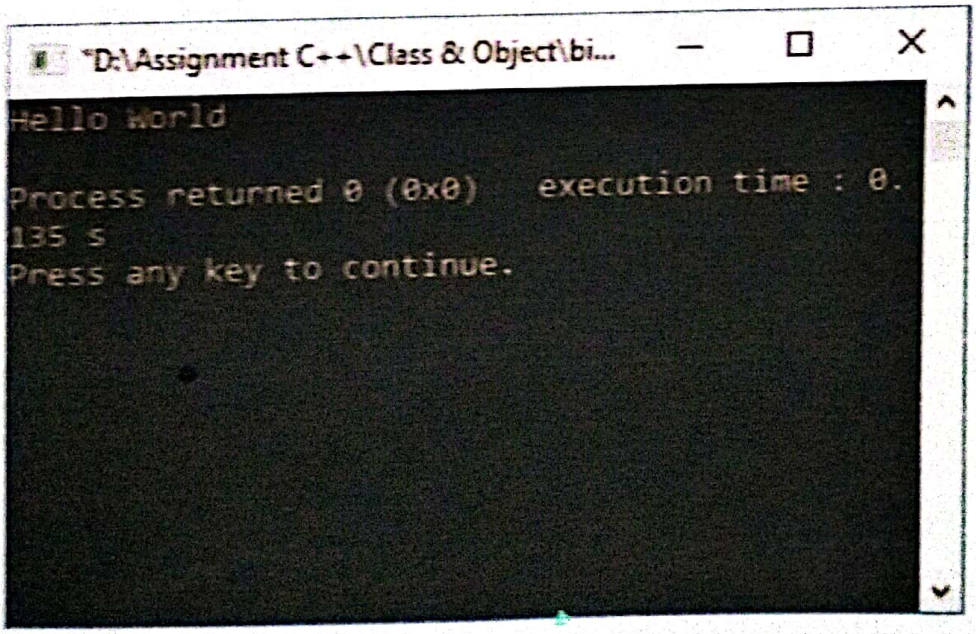
1./* C++ program to create a simple class and object.*/

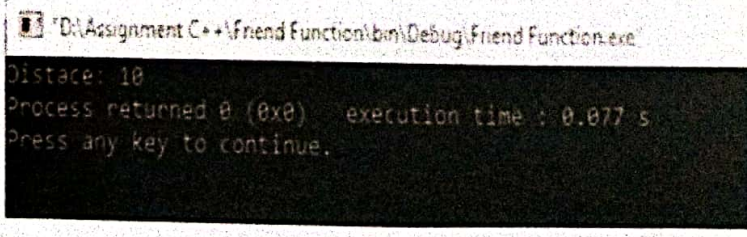
```
#include  <iostream>
using namespace std;

class Hello
{
    public:
        void sayHello()
        {
                cout << "Hello World" << endl;
        }
};

int main()
{
    Hello h;

    h.sayHello();

    return 0;
}
```

Output



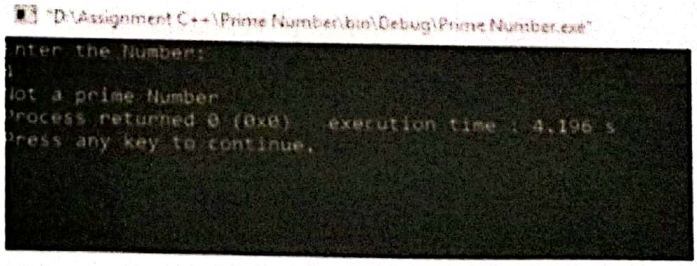
2./* C++ program to demonstrate the working of friend function.*/

```
#include <iostream>
using namespace std;

class Distance {
    private:
        int meter;
    public:
        Distance(): meter(0){ }
        friend int func(Distance); //friend function
};

int func(Distance d){
    //function definition
    d.meter=10; //accessing private data from non-member function
    return d.meter;
}

int main(){ Distance D;
    cout<<"Distace: "<<func(D);

    return 0;
}
```



