

FLIGHT BOOKING SYSTEM

**A PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT
OF REQUIREMENT
FOR THE AWARD OF THE DEGREE**

MASTER OF COMPUTER APPLICATIONS (MCA)

**OF
MAHATMA GANDHI UNIVERSITY, KOTTAYAM
BY**

**JOBIT THOMAS
Reg. No:22PMC133**



**MARIAN COLLEGE
KUTTIKKANAM**

(AUTONOMOUS)

MAKING COMPLETE

Marian College Kuttikkanam Autonomous

Peermade, Kerala – 685 531

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Under the guidance of

Ms. RENY JOSE

Assistant Professor

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PG DEPARTMENT OF COMPUTER APPLICATIONS

Marian College Kuttikkanam Autonomous

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

KUTTIKKANAM – 685 531, KERALA.

CERTIFICATE

This is to certify that the project work entitled

“FLIGHT BOKKING SYSTEM”

is a bonafide record of work done by

JOBIT THOMAS

Reg. No:22PMC133

In partial fulfilment of the requirements for the award of Degree of

MASTER OF COMPUTER APPLICATIONS [MCA]

During the academic year 2022-2023

Ms. Reny Jose

Assistant Professor

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Finally, I express my deep appreciation to all our friends and family members for the moral support and encouragement they have given to complete this project successfully.

Jobit Thomas

ABSTRACT FLIGHT BOOKING SYSTEM

The Flight Booking System is a Django-based web application that provides users with the ability to search for and book flights. The system aims to simplify the flight booking process by offering a user-friendly interface and a comprehensive set of features. The application allows users to create an account, search for available flights based on various criteria such as destination, departure date, and number of passengers. It provides real-time flight information, including flight schedules, seat availability, and fares. Users can select their preferred flights, choose their seats, and proceed to the booking and payment process. The application is developed using the Django framework, which provides a robust and scalable foundation. Django's built-in features, such as ORM (Object-Relational Mapping) and template engine, are utilized to streamline the development process and create efficient database interactions and dynamic web pages.

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1.INTRODUCTION

1.1 OVERVIEW OF THE PROJECT

The Flight Booking System is a Django-based web application that provides users with the ability to search for and book flights. The system aims to simplify the flight booking process by offering a user-friendly interface and a comprehensive set of features. The application allows users to create an account, search for available flights based on various criteria such as destination, departure date, and number of passengers. It provides real-time flight information, including flight schedules, seat availability, and fares. Users can select their preferred flights, choose their seats, and proceed to the booking and payment process. The application is developed using the Django framework, which provides a robust and scalable foundation. Django's built-in features, such as ORM (Object-Relational Mapping) and template engine, are utilized to streamline the development process and create efficient database interactions and dynamic web pages.

2.SYSTEM STUDY

2.1 EXISTING SYSTEM

The current system of flight booking requires passengers to physically visit the airport or travel agencies to book their flight tickets. They have to check the availability of flights, choose their preferred seats, and make the payment at the counter. This manual process involves a significant amount of manpower to manage the bookings. It can be time-consuming for passengers, and the information provided about flight routes and schedules is often limited. Online booking and payment options are not available in this system.

- It is less user-friendly.
- Users must go to the airport or travel agencies to book tickets.
- Involves a lot of human efforts for booking management.
- Time-consuming for both passengers and staff.
- Limited information about flight routes and schedules.

2.2 PROPOSED SYSTEM

The proposed system for flight booking aims to provide a more convenient and streamlined process for passengers to book their flight tickets. It eliminates the need for physical visits and introduces online booking capabilities. The key features of the proposed system include:

- It is very user friendly.
- User need not go to the airport or travel agencies to book tickets.
- Involves a less of human efforts.
- Time consuming is less
- Description of the bus information is detailed

3.SYSTEM ANALYSIS

3.1 REQUIREMENT DEFINITION

Requirements Analysis is the process of defining the expectations of the users for the website that is to be built or modified. The goal is to produce a document of the client's requirements and fulfill their needs. This document forms the basis of development and software validation. It involves all the tasks that are conducted to identify the needs of different stakeholders.

