

**University of Sargodha**

**Lahore Campus**

**Name: Salman Naeem**

**Roll No: BSCS-F17-LC-185**

**Semester: 2nd**

**Section: A**

**Submitted to: Sir Saqib Ali**

**Department of CS&IT**

**Week 1**

**Program Code:**

**#include<iostream>**

**using namespace std;**

**class salman{**

**private:**

**int a;**

**public:**

**salman(){**

**a=5;**

**}**

**friend class oop;**

**};**

**class oop{**

**public:**

**void show(salman b)**

**{**

**cout<<"b="<<b.a;**

**}**

**};**

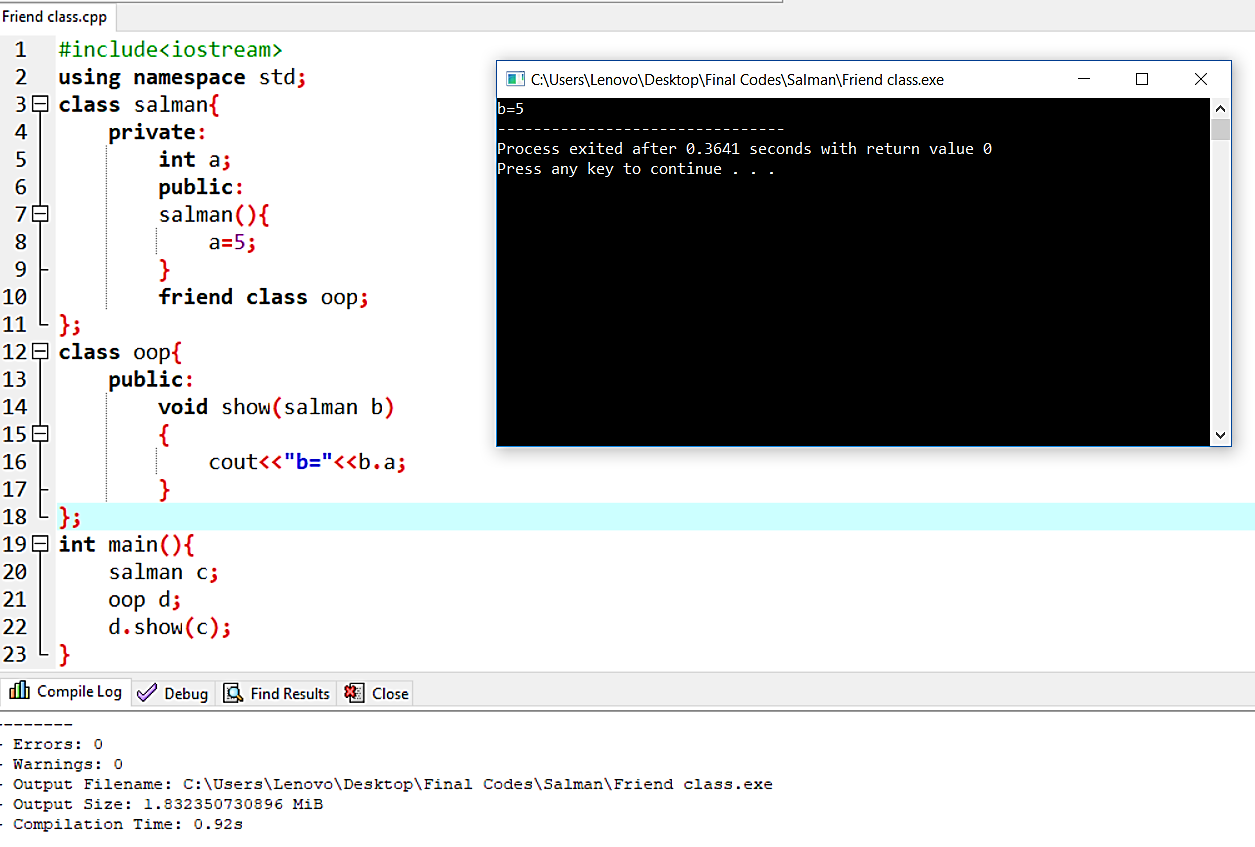
**int main(){**

**salman c;**

**oop d;**

**d.show(c); }**

**Output:**



**Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**private:**

**int