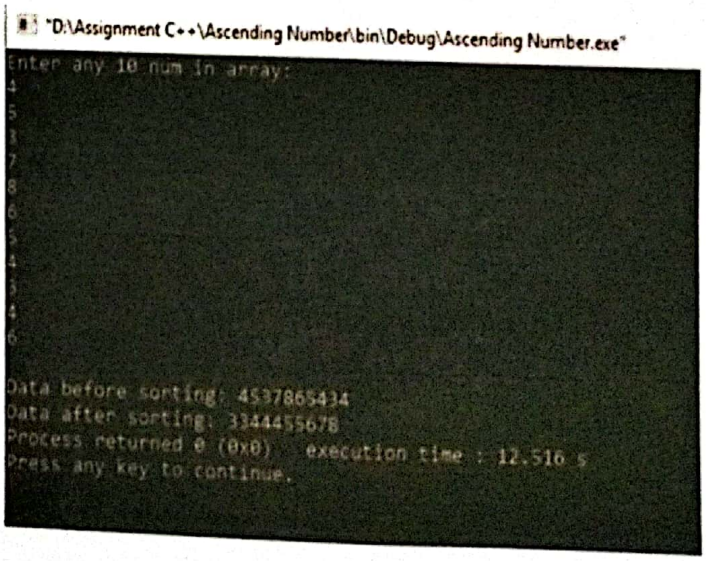
3. Prime Or Not

```
#include <iostream>
using namespace std;

int main()
{
    int num,i,count;

    cout<<"Enter the Number:"<<endl;
    cin>>num;
    for(i=2;i<num;i++)

        if(num%i==0)
    {
       cout<<"Not a prime Number";
       break;
    }

    else
    {
        cout<<"Yes! It's a Prime Number"<<endl;
        break;
    }

    return 0;
    }
```



4)Ascending Number

```
#include<iostream>
using namespace std;

 int main()
 {
 int i,a[10],temp,j;

 cout<<"Enter any 10 num in array: \n";
 for(i=0;i<=10;i++)
 {
 cin>>a[i];
 }
 cout<<"\nData before sorting: ";
 for(j=0;j<10;j++)
 {
 cout<<a[j];
 }
 for(i=0;i<=10;i++)
 {
 for(j=0;j<=10-i;j++)
 {
 if(a[j]>a[j+1])
 {
 temp=a[j];
 a[j]=a[j+1];
```

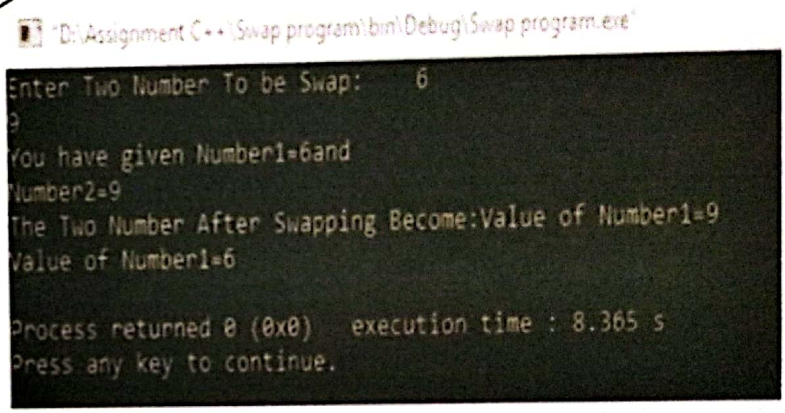


```
a[j+1]=temp;
}
}
}
cout<<"\nData after sorting: ";
for(j=0;j<10;j++)
{
cout<<a[j];
}


}
```

