**Question 1:** Implement in C++ a program that will instantiate two automobile objects, allowing them to change its 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?

Answer:

The UML Stands for Unified Modeling Language .It is describe the design and analysis of the software .When we are developing software so We are Using UML Because It describe , visualizing and constructing the document ,So we can easily understand how to develop the software and what is the flow of software .example like class diagram , model's etc.

**Question 3:** Describe what is Software Engineering?

Answer:

A software engineering is a field of an engineering. In this filed we are developing, implementing, and after implementing we are testing of product. And then we are maintaining the product.