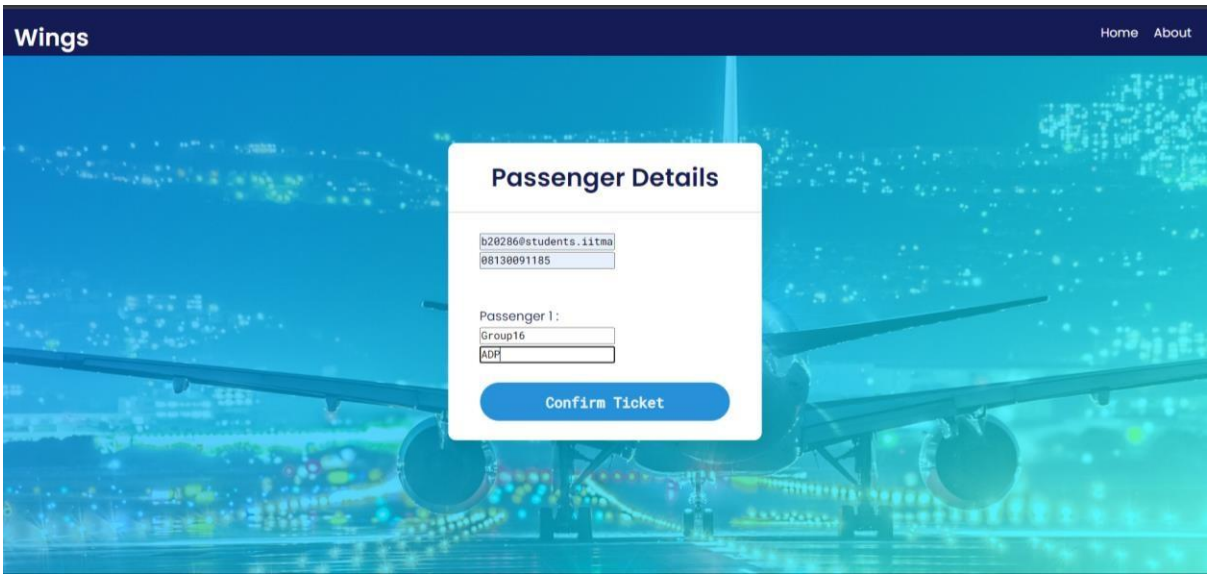
Flight Cards



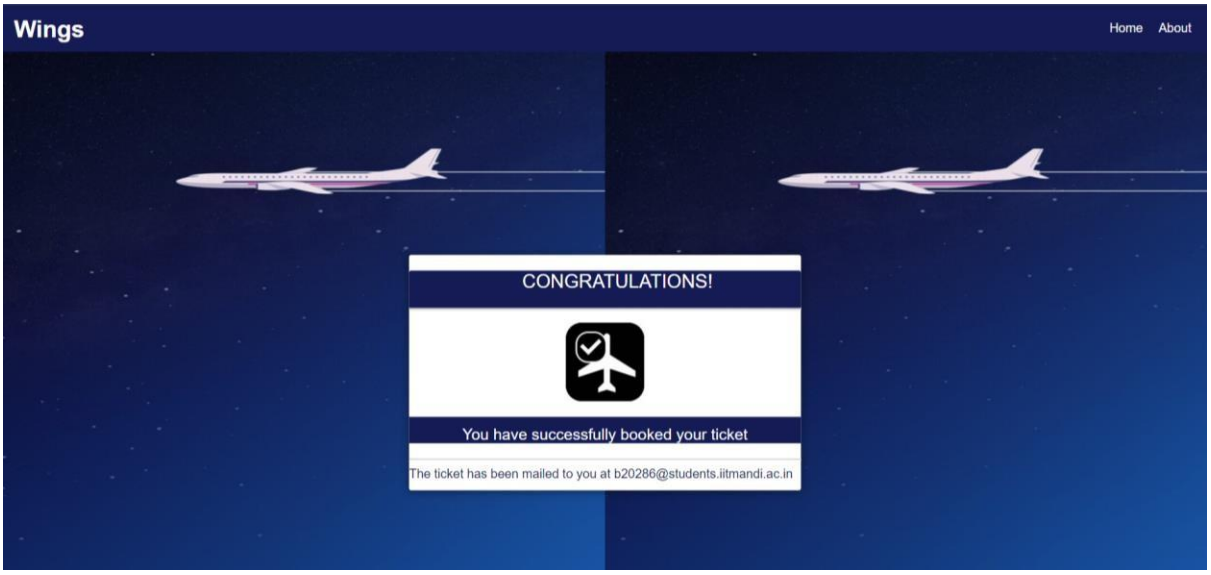
Bogus Case



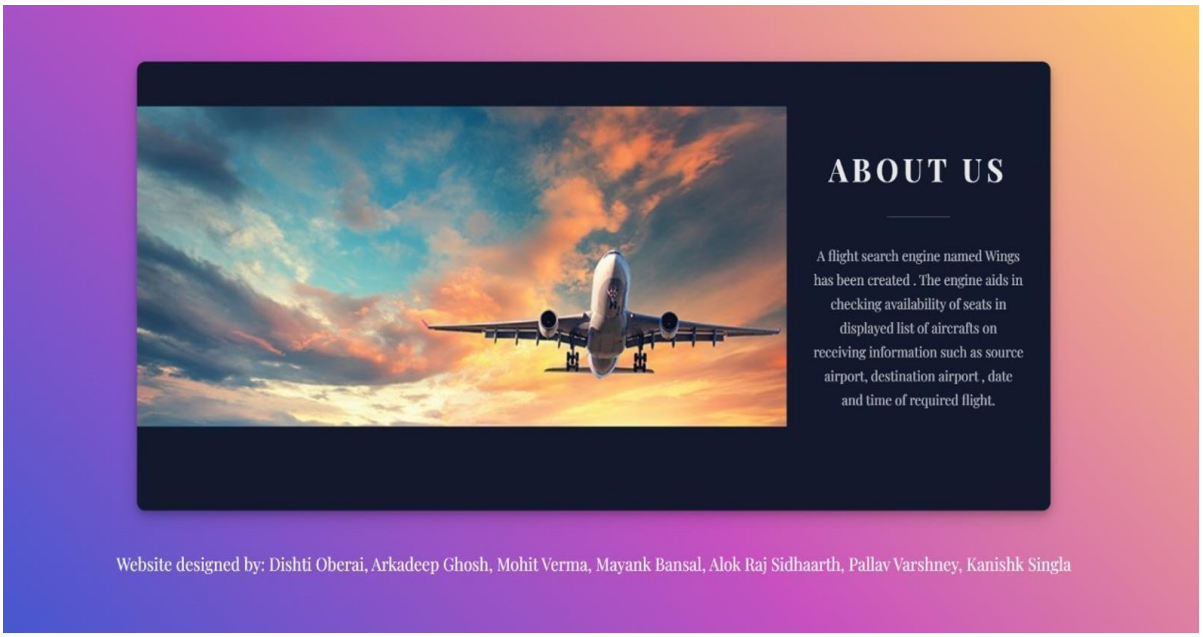
Result of bogus case



Passenger details page

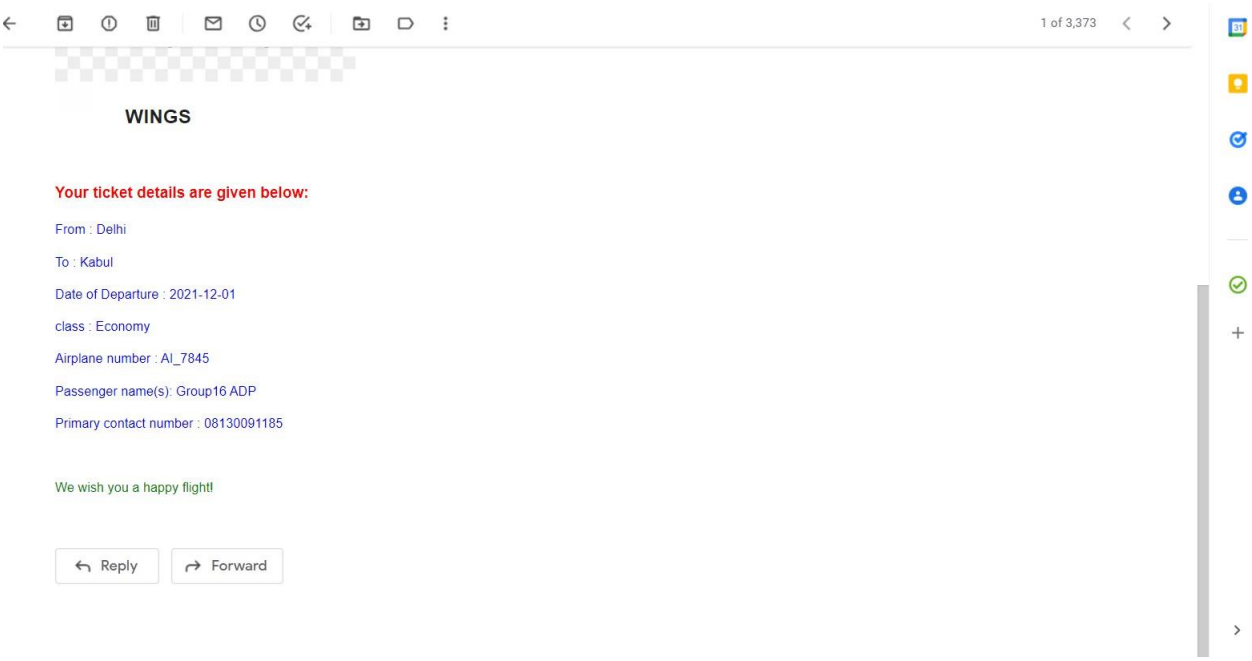