5. Swap Number

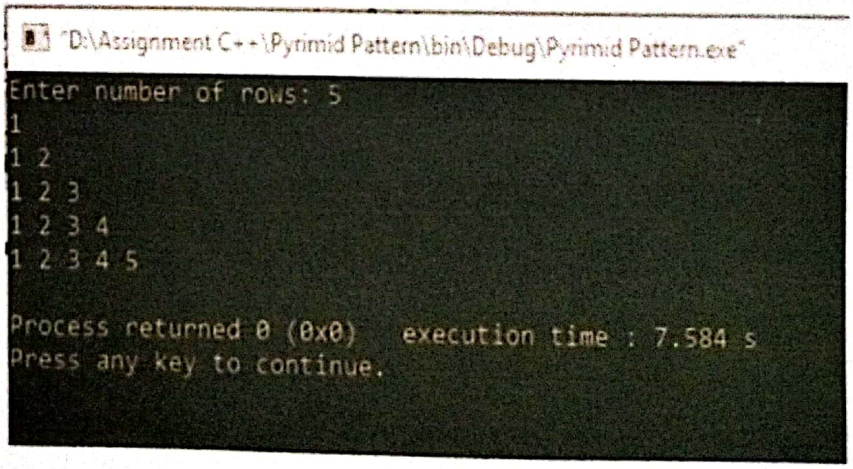
```
#include <iostream>
using namespace std;

void swip(int &num1,int &num2)
{
    num2=num1+num2;
    num1=num2-num1;
    num2=num2-num1;
}
int main()
{
int num1,num2;

cout<<"Enter Two Number To be Swap:\t";
cin>>num1>>num2;
cout<<"You have given
Number1="<<num1<<"and"<<endl<<"Number2="<<num2<<endl;
swap(num1,num2);

cout<<"The Two Number After Swapping Become:";
cout<<"Value of Number1="<<num1<<endl;
cout<<"Value of Number1="<<num2<<endl;
return 0;
}
```

```
int temp = num1;
num2 = num1;
num2 = temp;
```



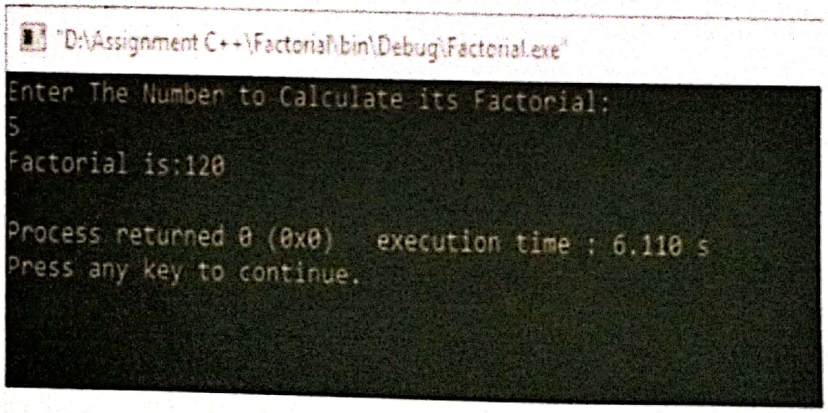
6.Making a pyramid using For Loops

```
#include <iostream>
using namespace std;

int main()
{
    int rows;

    cout << "Enter number of rows: ";
    cin >> rows;

    for(int i = 1; i <= rows; ++i)
    {
        for(int j = 1; j <= i; ++j)
        {
            cout << j << " ";
        }
        cout << "\n";
    }
    return 0;
}
```



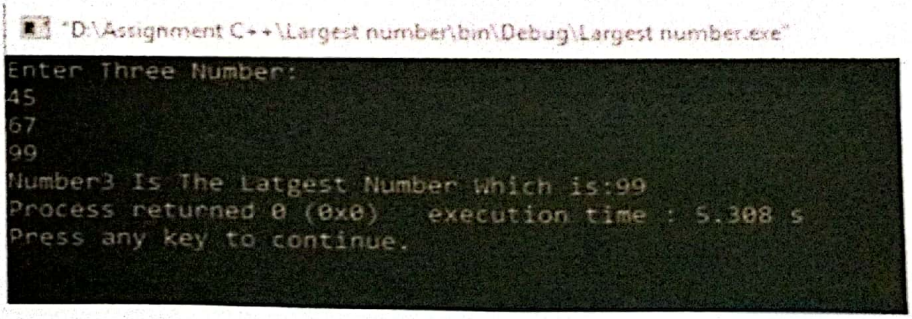
7.Factorial Number

```
#include <iostream>

using namespace std;

int main()
{
    int x,fact;
    cout<<"Enter The Number to Calculate its
Factorial:"<<endl;
    cin>>x;
    fact=x;
    while(x>1)
    {
        x--;
        fact=fact*x;
    }
    cout<<"Factorial is:"<<fact<<endl;
    return 0;
}
```



