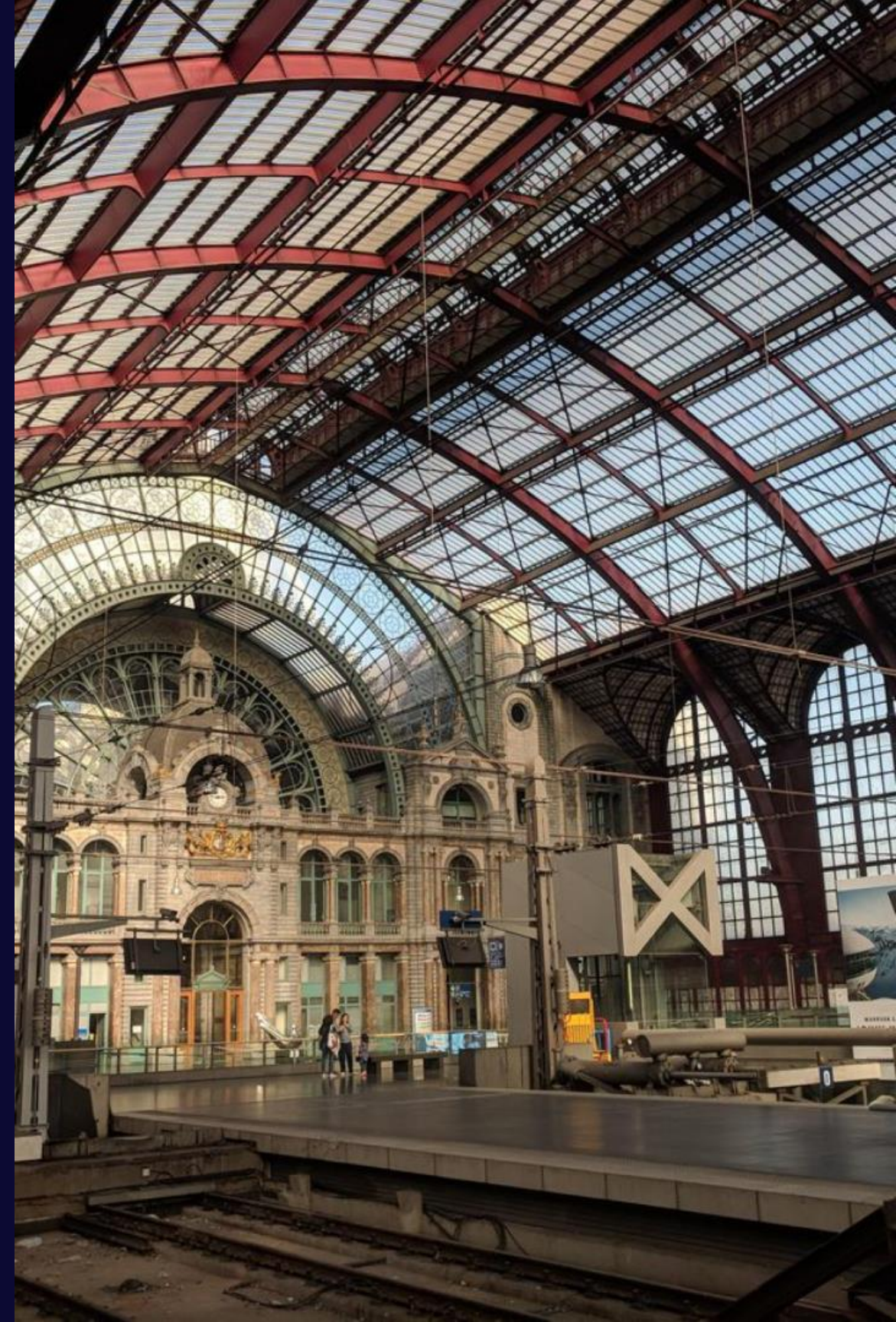# Railway Management System

By Akash

Introduction: Railway Management System

A comprehensive software solution for managing railway operations efficiently efficiently and effectively. Streamlines ticket booking, train scheduling, and and passenger management.

Explanation of the Project

An overview of the purpose and scope of the Railway Management System, System, including its key objectives and benefits for both railway authorities and authorities and passengers.

Design and Architecture

Dive into the architectural design of the Railway Management System, including including the layered structure, modular components, and data flow. Highlight Highlight the system's scalability and flexibility.

Features and Functionalities

1 **Ticket Booking**

Effortless online ticket booking with real-time availability and seat selection.

2 **Train Scheduling**

Optimized train schedules considering considering factors like like distance, station capacity, and demand. demand.

3 **Passenger Management**

Efficient management of management of passenger information, information, including including booking history and preferences. preferences.