id,price,i;**

**public:**

**void input(A Arr[]){**

**for(i=0;i<5;i++){**

**cout<<"enter id of book";**

**cin>>Arr[i].id;**

**cout<<"enter the price of book";**

**cin>>Arr[i].price;**

**}**

**}**

**void show(A Arr[]){**

**int a,max;**

**for(i=0;i<5;i++){**

**if(Arr[i].price>Arr[0].price){**

**max=Arr[i].price;**

**a=i;**

**}**

**else{**

**max=Arr[0].price;**

**a=0;**

**}**

**}**

**cout<<"most expensive book has a price"<<Arr[a].price<<endl<<"and id"<<Arr[a].id;**

**}**

**};**

**int main(){**

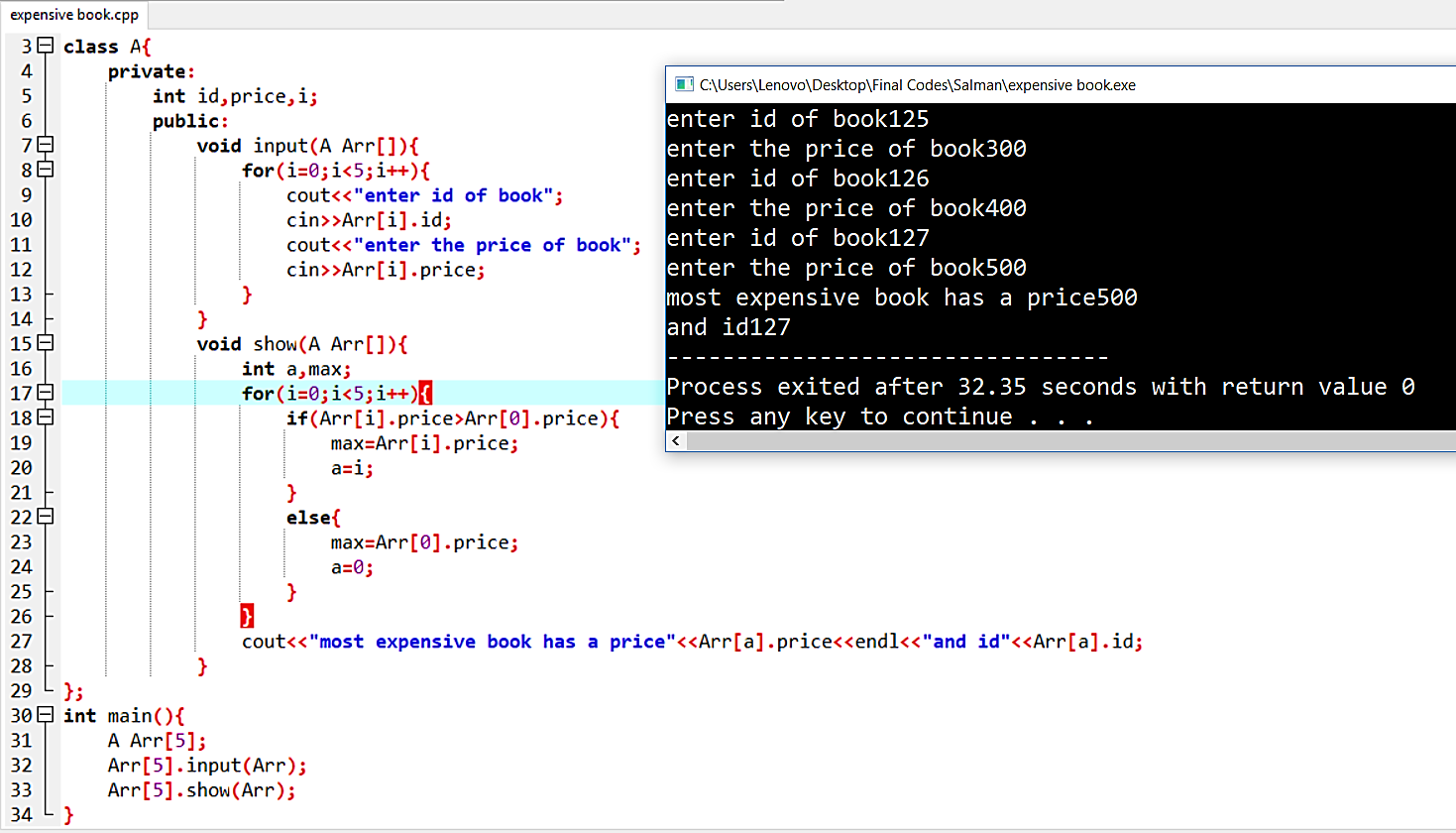
**A Arr[5];**

**Arr[5].input(Arr);**

**Arr[5].show(Arr);**

**}**

**Output**



**Week 2**

**1-Program:**