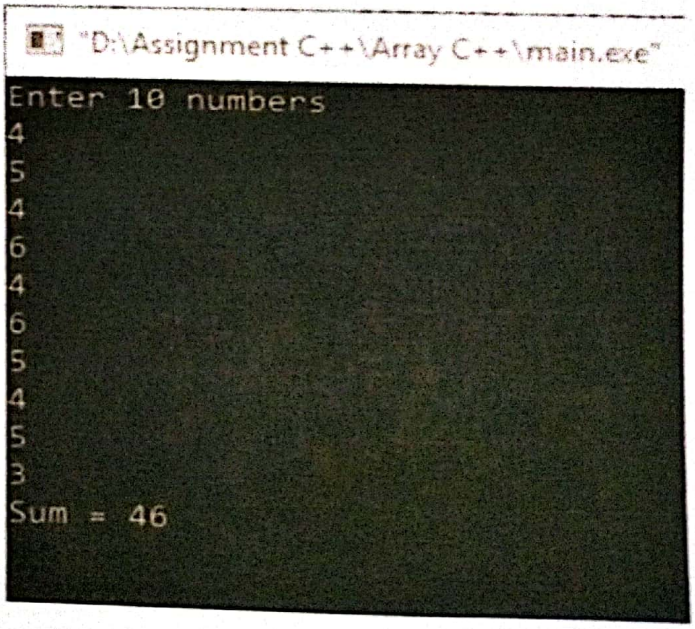
8.Largest Number

```
#include <iostream>

using namespace std;

int main()
{
    float num1,num2,num3;
    cout<<"Enter Three Number:\t"<<endl;
    cin>>num1>>num2>>num3;
    if(num1>=num2 && num1>=num3)
    {
        cout<<"Number1 Is The Largest Number which
is:"<<num1;
    }
    if(num2>=num1 && num2>=num3)
    {
        cout<<"Number2 Is The Largest Number Which
is:"<<num2;
    }
    if(num3>=num1 && num3>=num2)
    {
        cout<<"Number3 Is The Latgest Number Which
is:"<<num3;
    }
    return 0;
}
```



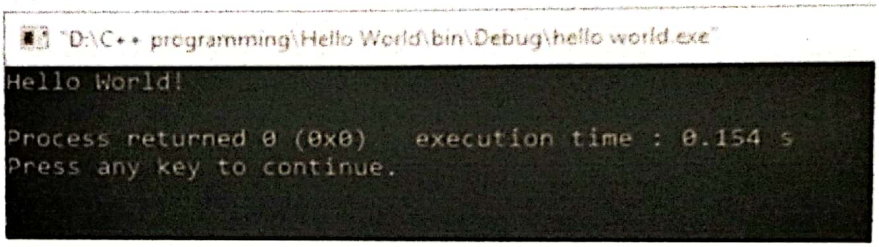
9.Array of C++

```
#include <iostream>
#include <conio.h>
using namespace std;

int main()
{
    int arr[10],sum=0,i;
    cout<<"Enter 10 numbers"<<endl;
    for(i=0;i<10;i++)
    {
        cin>>arr[i];
        sum = sum+arr[i];
    }
    cout<<"Sum = "<<sum;
    getch();
    return 0;
}
```



10.Simple program using C++

```
#include<iostream>
using namespace std;
int main()
{
    cout<<"Hello World!"<<endl;
    return 0;

}
```



11.Cricket Score Program

```
#include <iostream>

using namespace std;

int main()
{
    int sachinR=8430, sourovR=4200, rahulR=3350,
    inningsSa=230, inningsSo=130, inningsRa=105,
    tnoSa=18, tnoSo=9, tnoRa=11;

    cout << "Player's Name       Runs        Innings      Notout Times\n"
         <<"--------------   ----------  ----------  ----------------\n";
    cout <<"Sachin Tendulkar"<<"     " <<sachinR<<"        "<<inningsSa<<"             "<<tnoSa <<endl;
    cout <<"Sourav Ganguly"<<"       " <<sourovR<<"        "<<inningsSo<<"             "<<tnoSo<<endl;
    cout <<"Rahul Drabit"<<"         " <<rahulR<<"        "<<inningsRa<<"             "<<tnoRa <<endl;
    return 0;
}

