

## Generate Project Instruction

Based on the attached sample code, write instruction for a project about simulating the parking system.

There should be several things covered in the instruction file:

1. General rules for the parking system and the simulation of it. For example, the number of parking spaces of the parking lot, the chance of a police officer checking parked cars, the duration of simulation, and so on.
2. Instruction for each of the five classes, including ParkedCar class, ParkingMeter class, PoliceOfficer class, ParkingTicket class, and ParkingSimulation class:  
The names of the data members of each class, the description about them, and their initial value if necessary.  
The names of the member methods of each class and the description about them, like what should be passed in as arguments, what should be returned, and what should be done within the methods.

You could also provide some additional information about the project besides the things listed above if you think is helpful to better explain the project.