ADMIN

- Admin can add flights and add routes.
- Delete and update flights and routes.
- Can see the details of flights and routes.
- Can receive the payment.
- Can view the bookings.

CUSTOMER

- Customer can view the flight routes.
- Customer can book flight ticket.
- Can pay money online.

4.FUNCTIONAL REQUIREMENTS

4.1MODULE SPECIFICATION

- Login Module
- Registration Module
- Search flight Module
- flight List Module
- Book Module
- Payment module
- Cancel Boking Module

User Login Module

This feature allows users who have already registered with the system to log in using their credentials, such as username and password.

User Registration Module

This feature allows new users to create an account on the flight reservation system by filling in their personal information such as username, first name, last name, email, phone number, and password. After successful registration, users can log in to the system to access the bus booking and other related services.

Search flight Module

This feature enables users to search for flights based on various criteria such as departure location, destination and travel date.

List of flights Module

This feature provides a comprehensive list of available flights that match the search criteria entered by the user. Users can view the bus details such as flights name, fare, available seats, and travel time.

Booking Module

This feature allows users to enter passenger details and book the seats on the bus and confirm their booking

Payment Module

This feature enables users to make payment for their bookings.

Cancel Bookings Module

This feature allows users to cancel their bookings if they have a change of plans or for any other reason.

5. NON FUNCTIONAL REQUIREMENTS

5. NON-FUNCTIONAL REQUIREMENT

5.1 Reliability

The reliability of the overall project depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes, Also the system will be functioning inside a container. Thus, the overall stability of the system depends on the stability of container and its underlying operating system.

5.2 Availability

The system should be always available, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs. A customer-friendly system which is accessible to people around the world should work 24 hours. In case of a hardware failure or database corruption, a replacement page will be shown. Also, in case of a hardware failure or database corruption, backup of the database should be retrieved from the server and saved by the Organizer. Then the services will be restarted. It means 24 X 7 availability.

5.3 Maintainability

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the project will be done. Also, the software design is being done with modularity in mind so that maintainability can be done efficiently.

5.4 Supportability

The code and supporting modules of the system will be well documented and easy to understand. Online documentation and help system requirements.

6.SYSTEM DESIGN

6.1 INPUT DESIGN

In the input design, the user oriented inputs are converted into computer recognizable format. The collection of input data is the most expensive part of the system in terms of equipment used, time and number of users involved. Input design is the processes of converting user oriented inputs to a computer based format. The goal of designing input data is to make data entry as easy, logical and free from errors as possible.

- Registration Form- Here the customer creates their accounts using the relevant details asked to fill for and it is stored to the database and used whenever it is needed.
- Login Form- The admin, the customer login to the website, to their account using their particular username and password.
- Booking Form- The user can book ticket using this form filling the relevant information about passenger such as passenger name, age and gender.
- Payment Form- The user need to fill the cvv, and account number of the atm card to send or pay money to the admin.