```

```
"D:\Assignment C++\Cricket Score Table\bin\Debug\Cricket Score Table.exe"
Player's Name       Runs        Innings      Notout Times
--------------   ----------  ----------  ----------------
Sachin Tendulkar     8430        230             18
Sourav Ganguly       4200        130             9
Rahul Drabit         3350        105             11

Process returned 0 (0x0)   execution time : 0.184 s
Press any key to continue.
```

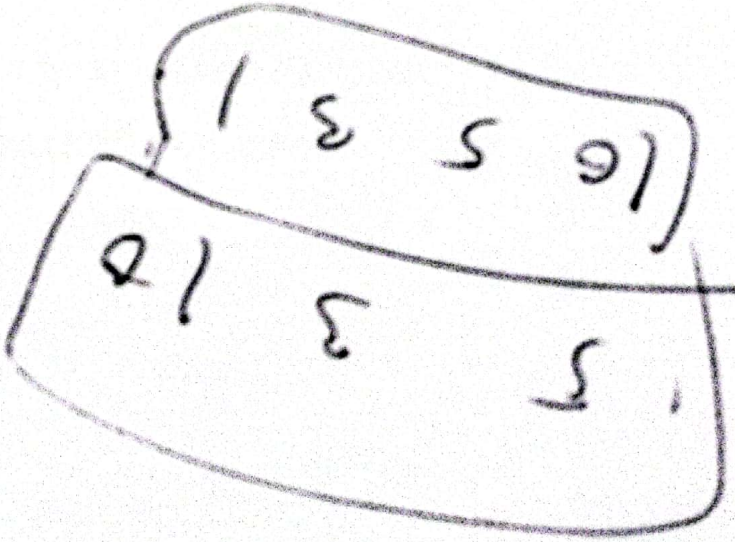
12.Make a simple program with contractor

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

using namespace std;

class Example {
  int a, b;
public:

    Example() {
        // Assign Values In Constructor
        a = 10;
        b = 20;
        cout << "Im Constructor\n";
    }

    void Display() {
        cout << "Values :" << a << "\t" << b;
    }
```

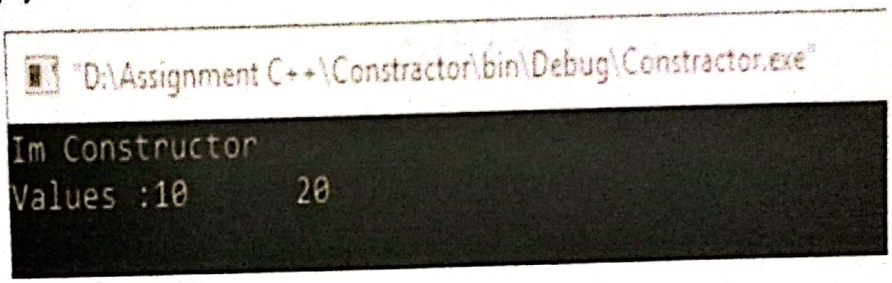
```
#include <iostream>
Using namespace std
int main( ) i, j. *temp
cout << "enter the number of data: "
i = 0; i<n; i++
```

7, 9, 10, 8
7, 9, 8, 10
7, 8, 9, 10

50, 25, 9, 55, 95
50, 25, 9, 95, 55
50, 25, 95, 9, 55
50, 25, 95, 55, 9
50, 95, 25, 55, 9
50, 95, 55, 25, 9

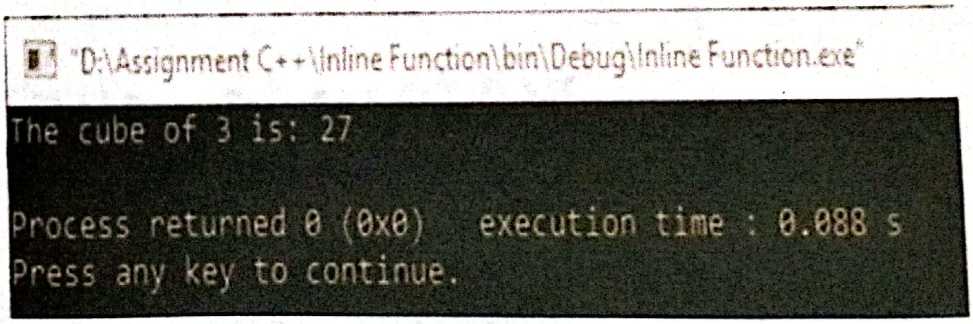


