**TASK: PYTHON: OOPS**

**(Completion Time: 1 Day)**

**\*\* Should cover classes and Oops, collections concepts**

Ref:

1. <https://www.pythontutorial.net/python-oop/> for oop concepts

2. <https://realpython.com/python-application-layouts/> for python application layout.

1. Follow Python Application Layout to impliment
2. Define vehicle
3. Milage
4. Name
5. Capacity
6. Width
7. Depth
8. Number
9. Manufacturer
10. Define Vehicles like Bus , Car, Bike
11. Define a Lot with
12. Width
13. Depth
14. Number
15. Series (A/B/C/D)
16. Status (Free/Occupied)
17. InTime
18. Parking Lot Functionality
19. Define Series of parking Lots with where each series consists (60% Cars, 30% Bikes, 10% Busses)
20. One Can assign a lot depending upon the vehicle size and allocation Time
21. Define functionality of random Vehicle exit and lot deallocation
22. Define functionality of lot allocation based on availability of lots
23. Define a charge calculation based on time parked first hour 20, next 1 -10 hour onwards a charge of 10 rs, above 10 hr onwards a charge 5 rs per hour.
24. If time exceeds more than 30 minutes of an hour, a full charge will be collected of that hour.

5. Wrtie few test cases to check the implimented functionality like creating series,lots,allocation, deallocation, random allocation/de-allocation, fare calculations etc