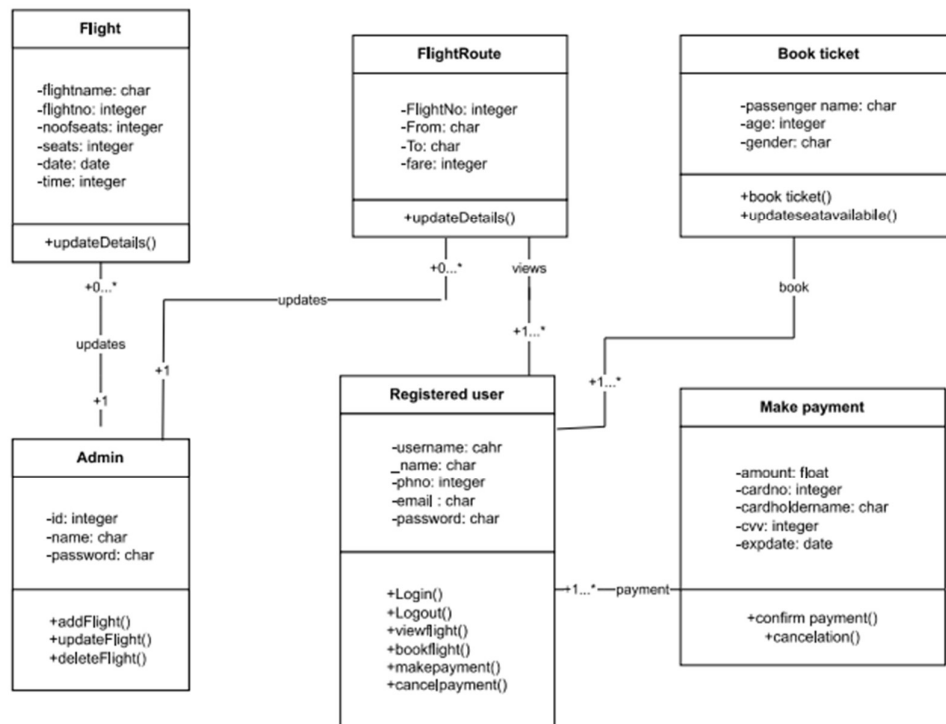
6.2 OUTPUT DESIGN

The goal of the output design is to capture the output and get the data into format suitable for the computer. One of the important features of an information system for users is the output it produces. Output is the information delivers to the users through the information system. Without quality output the entire system appears to be unnecessary that users will avoid using it. The output design is the key to the success of any system because it is the system relationship with the user, we must determine the information is present and arrange the information in the acceptable format that is when to display the information.

- Search Bus. This button helps the user to view the buses that are added by the admin.
- Book Now. This button helps the user to book bus tickets.
- Proceed to payment. This button redirects the user to the payment form so that they can pay the money to place their order.
- Logout- The button that helps the customer to log out from the website.
- Login- The button helps to log in to the website to purchase their product.
- Register- The button that allows the customer to register for their account to book bus tickets.

6.3 DATABASE DESIGN

6.3.1 CLASS DIAGRAM



7. CHALLENGES FACED

7.1 CHALLENGES FACED

Developing a flight booking system using Django, I faced several challenges. The most difficult challenge I faced was ensuring secure user authentication, designing a user-friendly interface, implementing validation mechanisms, and managing a robust database structure.

User Authentication and Security: Implementing a robust user authentication system with appropriate security measures can be a challenging task. You would need to handle user registration, login, password hashing, and protect sensitive user information to ensure the system is secure against potential threats like unauthorized access or data breaches.

Designing User Interface: Creating an intuitive and user-friendly interface is crucial for a successful flight booking system. It involves designing visually appealing web pages, organizing information effectively, and providing a seamless user experience. Consider factors like responsive design, easy navigation, and clear call-to-action elements to enhance usability.

Validation Mechanisms: Implementing validation mechanisms helps ensure that user input is accurate and consistent. You need to validate user data at various stages, such as during registration, booking, or updating information. Validations can include checking for required fields, validating email addresses, enforcing password complexity, and verifying the availability of flight seats or desired routes.

Database Design and Management: Designing an efficient database schema and managing the database operations can be complex. You need to carefully plan the structure of your database, define relationships between entities (e.g., flights, routes, bookings), handle data integrity, and optimize queries for performance.

8. FUTURE ENHANCEMENT

8.1 FUTURE ENHANCEMENT

The project, flight Booking System, has a vast scope for future enhancements. The software is developed using Python and SQLite as the back-end, and HTML and CSS as the front-end. In the future, the system can be further modified to include additional features easily. Here are some potential enhancements for the bus booking system:

Multiple Admin Access: The system can be modified to allow multiple administrators to manage the flight booking platform. This would enable efficient administration of the system, with different admins having specific roles and permissions.

Real-Time Updates: Implementing real-time updates regarding flight schedules, delays, and cancellations would greatly benefit passengers. Users can receive timely notifications through mobile apps or email, keeping them informed about any changes in their travel plans.

