Project Name

Vehicle Rental Management System **- Group C**

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Team Members
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Problem Description

Many small vehicle rental companies, especially local car rental shops, still depend on manual paper-based records or simple spreadsheets to handle their daily operations. This manual approach often results in mistakes, such as accidentally booking the same vehicle to two different customers at the same time. Staff spend a lot of time manually checking and updating vehicle availability, which slows down the rental process. Calculating rental

fees based on the number of days and vehicle type is done by hand, leading to billing errors and customer complaints. Keeping track of past rentals and customer details is also disorganized, making it hard to find information quickly when needed. A basic computerized Vehicle Rental Management System would solve these issues by automating the key tasks. This system will make operations faster, more accurate, and easier for the rental staff to manage.

Main Objectives of the Programme

1. To automate the vehicle rental and return process
2. To maintain accurate records of vehicles, customers, and rentals
3. To ensure real-time tracking of vehicle availability
4. To calculate rental costs and track payments
5. To generate basic reports for management purposes

Main Features Of the Programme

6. Add, update, and remove vehicle records

7. Register and manage customer information

8. Rent out and return vehicles while tracking availability

9. Calculate rental costs based on duration and vehicle type

10. Store and retrieve rental history records

11. Generate simple reports for rentals and vehicles

12. Mark vehicles as available, rented, or in maintenance

Data to Be Stored in Files

- Vehicle details (vehicle ID, type, brand, availability status, rental rate)
- Customer information (customer ID, name, contact details, license number)
- Rental records (rental ID, customer ID, vehicle ID, rental date, return date, total cost)
- Payment records (payment ID, rental ID, amount paid, payment date)

Initial List of Planned Classes

- Vehicle – Stores vehicle details and availability status
- Customer – Manages customer information
- Rental – Handles rental transactions between customers and vehicles
- Payment – Manages payment details for rentals
- FileManager – Reads from and writes data to files
- MainSystem – Controls program flow and user interaction

Initial Program Flow

- User logs into the system
- User selects an action (manage vehicles, customers, or rentals)
- System checks vehicle availability
- Rental is created and stored in files
- Payment is processed and recorded
- Vehicle status is updated upon return

Facilitator Approval:

Approved ?

- ☑ ~~YES~~
- ☐ NO

Feedback: ___Good on my end please proceed!!_____
Date: _____