FlyAway: Airline Booking Portal

Introduction

FlyAway is a comprehensive airline booking portal.This portal empowers users to easily book flights, providing a seamless and user-friendly experience. Additionally, it offers an admin backend for efficient management of airline, place, and flight data.

Project Scope

The FlyAway project encompasses various features for both users and administrators:

User-Facing Features

1. **Homepage and Search Form:** Users can enter travel details, such as the date of travel, source, destination, and the number of passengers. This information initiates the flight search process.

2. **Flight Listing:** Based on the entered travel details, FlyAway displays available flights with their respective ticket prices. These results are retrived from database

3. **Registration and Booking:** Once users select a flight, they are directed to a registration page to input their personal details. The system then shows a summary of the selected flight and initiates a dummy payment gateway. After successful payment, users receive a confirmation page with booking details.

Admin-Facing Features

1. **Admin Login:** Administrators have secure access to the system, allowing them to manage essential functionalities.
2. **Password Change:** Admins can change their passwords for enhanced security.
3. **Places and Airlines Management:** Admins can manage master lists of places for source and destination, as well as a list of airlines.
4. **Flight Management:** Admins have control over flight data, including source, destination, airline, and ticket price.

Development Stack

- **IDE:** I utilized Eclipse as our integrated development environment (IDE) to streamline the coding process.
- **Programming Language:** Java was chosen as the primary programming language for web development, database interactions, and more.
- **Database:** SQL was employed to create and manage tables for admin, airlines, places, bookings and flight specific information.
- **Version Control:** Git was used for version control and collaboration among the development team.
- **Agile Framework:** The Scrum framework was adopted to enable incremental product development and timely delivery.

Development Process

Our development process consisted of multiple sprints, each with its set of goals and tasks. We followed the Agile Scrum framework to ensure incremental development and early delivery of high-quality features. Here is a brief overview:

Sprint 1: Project Setup and User Interface (Duration: 2 weeks)

Goals:

- Set up the project environment, including IDE, version control.
- Create the basic project structure and database schema.
- Implement the homepage with a search form for users to input travel details.
- Develop initial flight listing functionality to display available flights.
- Begin documentation of the project.

Tasks:

- Configure Eclipse/IntelliJ and Git.
- Design and implement the homepage and search form.
- Create database tables for places and airlines.
- Implement basic flight listing functionality.

Sprint 2: User Registration and Booking (Duration: 2 weeks)

Goals:

- Allow users to register and provide personal details.
- Integrate payment processing via a dummy payment gateway.
- Develop booking confirmation pages.
- Enhance the flight listing with sorting and filtering options.

Tasks:

- Create the user registration page and integrate validation.
- Develop booking confirmation pages with booking details.
- Integrate a dummy payment gateway for payment processing.

Sprint 3: Admin Backend and Management (Duration: 2 weeks)

Goals:

- Create an admin login system with password change functionality.
- Develop the admin dashboard for managing airlines, places, and flights.
- Enhance user input validation to handle exceptions gracefully.

Tasks:

- Design and implement the admin login page with password change functionality.
- Develop the admin dashboard for managing master lists of places and airlines.
- Create an interface for admins to manage flights (add, display).
- Enhance user input validation to prevent exceptions.

Sprint 4: Documentation and Finalization (Duration: 2 weeks)
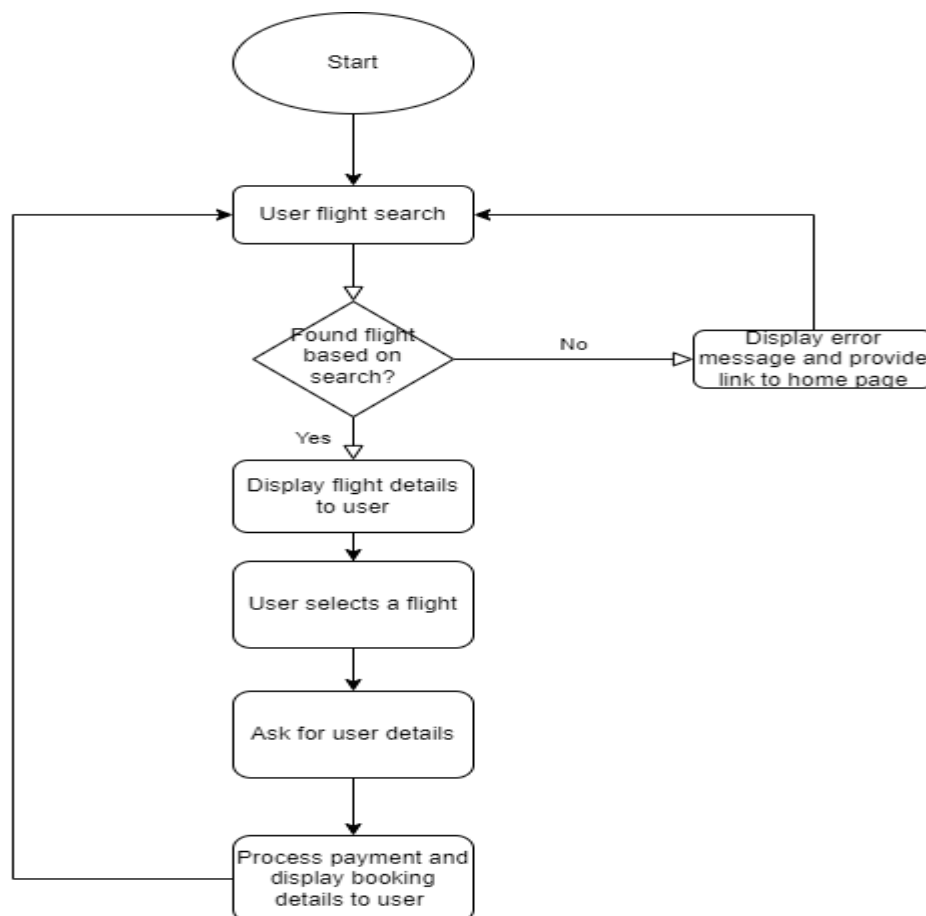
Goals:

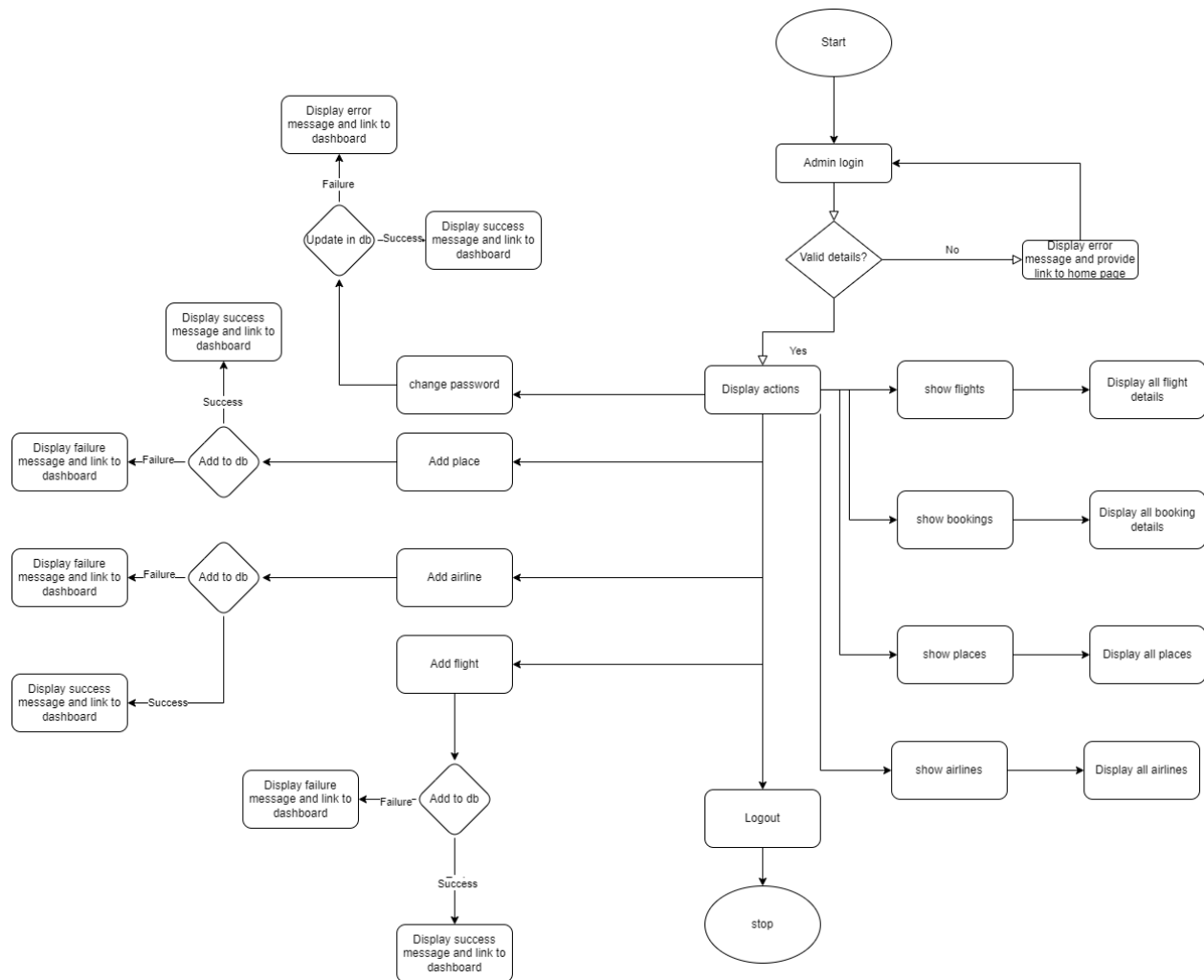- Review and finalize the project documentation.

Tasks:

- 2. Review and finalize all project documentation, including specifications and user manuals.
- Conduct comprehensive testing and address any identified issues.
- Prepare the project for release, including code cleanup and verification.
- Create a GitHub release and update the GitHub repository with the final code and documentation.
- Finalize the GitHub Portfolio with the project's screenshots and links.

Flow charts

User flow

Admin flow

Conclusion

FlyAway is a robust and user-friendly airline booking portal that meets the needs of both travelers and administrators. With a focus on agile development, performance optimization, and comprehensive documentation, I have delivered a high-quality product that is ready to serve the needs of the airline industry. For more details and to verify the project's completion, please refer to below link

GitHub Repository: https://github.com/santhoshsai4517/FlyAway