**#include<iostream>**

**using namespace std;**

**class salman{**

**private:**

**int m=0;**

**protected:**

**int n=0;**

**public:**

**int p=0;**

**void B()**

**{**

**m++;**

**n++;**

**p++;**

**}**

**};**

**class oop:public salman{**

**public:**

**void show(){**

**cout<<n;**

**cout<<p;**

**}**

**};**

**int main(){**

**oop o1;**

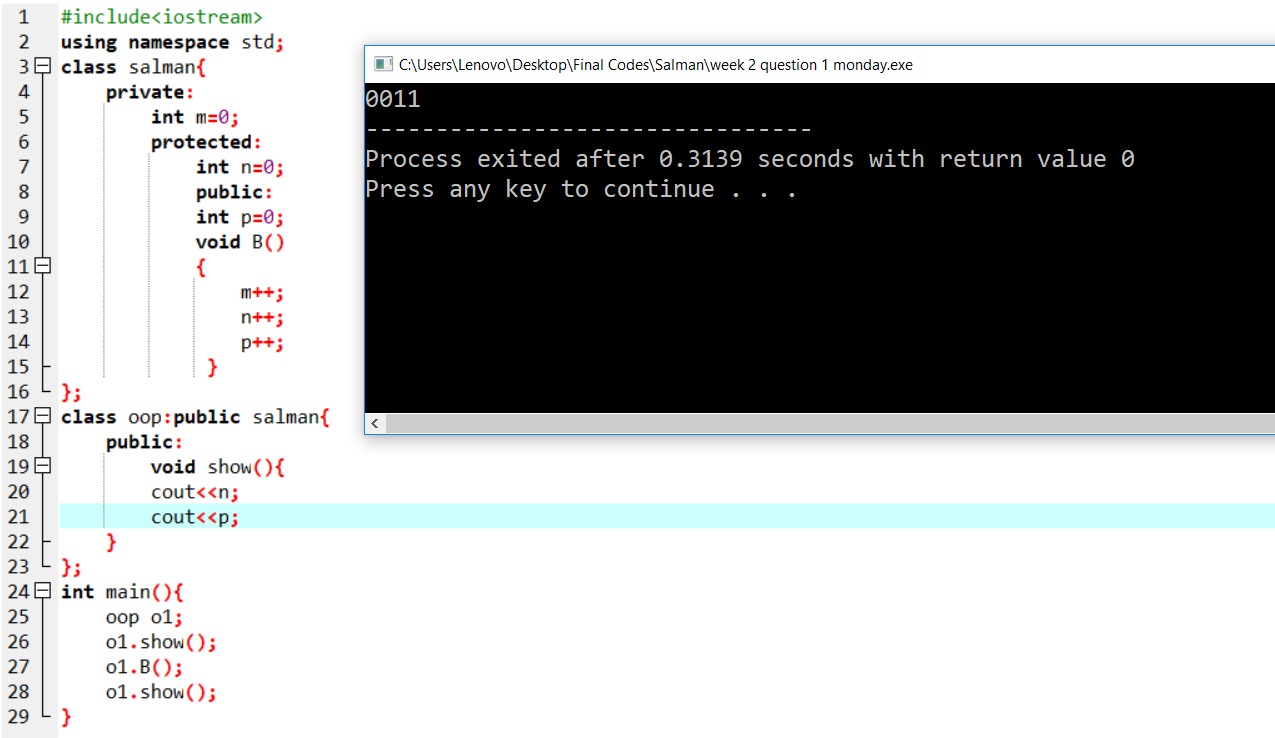
**o1.show();**

**o1.B();**

**o1.show();**

**}**

**Output:**



**2-Program:**

**#include<iostream>**

**using namespace std;**

**class salman{**

**private:**

**int m=0;**

**protected:**

**int n=0;**

**public:**

**int p=0;**

**void B()**

**{**

**m++;**

**n++;**

**p++;**

**}**

**};**

