NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

OOP

Class Test

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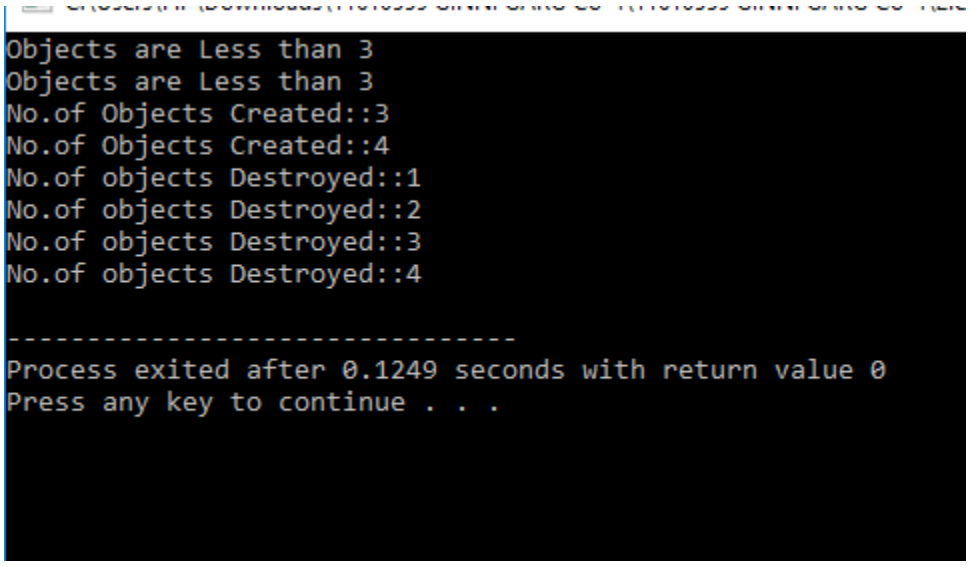
```
#include<iostream>
using namespace std;
class flag {
int flags[101];
public:
   flag() {
   int a;
   for(a=0;a<101;a++)
      flags[a]=1;
   for(a=1;a<=100;a=a+2)
      if(flags[a]==1)
      flags[a]=0;
      else
         flags[a]=1;
   for(a=3;a<=100;a=a+3)
      if(flags[a]==1)
      flags[a]=0;
   else
      flags[a]=1;
   for(a=4;a<=100;a=a+4)
      if(flags[a]==1)
      flags[a]=0;
   else
      flags[a]=1;
   }
   void print() {
   int a;
   cout<<"Index Having Value 1::"<<endl;
   for(a=1;a<101;a++)
      if(flags[a]==1)
      cout<<a<<endl;
   }
};
int main() {
flag ob;
ob.print();
return 0;
}
```

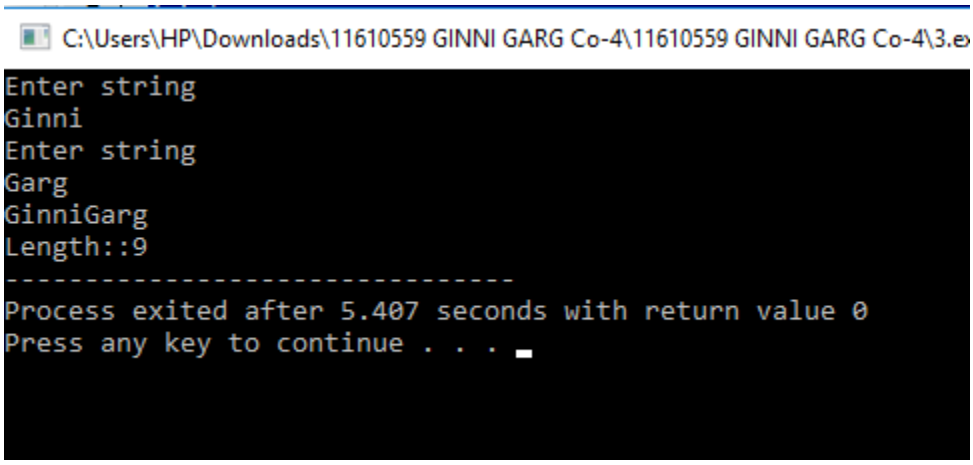
```
Index Having Value 1::
2,3,9,10,12,14,15,21,22,24,26,27,33,34,36,38,39,45,46,48,50,51,57,58,60,62,63,69,70,72,74,75,81,82,84,86,87,93,94,96,98,
99,
--------------------------------
Process exited after 0.08719 seconds with return value 0
Press any key to continue . . .
```

```
#include<iostream>
using namespace std;
class test {
static int count;
static int dest;
public:
   test() {
   ++count;
   if(count<3) {
      cout<<"Objects are Less than 3"<<endl;
   }
   else
      cout<<"No.of Objects Created::"<<count<<endl;
   }
   ~test() {
   ++dest;
   cout<<"No.of objects Destroyed::"<<dest<<endl;
   }
};
int test::count=0;
int test::dest=0;

int main() {
test ob,a,b,d;
return 0;
}
```



```
#include<iostream>
#include<stdio.h>
#include<string.h>
using namespace std;
class strg {
char str[30];
int l;
public:
   void get() {
   cout<<"Enter string"<<endl;
   gets(str);
   }
   void stlen() {
   l=strlen(str);
   }
   void operator+=(strg ob) {
   strcat(str,ob.str);
   l=strlen(str);
   }
   void print() {
   cout<<str<<endl<<"Length::"<<l;
   }
};
int main(){
strg ob,ob1;
ob.get();
ob.stlen();
ob1.get();
ob+=ob1;
ob.print();
return 0;
}
```



Q.4::Friend Functions::

They are used to access the private data of class as usually due to encapsulation the private data is not accessible in the simple functions.

Friend classes when declared in any another class ,make all the member functions of friend class to be the friend function of the another class.

Characteristics::

1. Friend function are not the member functions such that they can be declared in private or public portion of the class.
2. Friend are called like other functions without need of object to call function.
3. In which object's data can be accessed by object and dot operator.

Ex:::

```
Class A {
Int a;
Public:
void get() {cin>>a;}
Void put() {cout<<a;}
Friend A add(A &,A&);
};
A add(A &ob,A&ob1)  {
A tmp;
tmp.a=ob.a+ob1.a;
return tmp;
}
Int main() {
…
}
```