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Project Report: Vehicle Parking Management System

Overview:

The Vehicle Parking Management System is a console based application designed to efficiently manage the parking of vehicles within a parking facility. The system enables vehicle owners to park their vehicles in designated parking spaces and pay the required parking fee upon departure. Additionally, the system offers an administrative interface for overseeing the parking facility, which includes viewing vehicle records, adjusting parking fees, and exporting vehicle records to a file.

Features:

- Display available parking spaces
- Register new vehicles entering the parking facility
- Process vehicles leaving the parking facility
- Validate admin login credentials
- Access vehicle records
- View the total number of parked vehicles
- Calculate the total revenue collected
- Adjust parking fees
- Export vehicle records to a file

Implementation:

The Vehicle Parking Management System is developed using the C++ programming language. The system consists of several classes, including `Vehicle`, `ParkingLot`, `Owner`, and `Admin`.

The `Vehicle` class represents an individual vehicle and contains attributes such as the owner's ID, car registration number, assigned parking slot, unique key code, and parking status. The `ParkingLot` class represents the parking facility and contains an array of `Vehicle` objects, as well as attributes like the number of floors, the number of slots per floor, and the parking fee per slot. The `Owner` class represents a vehicle owner and includes functions for adding and removing vehicles from the parking facility. The `Admin` class represents an administrator and contains functions for managing the parking facility.

The system employs a `while` loop to continuously display a menu of options to the user and prompt them for their selection. Users can choose options such as viewing available parking spaces, registering a new vehicle entering the parking

facility, processing a vehicle leaving the parking facility, and accessing the administrative interface. The administrative interface allows users to view vehicle records, adjust parking fees, and export vehicle records to a file.

The Vehicle Parking Management System is a valuable software application for effectively managing vehicle parking within a parking facility. The system offers a user-friendly interface for vehicle owners to park their vehicles and pay the appropriate parking fee upon departure. The administrative interface enables parking facility managers to oversee the facility efficiently. The system is implemented using the C++ programming language and utilizes several classes to represent vehicles, parking facilities, owners, and administrators.

To login Into Administration System You must Enter following Correct details.

Administration Logic Details

Admin Id: **admin**
Admin Password: **123**