**class oop:private salman{**

**public:**

**void show(){**

**cout<<n;**

**cout<<p;**

**}**

**};**

**int main(){**

**salman o1;**

**oop o2;**

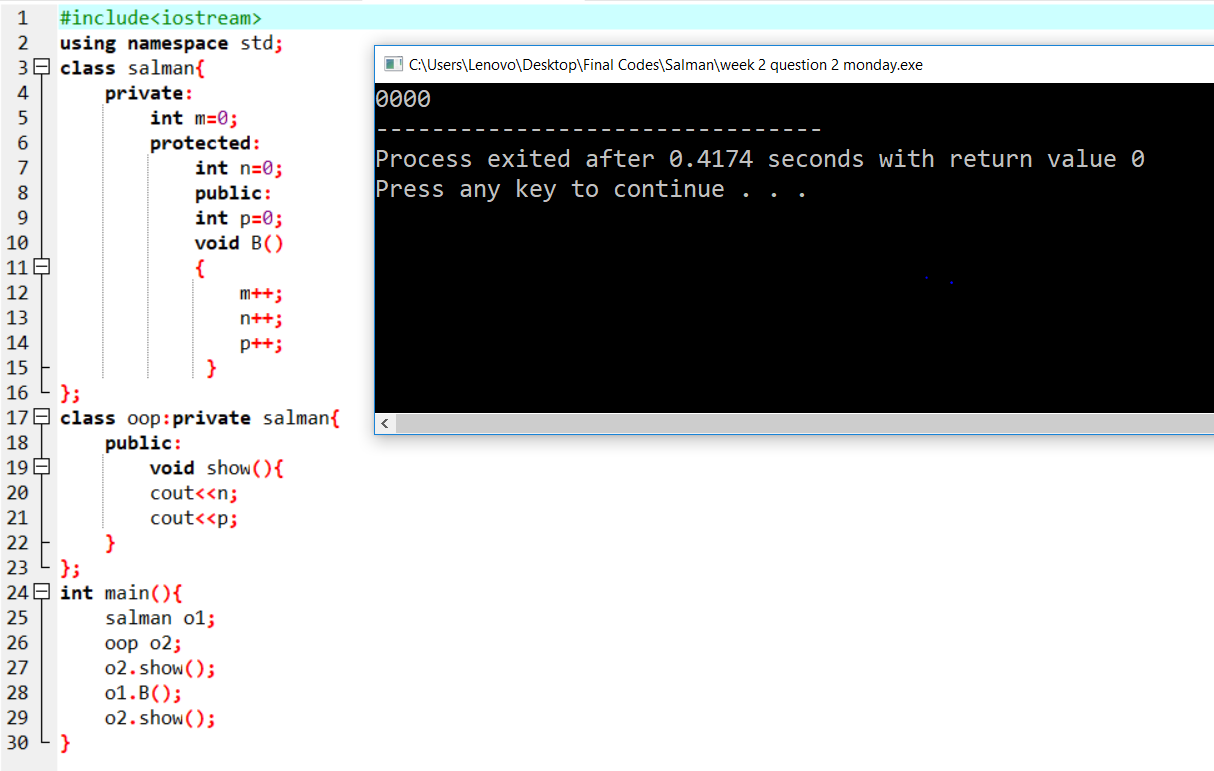
**o2.show();**

**o1.B();**

**o2.show();**

**}**

**Output:**



**3-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**public:**

**void show(){**

**cout<<"i love"<<"\t";**

**}**

**};**

**class B:public A{**

**public:**

**void display(){**

**cout<<"pakistan";**

**}**

**};**

**int main(){**

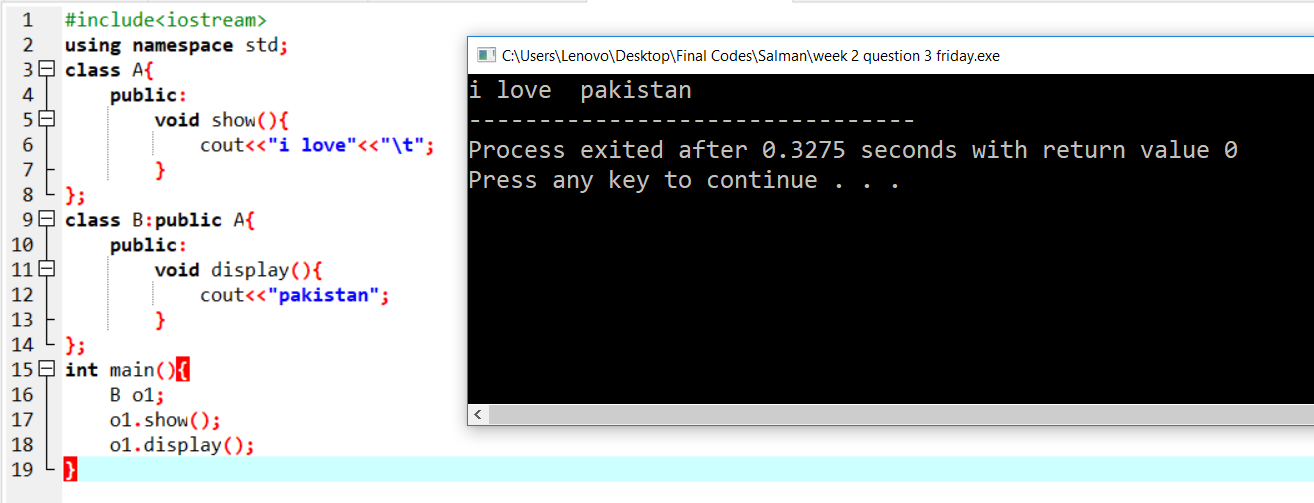
**B o1;**

**o1.show();**

**o1.display();**

**}**

**Output:**



**4-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**public:**

**void