A Python Project for Academic Year 2025 - 2026

Airline Booking SYSTEM

Subject Code : 05BC3404
Subject Name : Python Programing

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SubmittedTo:
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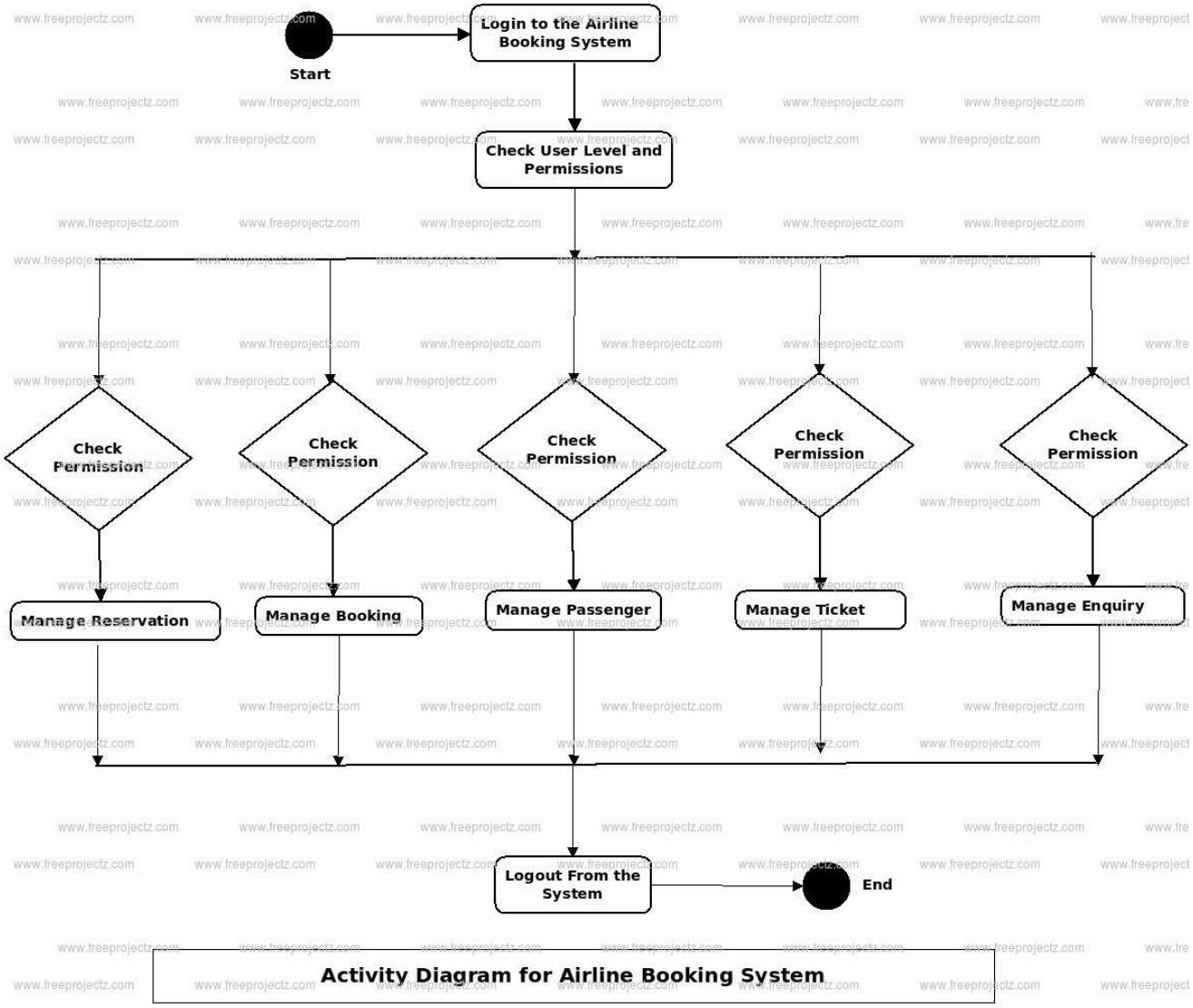
Coding Diagram



Activity Diagram for Airline Booking System

Code Explanation

1. CSV File Setup

- A CSV file (booking_data.csv) is used as the **database** to store all booking records.
- If the file doesn't exist, it initializes the file with headers like Name, Booking ID, etc.

