Complex Computing Problem (CCP)

Project Proposal

Group Name: “Byte Rails”

Group Members	Roll Numbers
Eshba	CT-052
Noman Khursheed	CT-093

1. Project Title

“Railway Reservation System”

1. Problem Statement

Railway ticket booking in traditional systems often involves long queues, inefficient manual handling, and lack of quick access to passenger information. Our project aims to simulate a computerized railway reservation system in C language, providing functionalities for booking, cancellation, and passenger list management.

1. Objectives

- *To implement a simple and efficient railway reservation system in C.*
- *To allow passengers to book tickets with unique IDs.*
- *To enable ticket cancellation with proper updates to the system.*
- *To manage and display a passenger list dynamically.*
- *To strengthen understanding of arrays, structures, and file handling in C.*

4. Proposed Solution

We propose developing a C-based console application that simulates a reservation system. The system will allow users to:

- *Book tickets with details like Name, Age, and Train Number.*
- *Cancel reservations by entering the passenger’s ID.*
- *View the list of passengers currently holding reservations.*
- *Ensure data integrity using arrays and file handling.*

5. Expected Outcomes

- *A working C program that simulates a real-life reservation system.*
- *Hands-on experience in applying C programming concepts.*
- *Improved problem-solving and logical thinking abilities.*
- *A user-friendly system that demonstrates efficient passenger management.*

6. Tools & Technologies

- *Programming Language: C*
- *IDE: Code::Blocks / DevC++ / VS Code*
- *Concepts: Arrays, Structures, Functions, File Handling*

7. Conclusion

This project not only simulates a real-world application but also enhances our understanding of problem-solving in C. By completing this project, we will gain practical programming skills and demonstrate how fundamental computing techniques can be applied to everyday problems.