show(){**

**cout<<"i"<<"\t";**

**}**

**};**

**class B:public A{**

**public:**

**void display(){**

**cout<<"pakistan";**

**}**

**};**

**class C:public B{**

**public:**

**void pro(){**

**cout<<"love"<<"\t";**

**}**

**};**

**int main(){**

**C o1;**

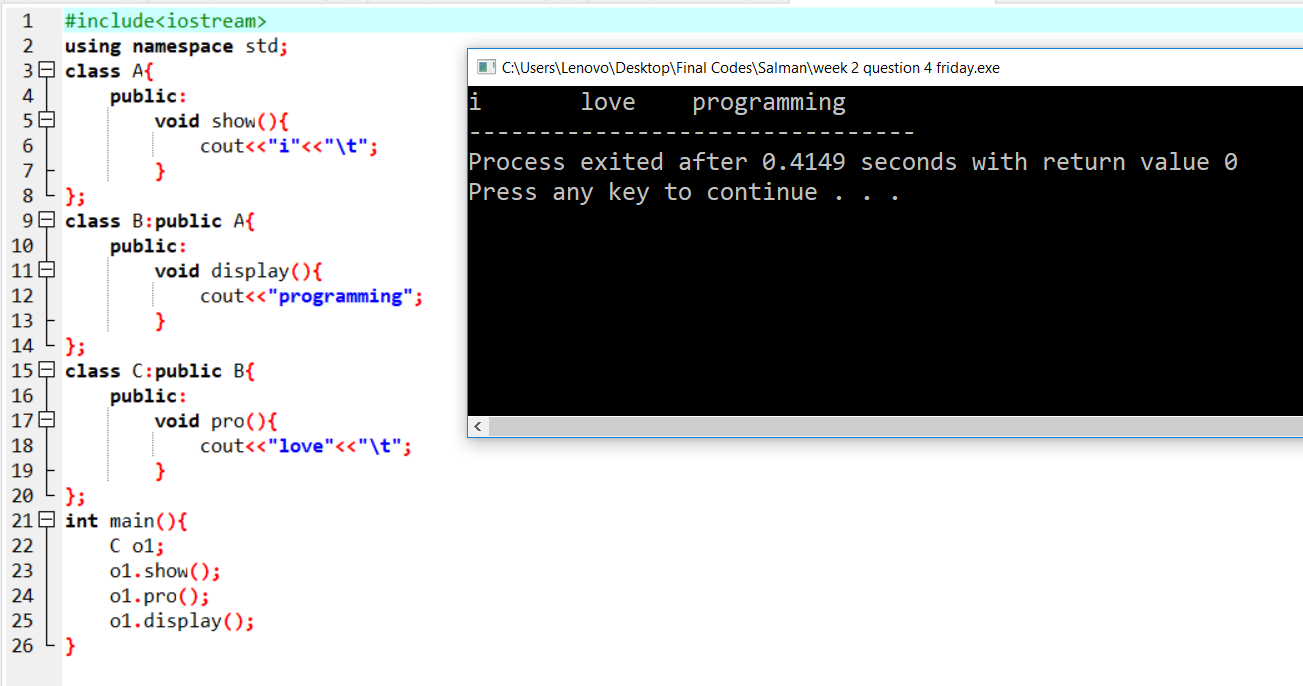
**o1.show();**

**o1.pro();**

**o1.display();**

**}**

**Output:**



**5-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**public:**

**void show(){**

**cout<<"is great"<<"\t";**

**}**

**};**

**class B:public A{**

**public:**

**void display(){**

**cout<<"pakistan ";//"\t";**

**}**

**};**

**class C:public A{**

**public:**

**void pro(){**

**cout<<"love ";//<<"\t";**

**}**

**};**

**int main(){**

**C o1;**

**B o2;**

**o1.pro();**

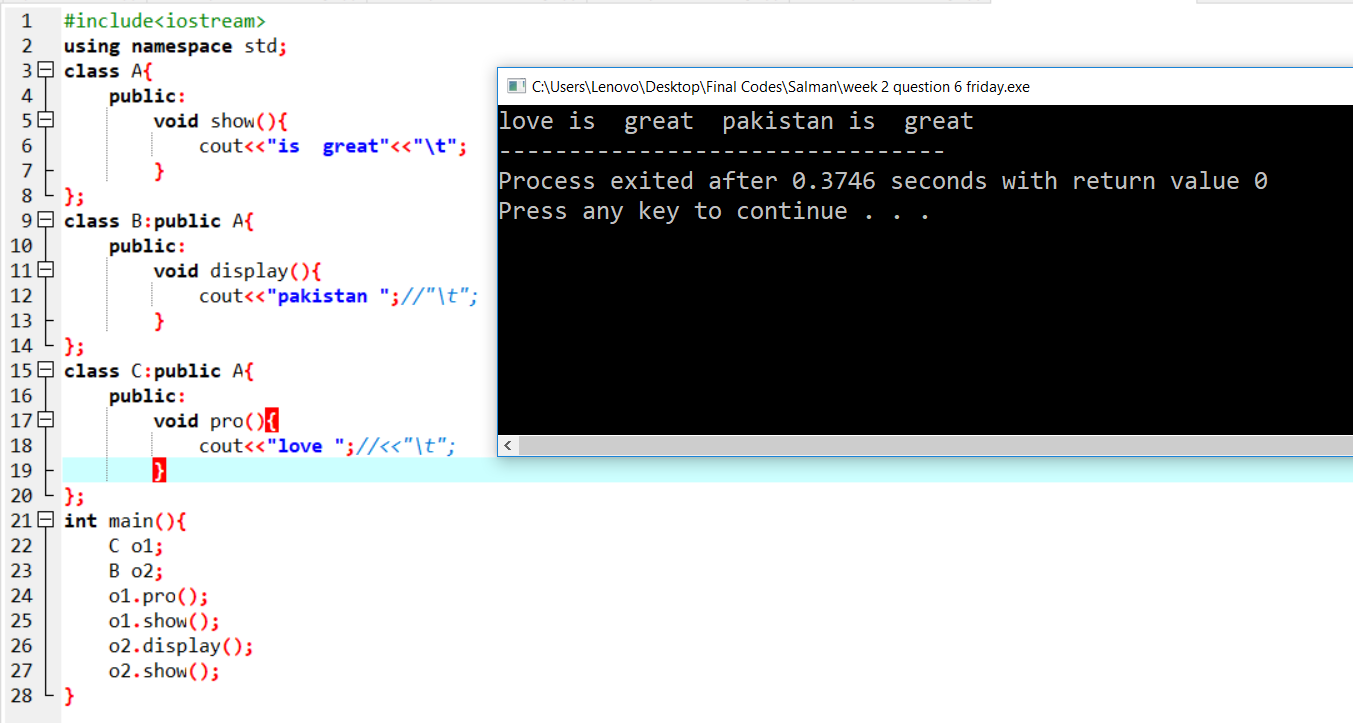
**o1.show();**

**o2.display();**

**o2.show();**

**}**

**Output:**



**6-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**public:**

**void show(){**

**cout<<"i"<<"\t";**

**}**

**};**

**class B:virtual public A{**

**public:**

**void display(){**

**cout<<"Programming"<<"\t";**

**}**

**};**

**class C:virtual public A{**

**public:**

**void pro(){**

**cout<<"love"<<"\t";**

**}**

**};**

**class D:public C,public B{**

**public:**

**void meh(){**

**cout<<"salman"<<"\t";**

**}**

**};**

**int main(){**

**D o1;**

**o1.meh();**

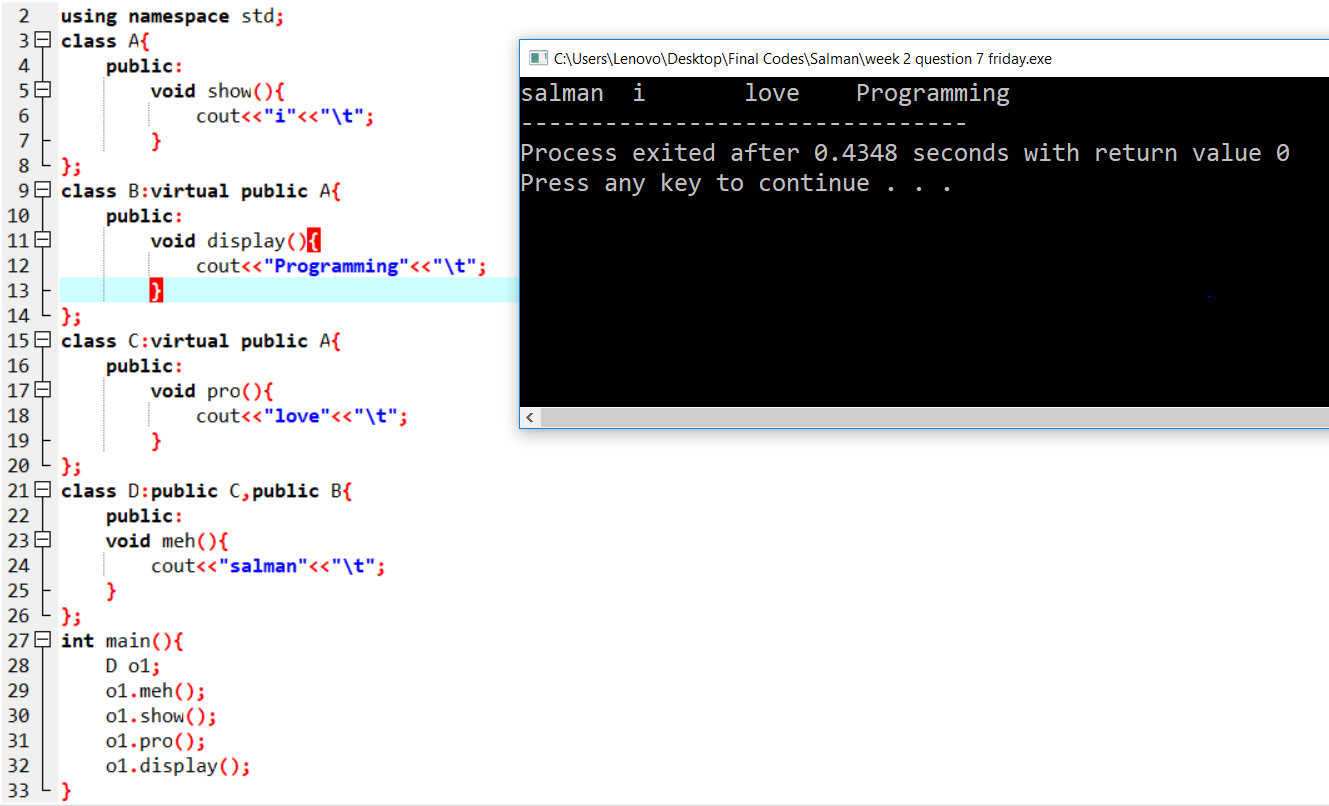
