Assignment #2

This assignment is about effective use of data structures that might leads to make a prototype of your daily life problems. This work comprises of two parts:

Part 1

There has been involvement of ADT like Stack and Queue in our daily life. Your task is to find the application of stack/queue in our daily life and provide following things:

- One page description
- Algorithmic Approach
- Preferable Structure (Static/Dynamic)
- Feasibility

You have to provide concise details against each section and avoid **Plagiarism.**

Part 2

Suppose there is a *Car Parking Garage* that asked you to write a program about their car parking garage. This garage has three floors A, B and C each floor has capacity of parking 10 cars. Each floor has been associated with one type of cars as described below and each type of car has same specifications and condition in first level of assignment:

Civic: A
City: B
Accord: C

Your assignment must contain followings:

Explanation:

Three floors should base on Queue/Stack. You have to write a class that contains three queues/stacks that might represent three floors. Whenever user came to park his/her car, your program should ask user about the type of car and car should be parked in the associated floor if there is empty space available. On wrong entry of model your program should display some message and asked user to enter type again.

First Level:

1) Your program should display the status of floors every time a car will be parked.
2) Whenever a car will be parked it must be placed while following the rules of Queue.
3) Whenever user wants his/her car back you should follow the rules of queue/stack.
4) Your program should exit when users wants.

All the work must be done in object oriented approach.

Important Note

- Two persons working independently on same assignment can never write same things.
- Assignment must be submitted in soft form before 28th of October 11:30am sharp.
- No queries will be entertained in any case after provided deadline.
- Copying and cheating will lead towards straight zero marks or more.
- Plagiarism is a curse avoids it.
- Part 1 should be submitted in hard form and part 2 will be submitted as single file with name as your registration number, like if your registration number is BSE-B3-222 your file must name like bse_b3_222.cpp.

Good Luck ☺