Payment Gateway Integration: Integrate popular payment gateways to facilitate secure and convenient online transactions for flight ticket bookings. This would provide users with various payment options and enhance the overall user experience.

Ticket: Like getting ticket as pdf format after the payment.

User Reviews and Ratings: Incorporate a user review and rating system, allowing passengers to provide feedback on their bus travel experiences. This would help other users make informed decisions when booking their bus tickets.

By incorporating these future enhancements, the flight booking system will become more efficient and user-friendly, offering a seamless and comprehensive booking experience for flight travelers.

9.CONCLUSION

9.1 CONCLUSION

The proposed flight booking system offers a convenient and user-friendly platform for customers to book flight tickets. By leveraging technologies such as Python, SQLite, HTML, and CSS, the system streamlines the booking process and enhances the overall experience for passengers.

The user registration module ensures privacy and allows registered users to access and book flight tickets for various destinations. The system aims to provide a consolidated resource where customers can conveniently browse and select their preferred bus routes, while maintaining the confidentiality of their personal information.

With the ability to check flight fares and examine available seats, customers have greater control and flexibility in their flight booking experience. The system allows customers to view details about flights and indicating seat availability.

Overall, the proposed flight booking system aims to provide a user-friendly interface, efficient booking process, and comprehensive travel solutions for passengers. By automating key operations and leveraging technology, the system reduces manual work and provides a seamless booking experience for flight travelers.

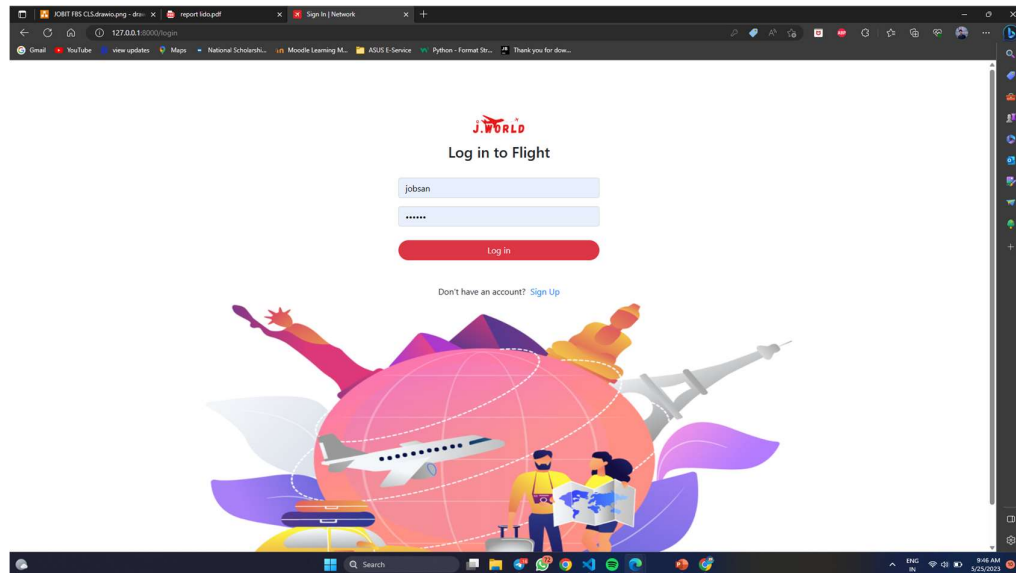
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10.1 REFERENCES

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5. <https://openai.com/blog/chatgpt>

11.APPENDIX

LOGIN PAGE



The screenshot shows a web browser window displaying the login page of a flight booking system. The browser's address bar shows the URL `127.0.0.1:8000/login`. The page features the J.WORLD logo at the top, followed by the heading "Log in to Flight". Below this, there are two input fields: one for the username, which contains the text "jobsan", and another for the password, which is masked with asterisks. A red "Log in" button is positioned below the password field. A link that says "Don't have an account? Sign Up" is located below the login button. At the bottom of the page, there is a colorful illustration of a globe with various travel-related icons, including a plane, a suitcase, a map, and a person.