**o1.show();**

**o1.pro();**

**o1.display();**

**}**

**Output:**



**Week 3**

**1-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**protected:**

**int a;**

**public:**

**A(){**

**a=10;**

**}**

**};**

**class B:public A{**

**private:**

**int b;**

**public:**

**B():A(){**

**b=20;**

**}**

**void show(){**

**cout<<"a="<<a<<endl;**

**cout<<"b="<<b<<endl;**

**}**

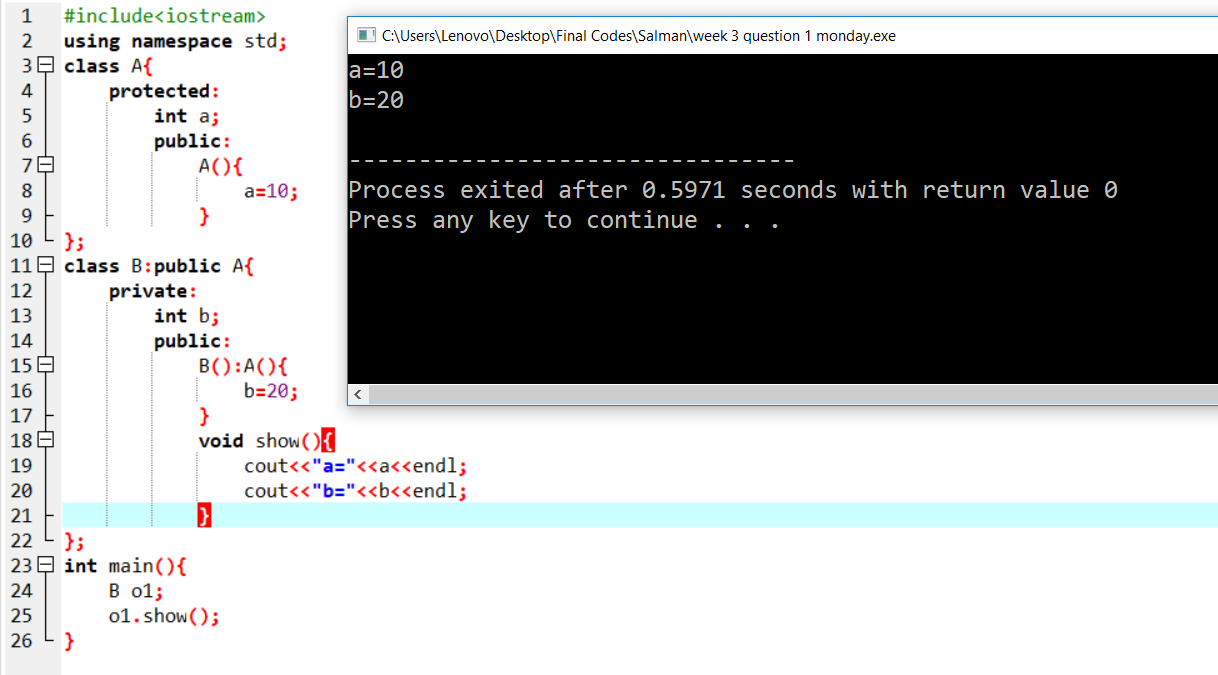
**};**

**int main(){**

**B o1;**

**o1.show();**

**}**

**Output:** 

**2-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**protected:**

**int a;**

**public:**

**A(){**

**a=10;**

**}**

**A(int x){**

**a=x;**

