



SECTION J

CS-112

PROJECT

P R O P O S A L

Prepared by
M.HAMDOON, BASILJOSEPH,
YAHYA KHALID, ZEESHAN

ABOUT US

M.Hamdoon-2024387

YahyaKhalidKhan-2024664

Zeeshan Naseem-2024495

Basil Joseph-2024138

Are Developing a user-friendly car rental and
buying system using core Object-Oriented
Programming principles

MEET OUR TEAM AND OUR ROLES

M.HAMDOON
Class
Designer/System
Designer

YahyaKhalid
Presentation
Head/Front
end designer

BASIL JOSEPH
BackEnd
Development
Head

ZEESHAN
Testing And
Integration
Head

OUR GOALS

1

To design and implement a user-friendly car rental and buying system using core Object-Oriented Programming principles such as inheritance, polymorphism, encapsulation, and abstraction in C++.

2

To provide a functional console-based interface that allows users to search, rent, and buy vehicles while managing vehicle inventory and maintaining data consistency through secure and modular code architecture.

PROPOSED TIMELINE





Hamdoon-will be responsible for crafting the foundational structure of the project using core object-oriented programming principles. Hamdoon will focus on abstraction by designing clean interfaces or abstract classes if needed, and provide detailed documentation or UML diagrams to guide the development team. His class structures will serve as the blueprint for the rest of the project.



Basil-will implement the core logic of the application. He will handle the functionality behind adding, removing, and searching for vehicles, as well as managing the operations for renting and buying cars. Basil will ensure that data is stored and retrieved effectively using file handling techniques to simulate a basic database. His work will be based on the class structures provided by Hamdoon, and he will collaborate closely with Yahya to provide a backend interface that the user interface can call.



Yahya-serving as the Presentation Head and Console Interface Designer, will focus on developing a smooth and user-friendly command-line interface. He will create a menu-driven UI that guides the user through all core functions such as renting a car. He will also be responsible for preparing the project presentation, which includes creating slides and explaining how the system functions to the class or evaluator.



Zesshan-he Testing and Debugging Lead, will ensure the overall functionality and reliability of the system. His work will begin with unit testing individual modules to confirm that each component works as expected. As the project comes together, he will conduct integration testing to ensure all parts — frontend, backend, and class structures — work smoothly together.