Flight Confirmation page

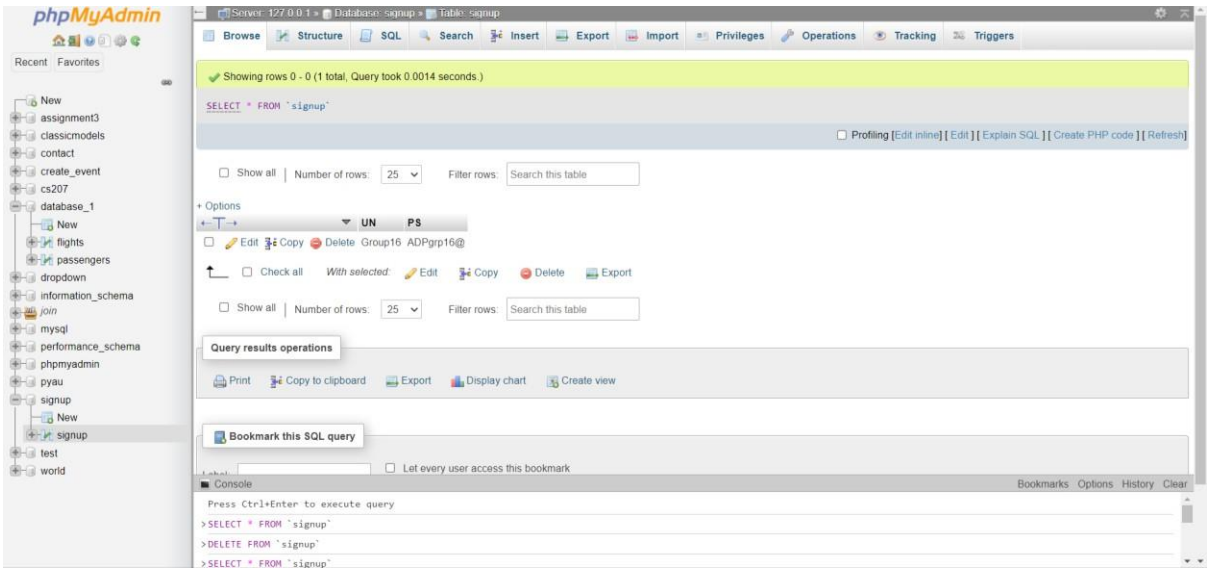

ABOUT US
A flight search engine named Wings has been created . The engine aids in checking availability of seats in displayed list of aircrafts on receiving information such as source airport, destination airport , date and time of required flight.
Website designed by: Dishti Oberai, Arkadeep Ghosh, Mohit Verma, Mayank Bansal, Alok Raj Sidhaarth, Pallav Varshney, Kanishk Singla