J.WORLD

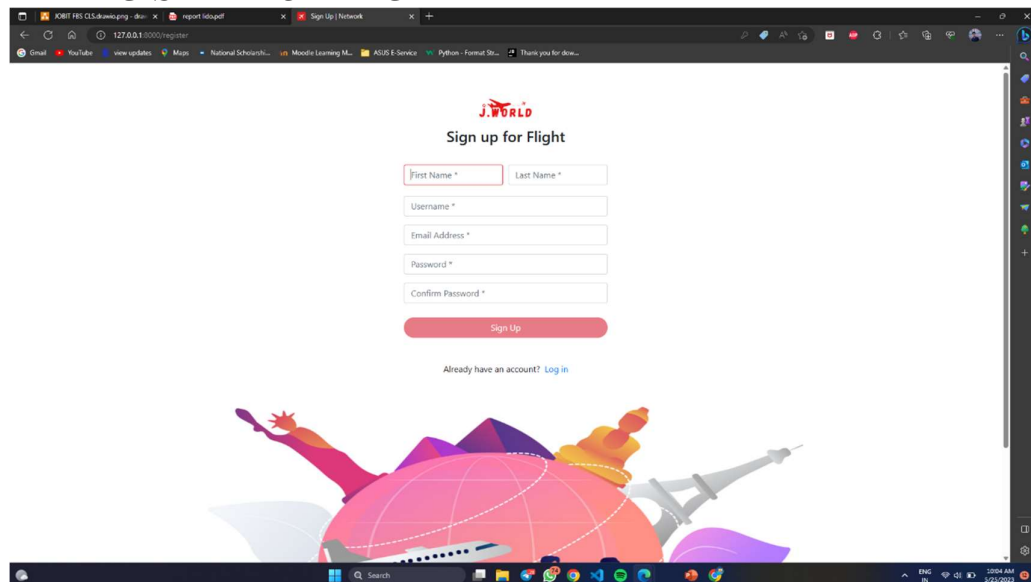
Log in to Flight

jobsan

Log in

Don't have an account? [Sign Up](#)

REGISTRATION PAGE



The screenshot shows a web browser window displaying the registration page of a flight booking system. The browser's address bar shows the URL `127.0.0.1:8000/register`. The page features the J.WORLD logo at the top, followed by the heading "Sign up for Flight". Below this, there are five input fields: "First Name *", "Last Name *", "Username *", "Email Address *", and "Password *". A "Confirm Password *" field is also present. A red "Sign Up" button is positioned below the password fields. A link that says "Already have an account? Log in" is located below the sign up button. At the bottom of the page, there is a colorful illustration of a globe with various travel-related icons, including a plane, a suitcase, a map, and a person.

J.WORLD

Sign up for Flight

First Name * Last Name *

Username *

Email Address *

Password *

Confirm Password *

Sign Up

Already have an account? [Log in](#)

FLIGHT SEARCH PAGE

FLIGHT SEARCH PAGE

From:

To:

Departure Date:

Return Date:

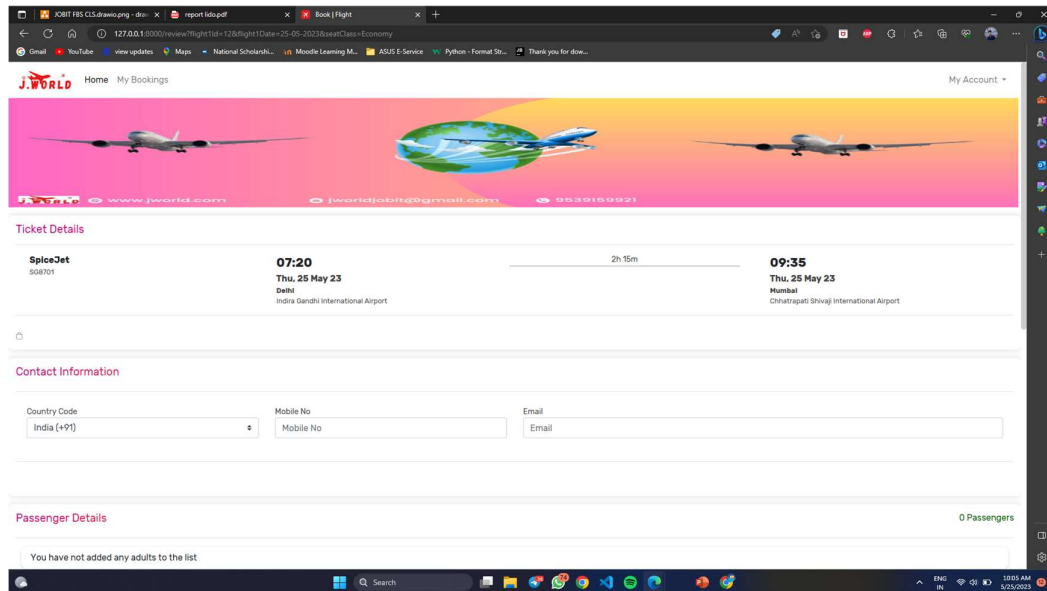
Class:

LIST OF FLIHTS PAGE

FLIGHT LIST

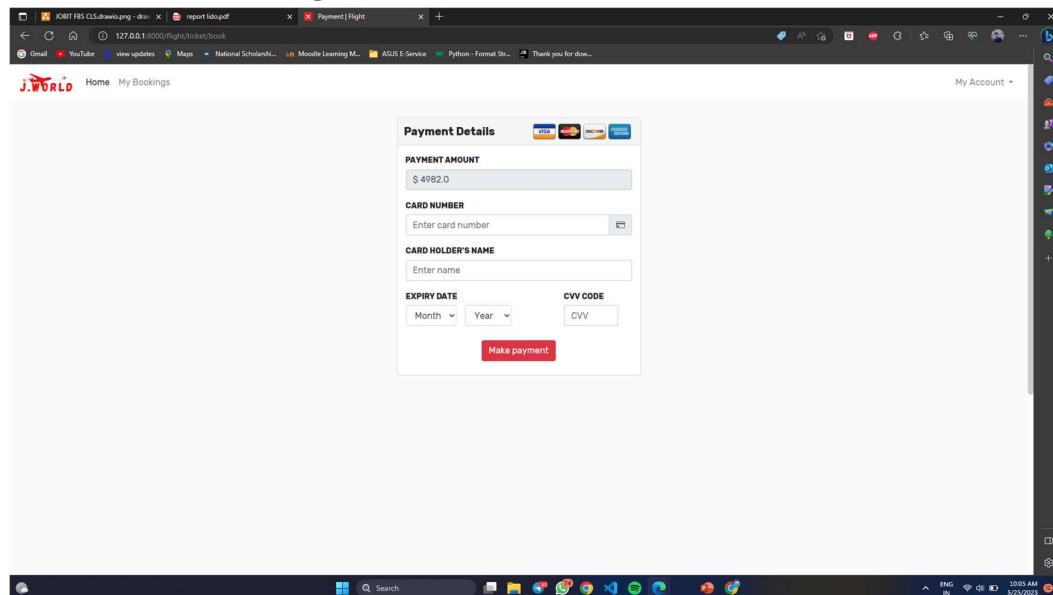
Flight	Depart	Arrive	Price	
SpiceJet 908701	07:20 Delhi	09:35 Mumbai	₹ 4882.0	<input type="button" value="Book Flight"/>
SpiceJet 908701	07:20 Delhi	09:35 Mumbai	₹ 4900.0	<input type="button" value="Book Flight"/>
SpiceJet 908709	19:00 Delhi	21:10 Mumbai	₹ 4940.0	<input type="button" value="Book Flight"/>
SpiceJet 90711	21:40 Delhi	23:55 Mumbai	₹ 4940.0	<input type="button" value="Book Flight"/>
SpiceJet 908149	19:45 Delhi	22:00 Mumbai	₹ 4940.0	<input type="button" value="Book Flight"/>
SpiceJet 908709	19:00 Delhi	21:10 Mumbai	₹ 4958.0	<input type="button" value="Book Flight"/>