Technologies and Tools Used

1 **C++**

The project is built using using the powerful C++ C++ programming language for its performance and object-object-oriented nature. nature.

2 **Database**

An SQL database is utilized to securely store store and manage railway-related data.

3 **UI/UX Design**

Design tools like Adobe Adobe XD are employed employed to create a user-friendly and visually appealing interface.

Libraries

<iostream>

<fstream>

<string>

<windows.h>

<conio.h>

Libraries

1 Iostream

<iostream> is a Input and output streams, used for basic input/output operations in C++.

2 fstream

<fstream> is Input and output stream class to operate on files.
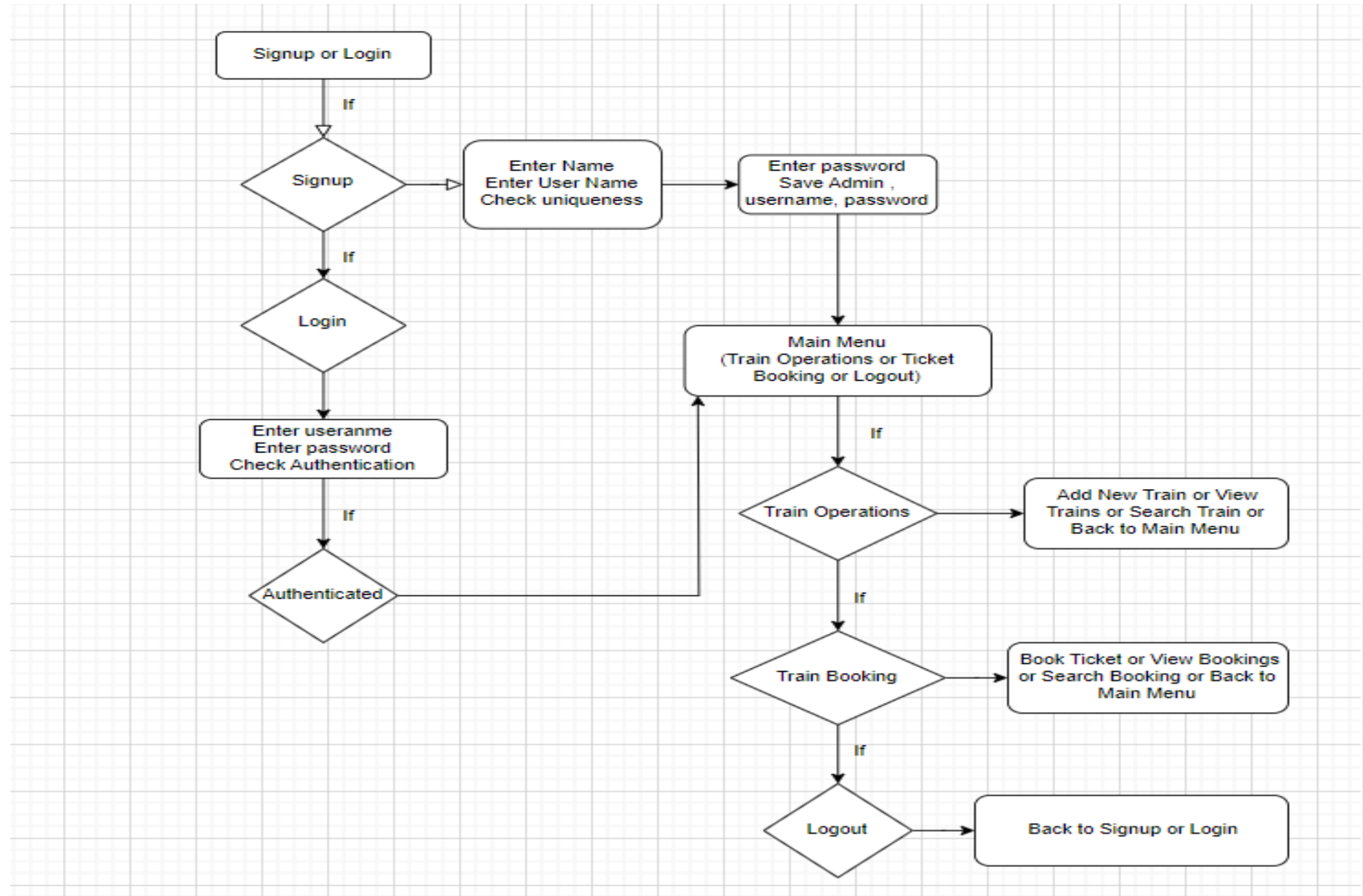
3 Window.h