About page

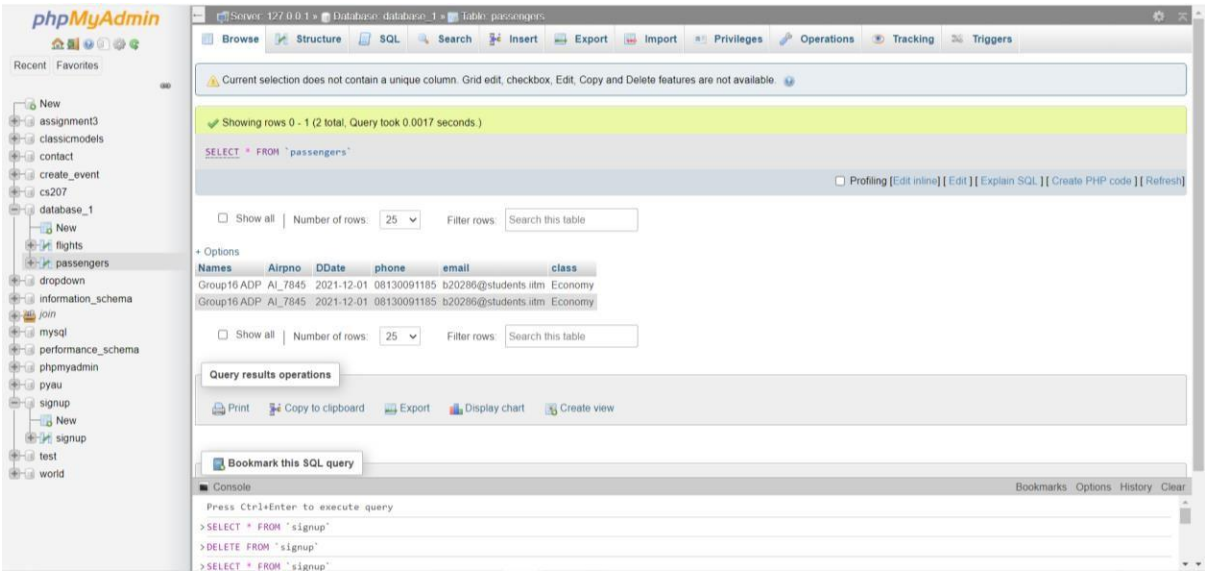

b20286@students.iitmandi.ac.in
to me
5:50 PM (0 minutes ago)
WINGS
Your ticket details are given below:
From : Delhi
To : Kabul
Date of Departure : 2021-12-01
class : Economy



