Section: B **Quiz 4** **Roll number:** _____

Q1. An Automobile company has multiple types of automobiles, they are categorized in 'sedan', 'suv' and 'cross over'. In one category there could be several different types of cars. Each category has a different percentage of margin the company wants to calculate the total profit margin in each category. You have been given a car struct with its attributes. You need to create a Vehicles struct in which there would be 20 different types of cars.

```
struct Car {
    string car_name;
    string category;
    String color;
    Int quantity;
    float cost_price;
    float percentage_margin;
};
```

You need to code only for following questions:

a) ***Create Vehicles struct with parameterized constructor and destructor. Vehicles would have 20 cars.***
b) ***Assume that there exists 20 cars with different categories. You need to create a function named calcMargin for Vehicles struct whose parameter would be category and it returns the total profit margin after calculating for all the cars in that category.***

a)
```
struct Vehicles{
    Car car[20];

Vehicle (string name, string catag, string colour,
    int quantity, float cost_price, float
    percentage);
    ---
}

~Vehicle(){}
```

b)
```
};
float calcMargin( cost string& category){
    float total = 0.0;
for (int i=0; i < 20; i++){
    if (cars[i].category == category){
total += car[i].cost_price*(cars[i].percentage/100)*
    car[i].quantity;
} }
    return total; }
```