A header file in the Windows API for Windows-based applications. It includes declarations for many functions used in handling windows, processes, threads.
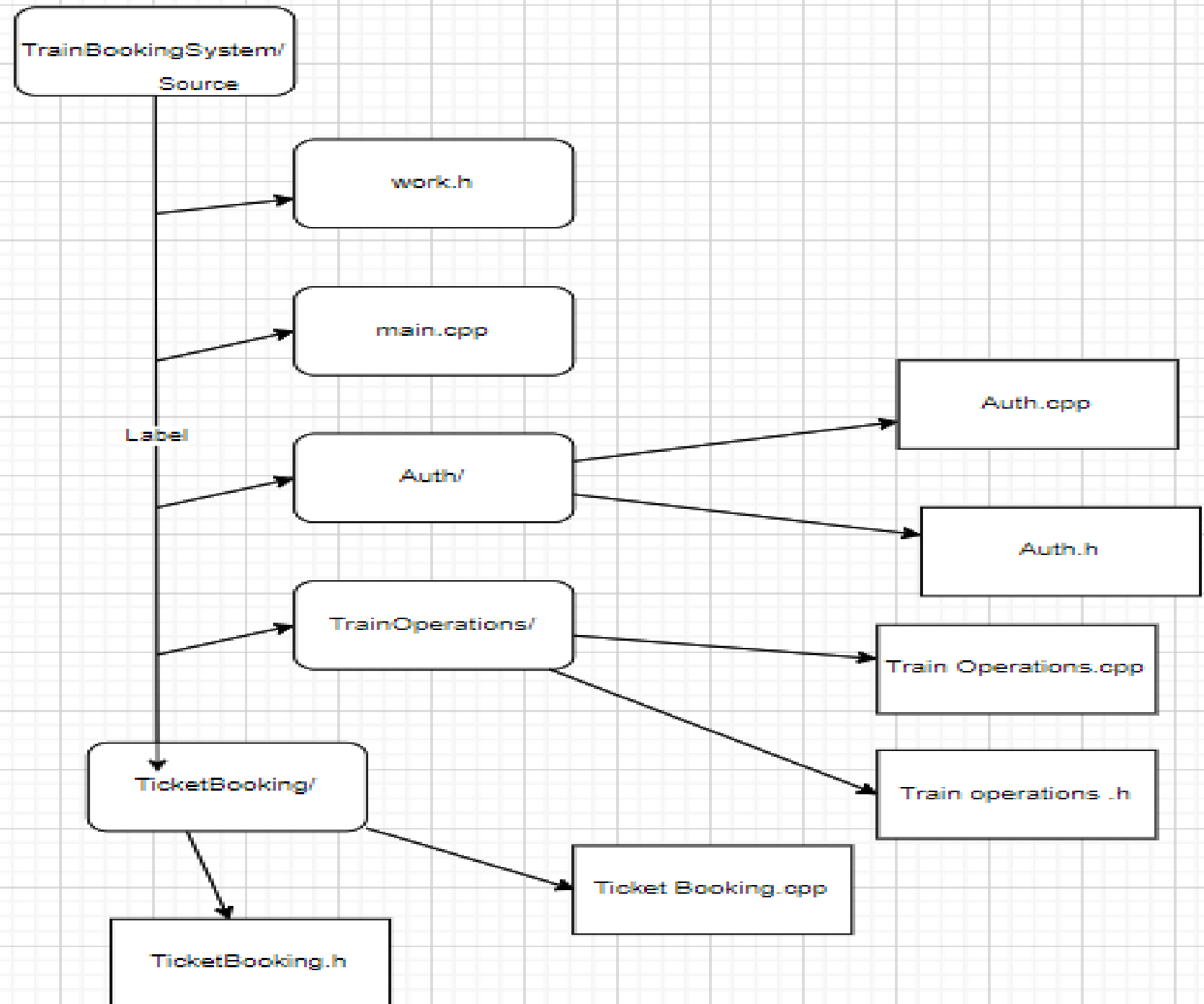
4 conio.h

A header file primarily used in old-style MS-DOS compilers to provide console input and output functions like getch() for character input.

Flow Chart

Signup or Login

If

Signup → Enter Name / Enter User Name / Check uniqueness → Enter password / Save Admin , username, password

If

Login

If

Enter useranme / Enter password / Check Authentication

If

Authenticated → Main Menu (Train Operations or Ticket Booking or Logout)

If

Train Operations → Add New Train or View Trains or Search Train or Back to Main Menu

If

Train Booking → Book Ticket or View Bookings or Search Booking or Back to Main Menu

If

Logout → Back to Signup or Login

Folder Heiarchy

GitHub Repo:

https://github.com/akash-sindhi/Railway-Management

References:

https://app.diagrams.net/

https://go.microsoft.com/fwlink/?linkid=830387