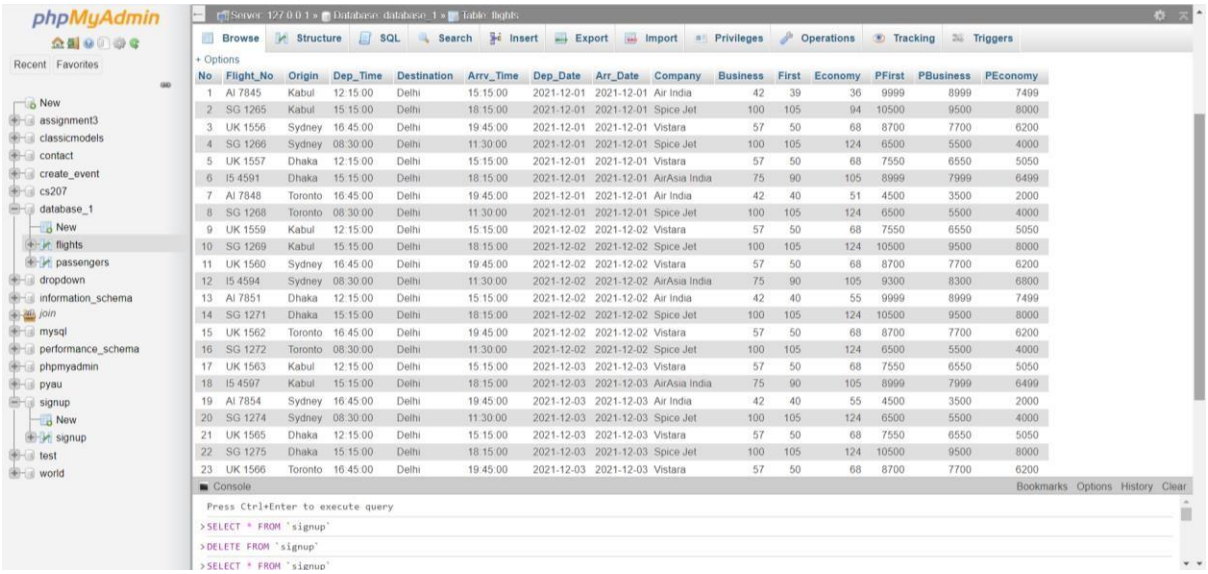
Flight Confirmation email



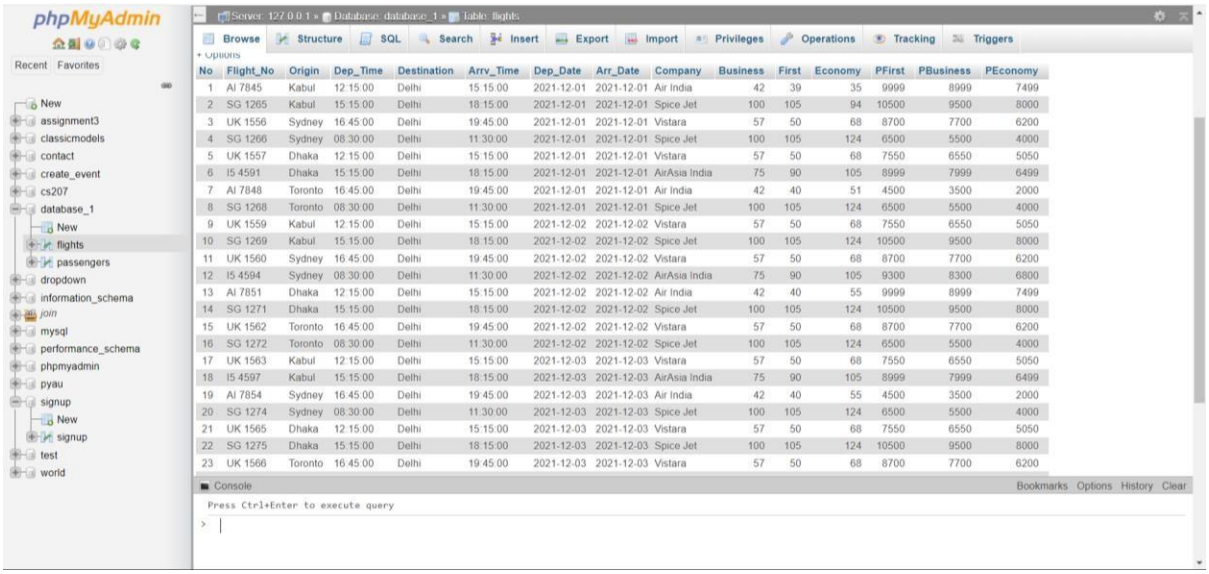
Signup table



Passengers table



Flight table initially



Flights table after booking (number of seats reduced)

CONCLUSION

1. The flight search platform is ready.
2. One can search as well as book the flights.
3. The user interface also appears to be good.
4. The website is well connected with the database and is fully working.
5. We learnt a lot during the project and enjoyed working with our team.