Parking Lot

Overview: This repository gives an overview of how we can design a basic parking lot in Python. It creates parking lot with given number of slots. The cars follow Greedy approach while being parked in the slots.

File Structure: I have divided my project into three modules:

1. **main.py =** Main File (**The file which you have to Run**)
2. **Classes.py =** The file where I declare and define my class and its member function.
3. **Function.py** = The file where I declare and define non-member function.

Input and Output: index.py can be run through shell or through file containing test cases. I did with file handling, in file **input.txt** all the test cases are there. You just need to run **main.py**,the desired output will be display in your screen. You can change input.txt according to your requirement.

Desired functionality: index.py script defines the following functions -

1. **create_parking_lot n** - Given n number of slots, create a parking lot

2. **park car_regno car color** - Parks a vehicle with given registration number and color in the nearest empty slot possible. If there are no more empty slots available, it shows a message "Sorry, parking lot is full".

3. **status** - Prints the slot number, registration number and color of the parked vehicles.

4. **leave x** - Removes vehicle from slot number x

5. There are few query functions to retrieve slot number from registration number of cars, get registration numbers of cars with particular color etc.
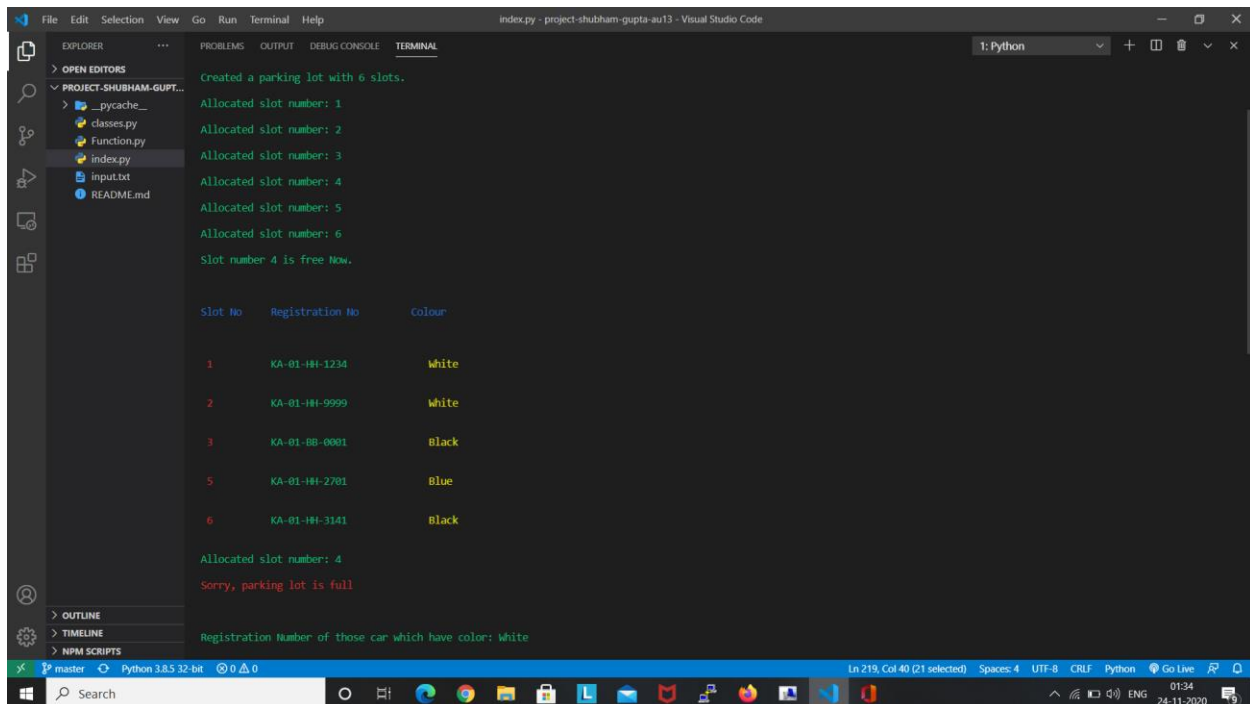
Additional Functionality:

1. Modify slot - I have added a feature by which you can extend the number of parking slot if you required at any instance of program. To perform this, you will have to add a command in input file. (**modify 10**). This will add 10 more new slot.

2. Free slot - I have added a feature by which You can check the available slot. To perform this you will have to add a command in input file.(**display_avaiable_slot**).This will show all f ree slot.

3. **Global Available:** With the help **pypi** I converted my whole program into Package and uploaded into pypi global repo. So now anyone in world can use my project by just installing My project as a package in his machine**.**

Command for installing my package is: **pip install parking-lot**

Note: parking-lot is a package name here

Output Screen:

Registration Number of those car which have color: White

KA-01-HH-1234
KA-01-HH-9999
KA-01-P-333

slots Number of car which have color: White

1
2
4

Slots Number of those car which have Registration_number : KA-01-HH-3141

6

Slots Number of those car which have Registration_number : MH-04-AY-1111

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Thank U ..Happy Coding!!!

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