Note:
Please use this doc to note down your discussions and ideas related to case study. This doc will be used during the evaluation along with the source code.
After deciding all the things related to case study, clearly mention the contribution from each team member.

Team Members Name:
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Few things that you **can** note here:
How to design the system?
How many classes do we need?
Any new things we might have to learn while developing the system?
Who is doing what work?
What things are we adding that are not mentioned in the case study instructions?
What type of variables, function might we need to use?
What is the final design of the system (agreed by all)? (you can boxes and show the connections between them)

ParkingLot System:

CLASSES : {ENCAPSULATION}

1. **Floors**
2. **Details**
   {Nested classes of Details class:
   (i)EnterDetails
   (ii)ExitDetails}
3. **Payment** **{METHOD OVERRIDING}**
4. **Vehicle**
   {Classes extending Vehicle: **{POLYMORPHISM}**
   - **(i) Truck**
   - **(ii) MiniTruck**
   - **(iii) Cars**
   - **(iv) ElectricCars**
   - **(v) Handicapped**
   - **(vi) TwoWheeler**
   - **(vii) ElectricScooters }**

   }
5. **Main**

ASSUMPTIONS MADE FOR THE CAPACITY IN EACH FLOOR FOR VARIOUS VEHICLES:

S.NO	FLOOR	NO.OF TRUCKS	NO.OF MINI TRUCKS	NO. OF CARS	NO.OF ELECTRIC CARS	NO.OF TWO WHEELERS	NO.OF HANDICAPPED VEHICLES	NO.OF ELECTRIC SCOOTERS
1	GROUND FLOOR	5	-	-	-	-	5	-
2	FIRST FLOOR	-	5	3	1	5	-	2
3	SECOND FLOOR	-	1	6	3	8	-	2
4	THIRD FLOOR	-	-	6	3	10	-	2
5	FOURTH FL0OR	-	-	6	3	10	-	2
TOTAL		5	6	21	10	33	5	8

Total Parking spaces = 88

ASSUMPTIONS MADE FOR THE CHARGES PER HOUR FOR VARIOUS VEHICLES:

S.NO	Vehicle Type	Price per hour (in ₹)	Price per hour (in $)	Price per hour (in €)
1	Truck	80	1.08	0.92
2	Mini Truck	60	0.81	0.69
3	Cars	60	0.81	0.69
4	Electric Cars	70	0.94	0.81
5	Two Wheelers	20	0.27	0.23
6	Handicapped Vehicles	20	0.27	0.23
7	Electric Scooters	30	0.40	0.35

ENTRY DETAILS:

The person who enters the parking lot gets the display to see the vacancies of the lot.If there are vacancies the person has to fill in the details and the system will give a ticket to enter.people owning trucks or minitrucks have to go through one entry and people owning cars,electric cars,two wheelers,handicapped vehicles or electric scooters have to go through another entry.

VARIABLES:

We need to use the following type of variables

{
String-name,ContactNumber,carnum,
vehicleTypes,a,b,c,e,f,h,j,r

int-i,j,n,TN
double-i,j
Bool-0
long-hrs,mins,payment
}

METHODS:

We need to use the following types of methods

{In built methods-Chronounit,add(),size(),
equals(),println()
User defined methods-truck,minitruck,cars,
electricars(),twowheelers(),
Payment(),main().
}

Payment:
It is done by card/cash.

EXIT DETAILS:
If the person pays the fee at the portal he/she can leave the exit without paying at the exit.The person has to show his parking ticket and pay the parking fee according to the time Customer vehicle stayed in the lot.We have two exit gates one gate for Trucks and MiniTrucks and another exit gate is for rest of the vehicles.

Who is doing what work?

Sidhant : Payment class ,Encapsulation
Saranya : Array list, Boolean
Avinash : Polymorphism
Nithin : Method overloading