Sukuna Multiple Campus

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Subject: OOP with C++

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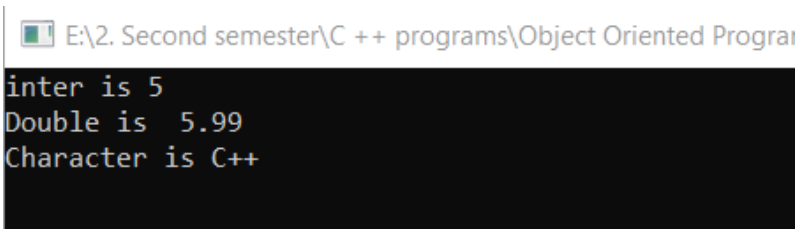
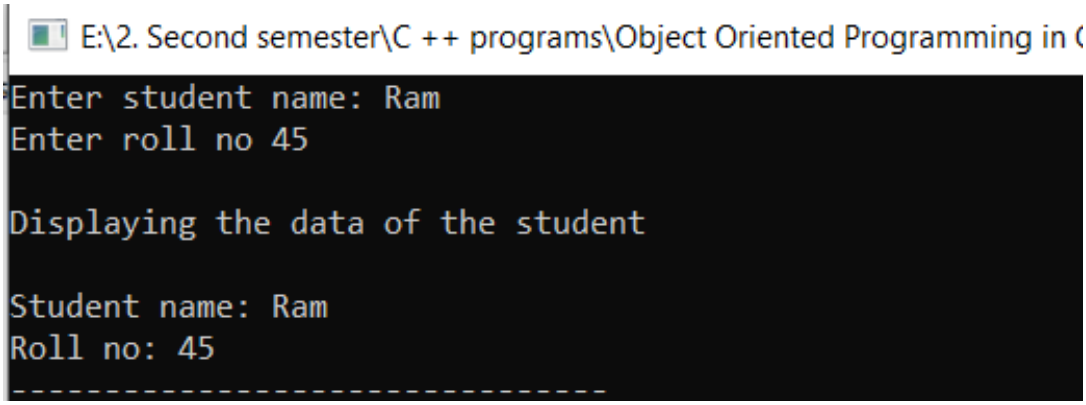
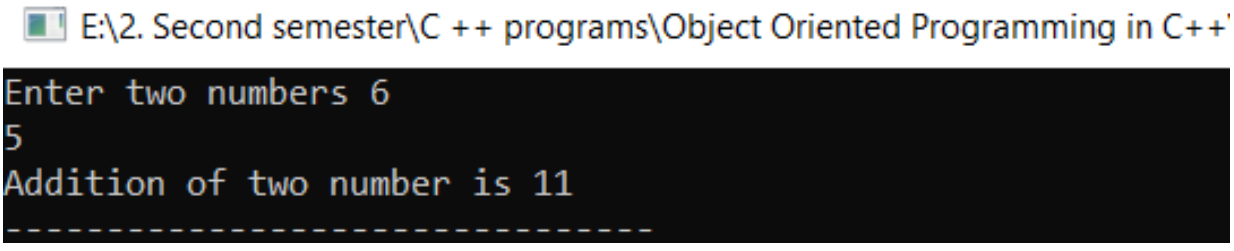
```
// function overloading
#include <iostream>
#include <conio.h>

using namespace std;

class Func_overloading{
   public:
   void print(int a){
      cout<<"inter is "<<a<<endl;

   }
   void print(double a)
   {
      cout<<"Double is  "<<a<<endl;
   }
   void print(string a){
      cout<<"Character is "<<a<<endl;
   }

};

int main()
{
   Func_overloading f1;
   f1.print(5);
   f1.print(5.99);
   f1.print("C++");
   return 0;
}
```



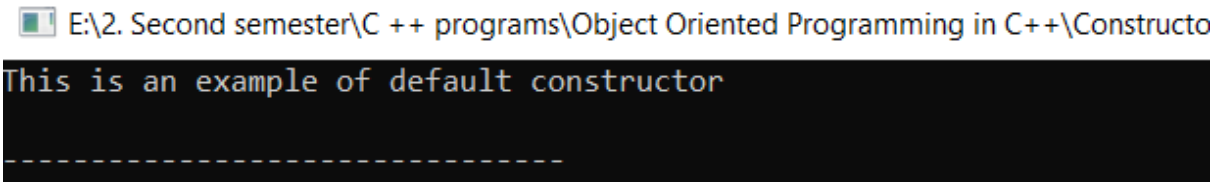
```
//inline Function
#include <iostream>
#include <conio.h>

using namespace std;
class Student
{
   private:
   int roll;
   char name[25];

   public:
   void display();
   void getdata();

};
inline void Student::getdata(){
   cout<<"Enter student name: ";
   cin>>name;
   cout<<"Enter roll no ";
   cin>>roll;
}

inline void Student::display(){
   cout<<endl<<"Displaying the data of the student "<<endl<<endl;
   cout<<"Student name: "<<name;
   cout<<endl<<"Roll no: "<<roll;
}

int main(){
   Student s1;
   s1.getdata();
   s1.display();
   return 0;
}
```


