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Course: Object-oriented programming (Part 1)
Assignment: Parking Space Management using Java

Introduction:
This project was developed as part of the course Object-Oriented Programming. The main subject of the assignment is Parking Space Management, where the goal is to design and implement an application that manages a parking lot, its vehicles, and its drivers through an object-oriented approach in Java.

For the Parking Space Management assignment, I implemented the following:

Basic classes:
a. Driver – to store driver information with the attributes given in the assignment description.
b. Vehicle and subclasses Car, Motorcycle, Truck using inheritance.
c. ParkingArea – for modeling the parking spots.
d. Parking – for recording the parking sessions.
e. ParkingLot – as the central logic manager of the application, implementing the four main functions described in the assignment.

Main functionality (menu for the user):
a. Parking a vehicle, with automatic allocation of suitable spots.
b. Vehicle departure, with spot release and display of a billing receipt.
c. Search of parking history:
i. By driver (based on phone number).
ii. By vehicle (based on license plate).
d. Display of availability and status of spots by type (normal/electric).
e. Saving the current state into a .txt file.

Technical features:
a. Used ArrayList for managing spots, drivers, vehicles, and parking sessions.
b. Used LocalDateTime for timestamps.
c. Used Scanner and try-catch for handling user input and managing invalid entries.