🎨 2. Styling and Layout

- Global styling uses constants for background color, button style, and font.
- Styling is applied uniformly across widgets using setStyleSheet().

👨‍💻 3. Login Page (LoginPage)

- A simple login form with username and password fields.
- If correct credentials (vishal and 2318) are entered, the user is allowed into the admin dashboard.
- Otherwise, an error message is shown.

🛠️ 4. Admin Dashboard (AdminPage)

- Displays three buttons:
  - **Create Booking**: Goes to the booking form.
  - **Manage Bookings**: Goes to the booking manager.
  - **Logout**: Returns to login page.

📄 5. Create Booking Page (CreateBooking)

- Form with input fields for all required booking details (Name, ID, Class, etc.).

- On submission:
  - Data is validated (no empty fields).
  - Data is saved into the booking_data.csv.
  - Confirmation message is shown.

🔍 6. Manage Bookings Page (ManageBookings)

Includes the following features:

- **Search by Booking ID**: Filters and displays matching row.
- **View All**: Loads and displays all data from CSV.
- **Update**:
  - User edits a selected row directly in the table.
  - Saves the updated data back to the CSV.
- **Delete**:
  - Deletes selected booking after confirmation.
- **Sort by Cost**:
  - Sorts all records by the "Cost" column (as float).
- **Export**:
  - Backs up all booking records into a new file backup_bookings.csv.

🧭 7. Stack-Based Navigation

- QStackedWidget is used to switch between pages like:
  - Login → Admin → Create/Manage
  - This avoids opening multiple windows and gives a **single-window app experience**.

🚀 8. Main Execution

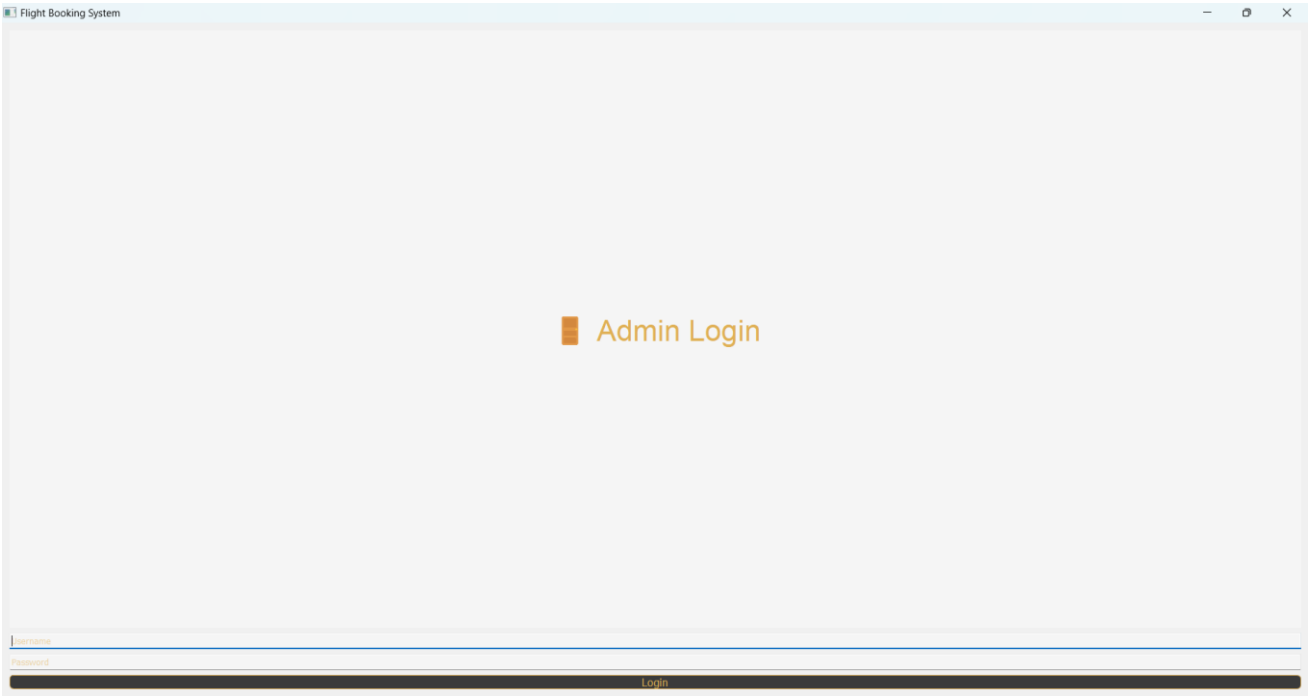
- Initializes the app, adds all widgets to the stack, shows the

main window, and starts the app loop.

