**LLD Parking Lot**

* Requirements:-

1. There should be multiple floors.
2. There should be multiple entry and exit gates.
3. Entry gates should process parking ticket.
4. Exit gate should process payments on hourly basis.
5. Parking lot should facilitate parking for different types of vehicles
6. There should be boards at different floors indicating vacant spots on the floor.

| **Class** | **Attributes** | **Methods** | **Description** |
| --- | --- | --- | --- |
| ParkingLot | > parkingFloors  > entrance  > exit | > isParkingSpaceAvailable | This class gives a vital info for initializing an object and methods as per requirements. |
| ParkingFloor | > levelId  > isFull  > parkingSpace  > displayBoard |  | Will identity each floor with a unique ID and also providing info about available parking space for diff types of vehicles and a board on each floor indicating vacant space. |
| Gate | > gateId |  | The obj created of the gate class will have a unique gate id assigned to it. |
| Entrance  (Base class Gate) |  | > getParkingTicket(vehicle) | Record the gate id from which the entry was made as well as create a parking ticket which will include gate\_id from base class. |
| Exit  (Base class Gate) |  | > payForTicket(ticket,veh) | Create a parking bill amount depending on hourly basis and will contain gate\_id (exit) from base Gate class. |
| DisplayBoard | > freeSpots | > updateFreeSpots | On each floor it will contain attribute freeSpots indicating free spots available on each floor and a method updateFreeSpots to update dynamically the free spots as per entry and exit of vehicles. |