

Parking Lot, Low Level Design | Amazon SDE2

Design interview question | Design Parking Lot

Rough Flow:-

VEICHLE TICKET ENTRANCE GATE PARKING SPOT EXIT VEICHLE OUT

Requirement Classification

- Parking spot should be nearest to entrance gate.
- How many Enntrance?
 - ENTRANCE 1
 - ENTRANCE 2 EXIT
- Payment Stratgey
 - Hourly Based charge
 - Minute Based Charged
 - MIX It can be both. [need confirm with interviewer]
- FloorsParking Floors.

Objects

- Vechile
 - Veichle No.
 - Veichle Type **ENUM** [2 WHEELER, 4 WHEELER]
- Ticket Entry Time , Parking SPOT
- Entrance Gate find parking space, update parking space Generate Ticket
- Parking SpotDifferent types of spot
 - TWO WHEELER
 - FOUR WHEELER
 - id,isEmpty, Veichle, Price, Type
 - Implement Nearest Parking slot to the specific entrance gate [we can maintain min heap for every entrance gate]

BUT IN future it is extendable for 6 wheeler and 10 wheeler

- Exit Gate

- cost calculation,
- Payment
- Update Parking Spot

2 Apporaches

- Top -to -Bottom
- Bottom -to -UP

Let's Go With Bottom UP Apporach

