Assignments 1

Question 1: Implement in C++ a program that will instantiate two automobile objects, allowing them to change it's speed and direction. Both automobile objects, their class declarations to say, auto1 and auto2, should have different characteristics. For example, auto1 could have air conditioner and auto2 could have no air conditioner, auto1 could be red color and auto2 could be blue. Please limit common features to minimum required, 6 at max, such as number of wheels, steering wheel and headlights. Differentiating characteristics should be, 2 or 3 at the max.

```
#include<iostream>
using namespace std;
class autov
{
   public:
   int conditioner;
   string color;
   int no_wheel;
   int Steering_wheel;
   int headlight;
   int no_seet;
   int side_light;

};
class auto1: public autov
{
   public:

   void data()
   {
      cout<<"Enter the detail of auto1:"<<endl<<endl;
      cout<<"Enter the detail for conditioner if give 0 than the conditioner will not
available otherwise available..:";
      cin>>conditioner;
      cout<<"Enter the color:";
      cin>>color;
      cout<<"Enter the number of wheels:";
      cin>>no_wheel;
      cout<<"Enter the steering wheels:";
      cin>>Steering_wheel;
```

```
      cout<<"Enter the number of  headlights:";
      cin>>headlight;
      cout<<"Enter the number of seats:";
      cin>>no_seet;
      cout<<"Enter the side lights if 0 then side light is not available otherwise available:";
      cin>>side_light;
   }
   void showdata()
   {
      if(conditioner==0)
      {
            cout<<"The conditioner is not available..";
      }
      else{   cout<<"The conditioner is available";}

      cout<<"The Color Is:"<<color<<endl;
      cout<<" The Number Of Wheels is:"<<no_wheel<<endl;
      cout<<" The Steering Wheels Is:"<<Steering_wheel<<endl;
      cout<<" The Headlight is:"<<headlight<<endl;
      cout<<" The Number Of Seat Is:"<<no_seet<<endl;
     if(side_light==0)
      {
            cout<<"The side light is not available..";
      }
      else{     cout<<" The Number Of Side light's:"<<side_light<<endl;}

   }

};
class auto2: public autov
{
   public:
    void data()
   {
      cout<<"Enter the detail of auto2:"<<endl<<endl;
      cout<<"Enter the detail for conditioner if give 0 than the conditioner will not
available otherwise available..:";
      cin>>conditioner;
      cout<<"Enter the color:";
      cin>>color;
      cout<<"Enter the number of wheels:";
```

```
        cin>>no_wheel;
        cout<<"Enter the steering wheels:";
        cin>>Steering_wheel;
        cout<<"Enter the number of  headlights:";
        cin>>headlight;
        cout<<"Enter the number of seats:";
        cin>>no_seet;
        cout<<"Enter the side lights:";
        cin>>side_light;
    }
     void show1()
    {
        if(conditioner==0)
        {
              cout<<"The conditioner is not available..";
        }
        else{   cout<<"The conditioner is available";}
        cout<<"The Color Is:"<<color;
        cout<<"\nThe Number Of Wheel:"<<no_wheel;
        cout<<"\nThe Steering Wheel:"<<Steering_wheel;
         cout<<"\nThe Headlight is:"<<headlight;
        cout<<"\nThe Number Of Seat Is:"<<no_seet;
        if(side_light==0)
        {
              cout<<"The side light is not available..";
        }
        else{     cout<<" The Number Of Side light's:"<<side_light<<endl;}

    }
};
int main()
{
    auto1 A;
     auto2 B;
    A.data();
     B.data();

    A.showdata();
   B.show1();

}
```

Question 2: Describe what is UML? Please give definition.

UML (Unified modeling language) is a standerzed notation for the modeling of real-word object as a first step in developing an object-oriented design methodology.

Question 3: Describe what is Software Engineering?

Software Engineering is the application of a systematic, disciplined, quantifiable approach to, the development, operation and maintenance of software that is, the application of engineering to software.