```
};

int main() {
    Example Object;

    Object.Display();

    getch();
    return 0;
}
```



13.Inline Function

```
#include <iostream>
using namespace std;
inline int cube(int s)
{
    return s*s*s;
}
int main()
{
    cout << "The cube of 3 is: " << cube(3) <<
"\n";
    return 0;
```

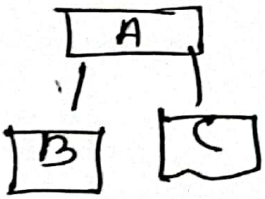


```
include <iostream>
using namespace std;

class Distance;
  int
  private
      int meter;
  public
      int height;
      int weight;
      int area;

};
int Distance::area(){ }
int area(){ }
return height * weight
height * weight
area = (10);
return (0);
int main()
{
    rectangle obj
    obj.height;
    obj.weight;
    return area = 10;
    Cout << object(): </area>;
    return 0;
}
```

14.Making a program using inheritance

```
#include <iostream>
using namespace std;

class Person
{
      public:
          string profession;
          int age;

          Person(): profession("unemployed"), age(16) { }
          void display()
          {
                cout << "My profession is: " << profession << endl;
                cout << "My age is: " << age << endl;
                walk();
                talk();
          }
          void walk() { cout << "I can walk." << endl; }
          void talk() { cout << "I can talk." << endl; }
};
```

```
#include <iostream>
using namespace std;
int main() {
cout << "Players name" << "run" << "average run"
<< "time not out" << endl;
cout << "Sakib" << "6000" << "42" << "3" << endl;
cout << "Riyad" << "5000" << "43" << "4" << endl;
cout << "Rubel" << "4000" << "40" << "2" << endl;
return 0;
}
```




```
* include <iostream.h>
using namespace std;
class A: Private A:
{
cout << "A is called "
};
class B: Private B:
{
cout << "B is called "
};
class C: private B:
{
cout << "C is called "
};
int main()
{
return 0;
}
```

```
// MathsTeacher class is derived from base class Person.
class MathsTeacher : public Person
{
    public:
        void teachMaths() { cout << "I can teach Maths." << endl; }
};

// Footballer class is derived from base class Person.
class Footballer : public Person
{
    public:
        void playFootball() { cout << "I can play Football." << endl; }
};

int main()
{
        MathsTeacher teacher;
        teacher.profession = "Teacher";
        teacher.age = 23;
        teacher.display();
        teacher.teachMaths();

        Footballer footballer;
        footballer.profession = "Footballer";
        footballer.age = 19;
        footballer.display();
        footballer.playFootball();

        return 0;
}
```

```
My profession is: Teacher
My age is: 23
I can walk.
I can talk.
I can teach Maths.
My profession is: Footballer
My age is: 19
I can walk.
I can talk.
I can play Football.

Process returned 0 (0x0)   execution time : 0.084 s
Press any key to continue.
```

```
int main()
{
int a,i,j,N,Num[30];
cout<<"enter the value of N";
cin>>N;
for(i=0;i<N;i++)
cin>>Num[i];
for(i=0;i<N;i++){
for(j=i+1;j<N;j++){
if(Num[i]>Num[j]){a=num[i];Num[i]=Num[j];Num[j]=a;}}
cout<<"the assending order are"<<endl;
for(i=0;i<N;i++)
cout<<Num[i]<<endl;
return 0;}
```

$5 \times 4 \times 3 \times 2 \times 1$

```
int main()
{
  int i, n, flag=0;
  cout<<"Enter the value of n"<<endl;
  cin>>n;
  for(i=2; i<=n; i++)
  {
    if(n%2==0)
    {
      flag=1;
      break;
    }
    if(flag==0)
    {
      cout<<"the number is prime"<<endl;
    }
    else
    {
      cout<<"the number is not prime"<<endl;
    }
  }
```

15.Program Using Nested Class

```
#include<iostream>

using namespace std;

 class Host
{
public:
   class Nested
   {
   public:
     void PrintMe()
     {
       cout << "Printed!\n";
     }
   };
};

int main()
{
   Host::Nested foo;
   foo.PrintMe();
 Host bar;

   return 0;
}
```