BOOKING PAGE



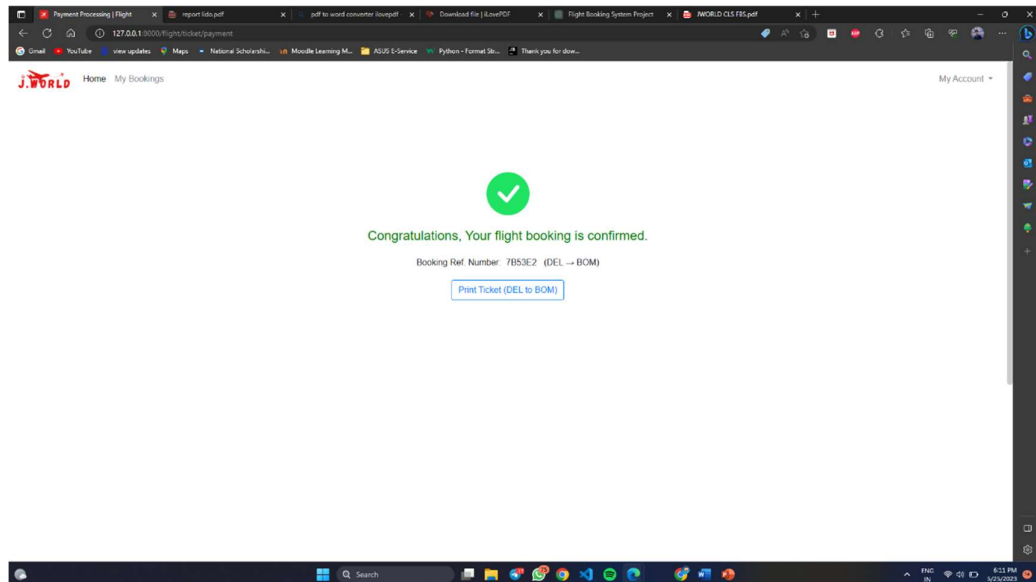
The screenshot shows the 'BOOKING PAGE' of the J.WORLD website. The browser window has multiple tabs open, including 'JWBTF FBS CLS drawing.png', 'report idoupd', and 'Book | Flight'. The address bar shows the URL '127.0.0.1:8000/Review/FlightId=12&FlightDate=25-05-2023&seatClass=Economy'. The website header includes the J.WORLD logo, 'Home', 'My Bookings', and a 'My Account' link. A banner image features two airplanes flying over a globe. Below the banner, the 'Ticket Details' section shows a SpiceJet flight (606701) from Delhi to Mumbai on Thursday, May 23, 2023, with a duration of 2h 15m. The departure is at 07:20 from Indira Gandhi International Airport, and the arrival is at 09:35 at Chhatrapati Shivaji International Airport. The 'Contact Information' section has input fields for Country Code (set to India (+91)), Mobile No, and Email. The 'Passenger Details' section shows '0 Passengers' and a message: 'You have not added any adults to the list'. The Windows taskbar at the bottom shows the time as 10:53 AM on 5/25/2023.

PAYMENT PAGE



The screenshot shows the 'PAYMENT PAGE' of the J.WORLD website. The browser window has tabs for 'JWBTF FBS CLS drawing.png', 'report idoupd', and 'Payment | Flight'. The address bar shows the URL '127.0.0.1:8000/Flight/ticket/book'. The website header is the same as the booking page. The 'Payment Details' section is highlighted with a white box. It includes a 'PAYMENT AMOUNT' of \$ 4982.0, a 'CARD NUMBER' input field with a placeholder 'Enter card number', a 'CARD HOLDER'S NAME' input field with a placeholder 'Enter name', and an 'EXPIRY DATE' section with 'Month' and 'Year' dropdowns, and a 'CVV CODE' input field with a placeholder 'CVV'. A red 'Make payment' button is at the bottom of the form. The Windows taskbar at the bottom shows the time as 10:55 AM on 5/25/2023.

PAYMENT PROCESSING



MY BOOKINGS

