



St. Mary's University

Programming Fundamentals I

Car Rental System

Department: Computer Science

Section B

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Submission date: 07/10/2025

Project Overview

This is a basic Car Rental System created using C++. The program lets users see available cars, rent a car, and return a car using a simple menu that appears in the terminal/console. It is made to practice and show understanding of C++ basics like structs, arrays, loops, if statements, and functions.

Functionalities in the Program

1. Show Cars

Displays a list of cars along with their status (Available or Rented).

2. Rent Car

User enters a car ID, and if the car is available, it gets marked as rented.

3. Return Car

User enters a car ID to return a rented car, and the status changes to available.

4. Exit

Ends the program.

Code Snippet

```
#include <iostream>

using namespace std;

struct Car {
    int id;
    string name;
    bool rented;};

void showCars(Car cars[], int n) {
    for (int i = 0; i < n; i++)
        cout << "ID: " << cars[i].id << " | " << cars[i].name
            << " | " << (cars[i].rented ? "Rented" : "Available") << endl;

}

void rentCar(Car cars[], int n) {
    int id;

    cout << "Enter ID to rent: ";
    cin >> id;

    for (int i = 0; i < n; i++) {
        if (cars[i].id == id && !cars[i].rented) {
            cars[i].rented = true;

            cout << "Rented " << cars[i].name << "\n";

            return;}}

    cout << "Not available or invalid ID.\n";}
```