E:\2. Second semester\C ++ programs\Object Oriented Programming in C
Enter student name: Ram
Enter roll no 45
Displaying the data of the student
Student name: Ram
Roll no: 45

```
//Encapsulation
#include <iostream>
#include <conio.h>

using namespace std;
class Encaps
{
  private:
  int a,b;
  public:
  void set_data()
  {
    cout<<"Enter two numbers ";
    cin>>a>>b;
  }
   void getdata()
  {
    cout<<"Addition of two number is "<<a+b;
  }
};

int main()
{
   Encaps E1;
   E1.set_data();
   E1.getdata();
   return 0;
}
```

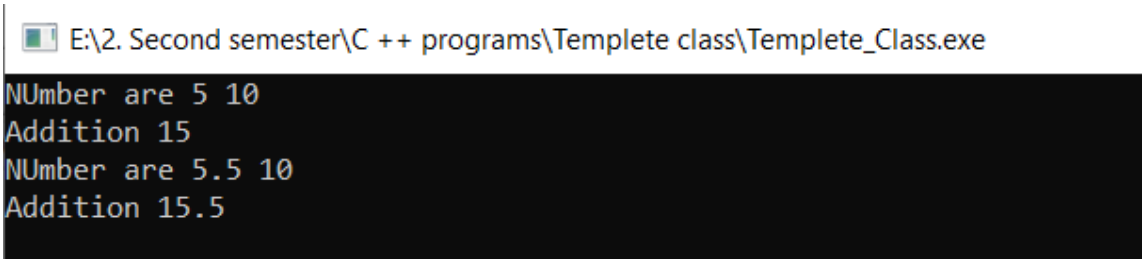


```
// Default Constructor
#include <iostream>
#include <conio.h>

using namespace std;
class DefaultConstructor{

	public:
	DefaultConstructor(){
		cout<<"This is an example of default constructor\n";
	}
};

int main()
{
	DefaultConstructor d1;
	return 0;
}
```

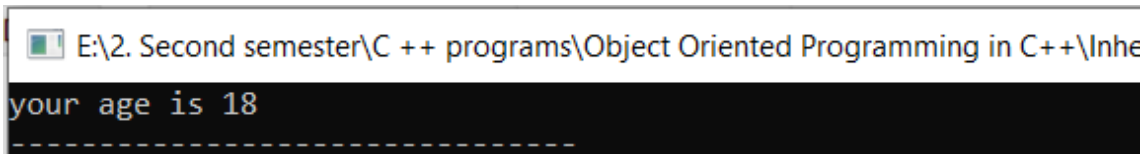


```
//template class
#include <iostream>
#include <conio.h>
using namespace std;
template <class temp>

class Calculator
{
  temp n1,n2;
  public:
  Calculator(temp n1,temp n2)
  {
     this->n1=n1;//this->n1 is above private access specifier member
     this->n2=n2;
  }

  void display()
  {
     cout<<"NUmber are "<<n1<<" "<<n2;
     cout<<endl<<"Addition "<<add()<<endl;

  }

   temp add()
   {
      return n1+n2;
   }

};

int main()
{
   Calculator <int> cal(5,10);
   Calculator <float> f(5.5,10);
   cal.display();
   f.display();
   return 0;
```

}


E:\2. Second semester\C ++ programs\Templete class\Templete_Class.exe
NUmber are 5 10
Addition 15
NUmber are 5.5 10
Addition 15.5

```
//Single level inheritance
#include <iostream>
#include <conio.h>
using namespace std;
class Base_class{
	protected:
		int age;

};
class Child_class: public Base_class{

	public:
		void myage()
		{
			age=18;

			cout<<"your age is "<<age;

		}

};

int main(){

	Child_class ch;
	ch.myage();

	return 0;
}
```



```
//Array of object

#include <iostream>
#include <conio.h>
using namespace std;
class largest{

   private:
   int a,b;
   public:
   void getdata();
   int largestdata();
   void displaydata();

};

void largest:: getdata(){
   cout<<"Enter numbers ";
   cin>>a>>b;

}

int largest::largestdata(){
   //returns one of the largest value among two
   if(a>=b){
      return a;
   }
   else{
      return b;
   }
}

void largest::displaydata(){
   if(largestdata()>=largestdata())
   {
       cout<<endl<<"The largest value is "<<largestdata()<<endl;
```

```
    }

}
int main(){
   int i;
    largest l1[2];

    for(i=0;i<2;i++){
   l1[i].getdata();
    }
    for(i=0;i<2;i++){
         l1[i].largestdata();

         l1[i].displaydata();
    }

    return 0 ;

}
```