

Parking Lot System

To create a parking lot that can hold up to 'n' cars at any given point in time. Each slot is given a number starting at 1 increasing with increasing distance from the entry point in steps of one and to create an automated ticketing system that allows customers to use parking lot without human intervention.

The ticket issuing process includes us documenting the registration number of the vehicle and the color of the car and allocating an available parking slot to the car.

This project also creates features such as getting the:

- * Registration numbers of all cars of a particular color.
- * Slot number in which a car with a given registration number is parked.
- * Slot numbers of all slots where a car of a particular color is parked.

Dependencies:

You just need Python. Visit the link <https://www.python.org/downloads/> to install Python.

Usage:

ParkingLot.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.

Output:

```
Microsoft Windows [Version 6.1.7601]
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C:\Users\desktop\Desktop\Project2>C:/Users/desktop/AppData/Local/Programs/Python
/Python38-32/python.exe c:/Users/desktop/Desktop/Project2/ParkingLot/ParkingLot.
py
$ create_parking_lot 6
Created a parking lot with 6 slots
$ park KA-01-HH-1234 White
Allocated slot number: 1
$ park KA-01-HH-9999 White
Allocated slot number: 2
$ park KA-01-BB-0001 Black
Allocated slot number: 3
$ park KA-01-HH-7777 Red
Allocated slot number: 4
$ park KA-01-HH-2701 Blue
Allocated slot number: 5
$ park KA-01-HH-3141 Black
Allocated slot number: 6
$ leave 4
Slot number 4 is free
$ status
Slot No.      Registration No.      Colour
1             KA-01-HH-1234         White
2             KA-01-HH-9999         White
3             KA-01-BB-0001         Black
5             KA-01-HH-2701         Blue
6             KA-01-HH-3141         Black
$ park KA-01-P-333 White
Allocated slot number: 4
$ park DL-12-AA-9999 White
Sorry, parking lot is full
$ registration_numbers_for_cars_with_colour White
KA-01-HH-1234, KA-01-HH-9999, KA-01-P-333
$ slot_number_for_registration_number KA-01-HH-3141
6
$ slot_number_for_registration_number MH-04-AY-1111
Not found
$
```