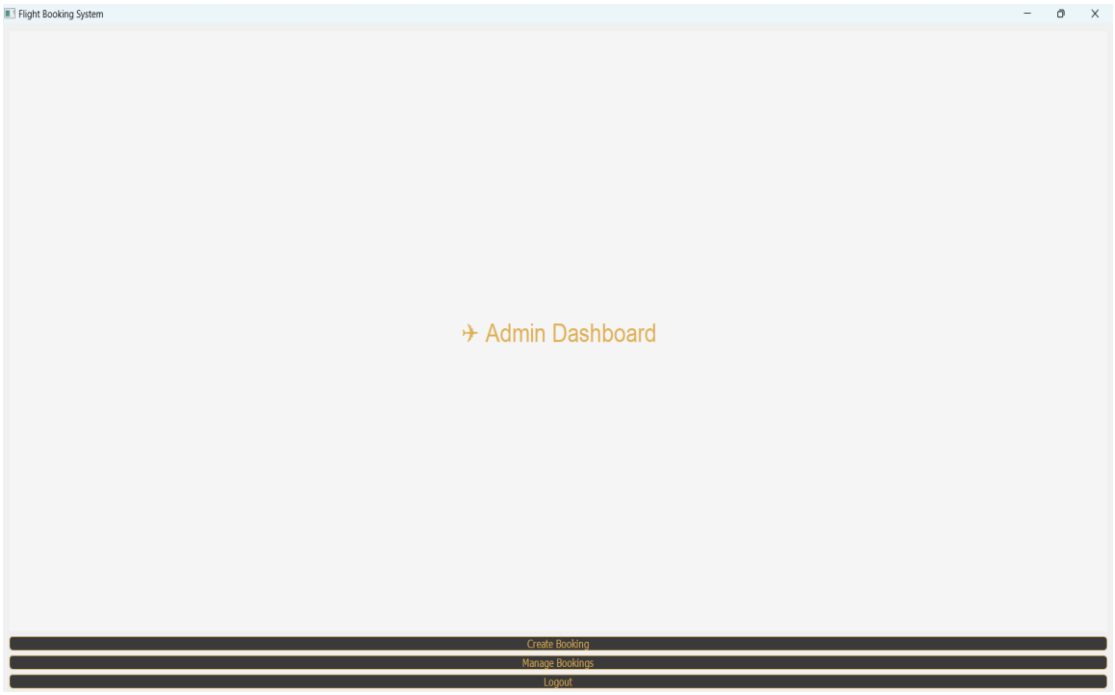
✅ Summary of Functionalities:

- Admin Login
- Booking Creation
- Data Validation
- Search/View/Update/Delete Bookings
- Sort by Cost
- Export to CSV
- Stacked page navigation in a single GUI window

