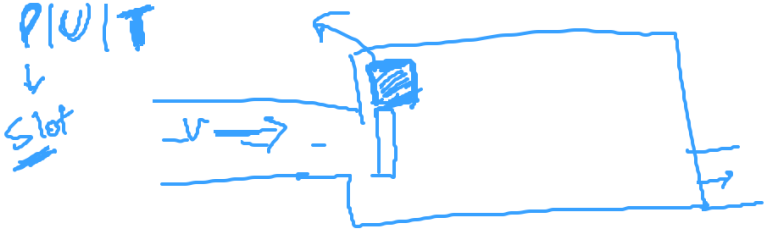
## Problem Statement

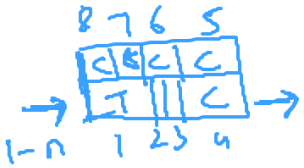
A parking lot is an area where cars can be parked for a certain amount of time. A parking lot can have multiple floors with each floor having a different number of slots and each slot being suitable for different types of vehicles. For this problem, we have to design the next generation parking lot system which can manage a parking lot without any human intervention.




### Requirements :

- The functions that the parking lot system can do:
  - Create the parking lot.
  - Add floors to the parking lot.
  - Add a parking lot slot to any of the floors.
  - Given a vehicle, it finds the first available slot, books it, creates a ticket, parks the vehicle, and finally returns the ticket.
  - Unparks a vehicle given the ticket id.
  - Displays the number of free slots per floor for a specific vehicle type.
  - Displays all the free slots per floor for a specific vehicle type.
  - Displays all the occupied slots per floor for a specific vehicle type.
- Details about the Vehicles:
  - Every vehicle will have a type, registration number, and color.
  - Different Types of Vehicles:
    - Car
    - Bike
    - Truck

- Details about the Parking Slots:
  - Each type of slot can park a specific type of vehicle.
  - No other vehicle should be allowed by the system.
  - Finding the first available slot should be based on:
    - The slot should be of the same type as the vehicle.
    - The slot should be on the lowest possible floor in the parking lot.
    - The slot should have the lowest possible slot number on the floor.
  - Numbered serially from 1 to n for each floor where n is the number of parking slots on that floor.




- Details about the Parking Lot Floors:
  - Numbered serially from 1 to n where n is the number of floors.
  - Might contain one or more parking lot slots of different types.
  - We will assume that the first slot on each floor will be for a truck, the next 2 for bikes, and all the other slots for cars.
- Details about the Tickets:
  - The ticket id would be of the following format:<parking_lot_id>_<floor_no>_<slot_no>Example: PR1234_2_5 (denotes 5th slot of 2nd floor of parking lot PR1234)
- We can assume that there will only be 1 parking lot. The ID of that parking lot is PR1234.

# Parking Lot

1. 

4+ Cars, Trucks,

2+ Bikes, Scooty.

2. Malls, Airports, Busy Markets

A

B

C

D

3. Interview
   - Parking Lot System
   - Demand → Assume
   - Thought Process.