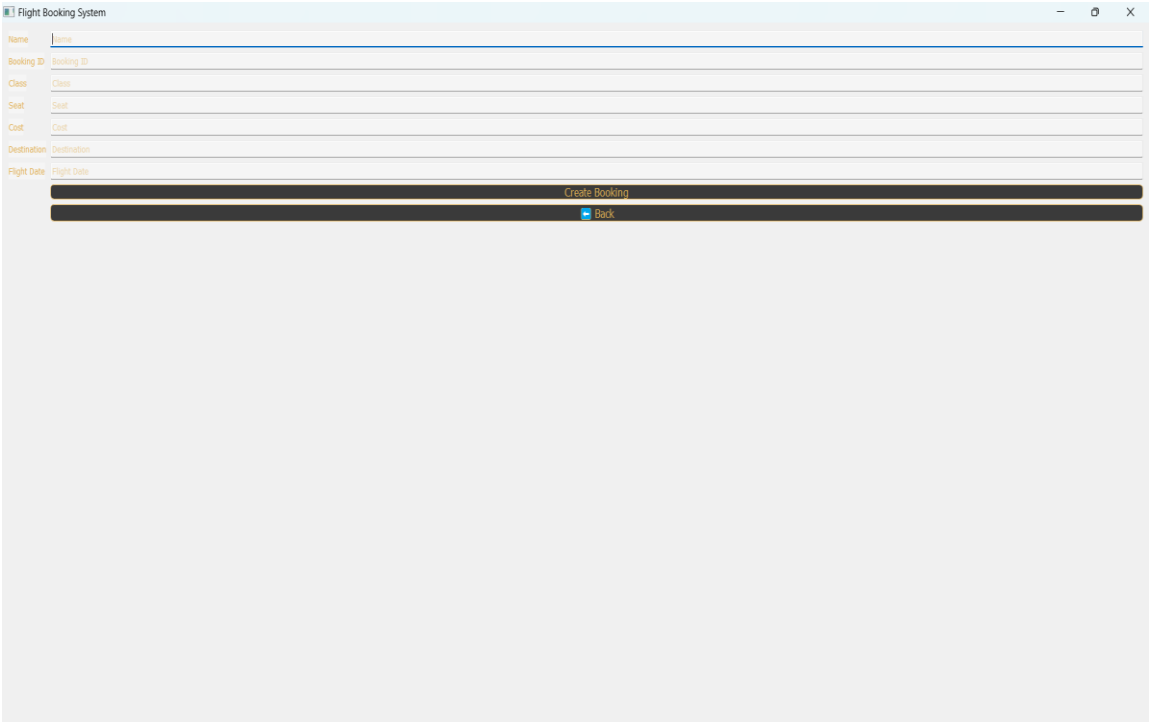
Output Photos :



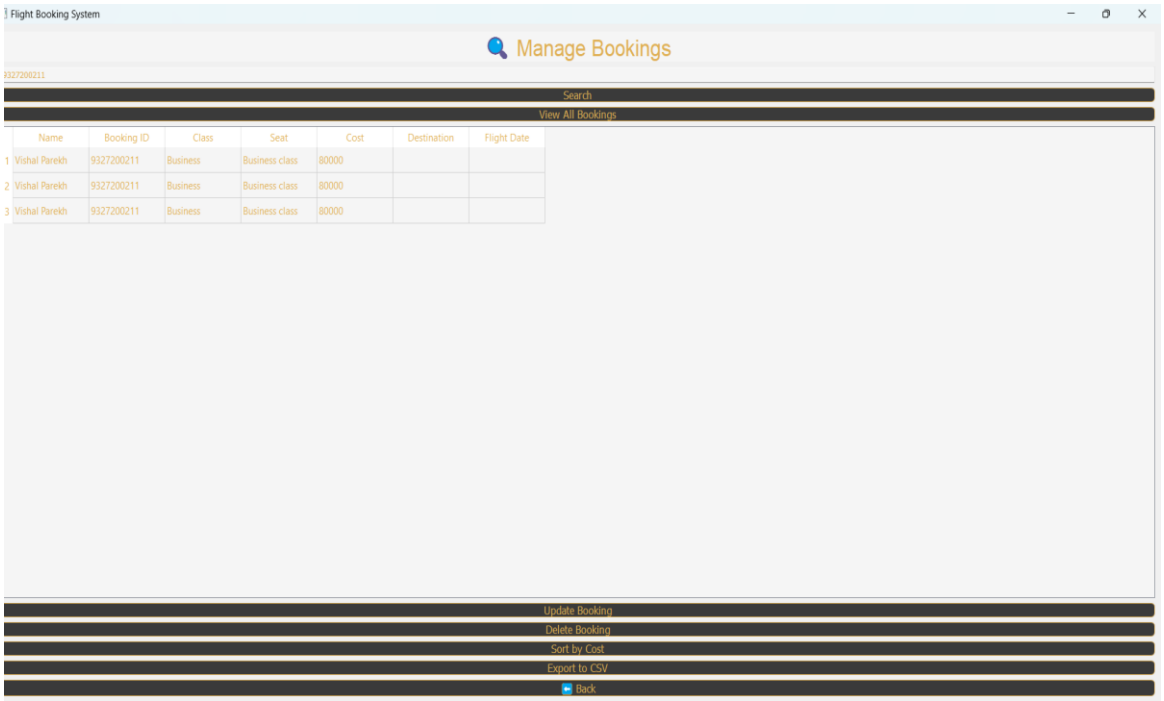
Admin login Page:



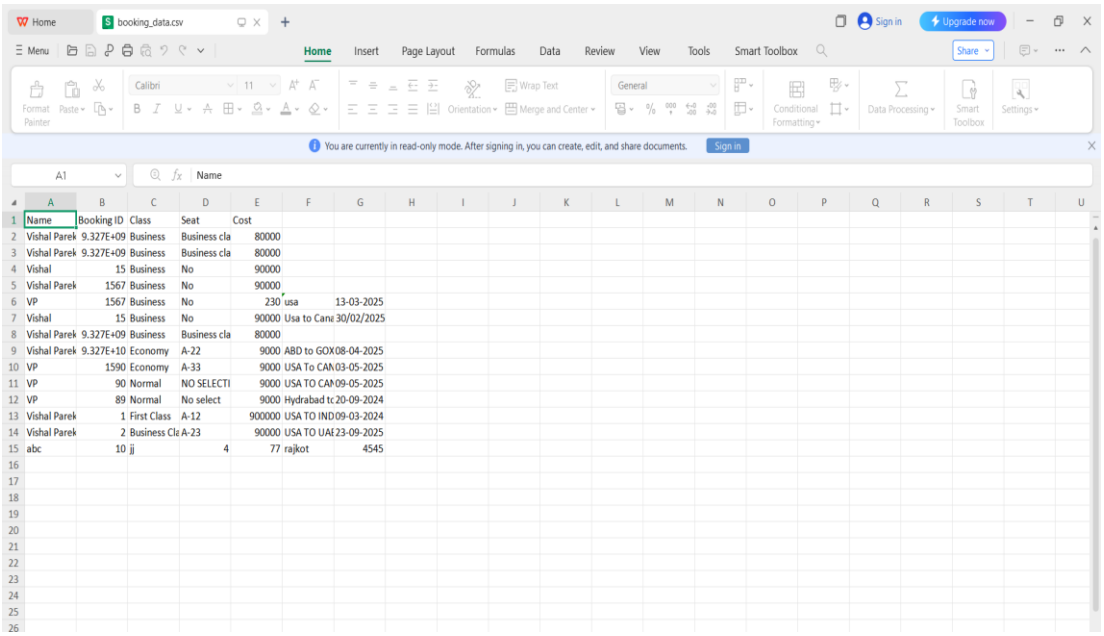
After Login Page:



Create Booking Page:



Manage Booking Page:



Name	Booking ID	Class	Seat	Cost		
Vishal Parek	9.327E+09	Business	Business cla	80000		
Vishal Parek	9.327E+09	Business	Business cla	80000		
Vishal	15	Business	No	90000		
Vishal Parek	1567	Business	No	90000		
VP	1567	Business	No	230	usa	13-03-2025
Vishal	15	Business	No	90000	Usa to Cana	30/02/2025
Vishal Parek	9.327E+09	Business	Business cla	80000		
Vishal Parek	9.327E+10	Economy	A-22	9000	ABD to GOX	08-04-2025
VP	1590	Economy	A-33	9000	USA To CAN	03-05-2025
VP	90	Normal	NO SELECTI	9000	USA TO CAN	09-05-2025
VP	89	Normal	No select	9000	Hydrabad tc	20-09-2024
Vishal Parek	1	First Class	A-12	900000	USA TO IND	09-03-2024
Vishal Parek	2	Business Cla	A-23	90000	USA TO UAE	23-09-2025
abc	10	jj	4	77	rajkot	4545

File Handling Data Store To Csv:

Conclusion :

This project, Flight Booking System, provides an admin interface to create, manage, and track flight bookings using a simple GUI built in PyQt5 and data storage in CSV.
It demonstrates the use of Python's GUI programming, file handling, and modular class-based design. The project enhances understanding of GUI event-driven programming and file I/O operations in Python.

Thank
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