**}**

**};**

**class B:public A{**

**private:**

**char b;**

**public:**

**B():A(){**

**b='t';**

**}**

**B(char y,int m):A(m){**

**b=y;**

**}**

**void show(){**

**cout<<"a="<<a<<endl;**

**cout<<"b="<<b<<endl;**

**}**

**};**

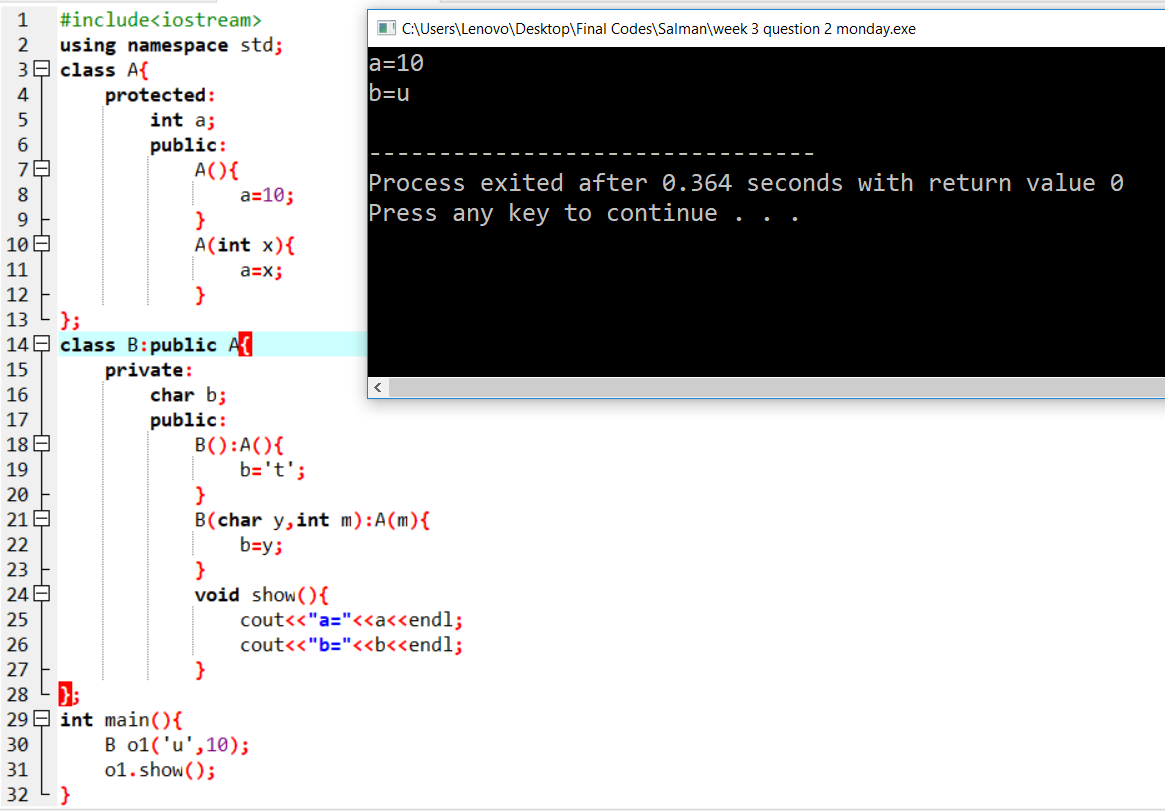
**int main(){**

**B o1('u',10);**

**o1.show();**

**}**

**Output:**



**3-Program:**

**#include<iostream>**

**using namespace std;**

**class Parent{**

**private:**

**int n=10;**

**public:**

**void show(){**

**cout<<"n="<<n<<endl;**

**}**

**};**

**class child:public Parent{**

**private:**

**int b=15;**

**public:**

**void show(){**

**Parent::show();**

**cout<<"b="<<b;**

**}**

**};**

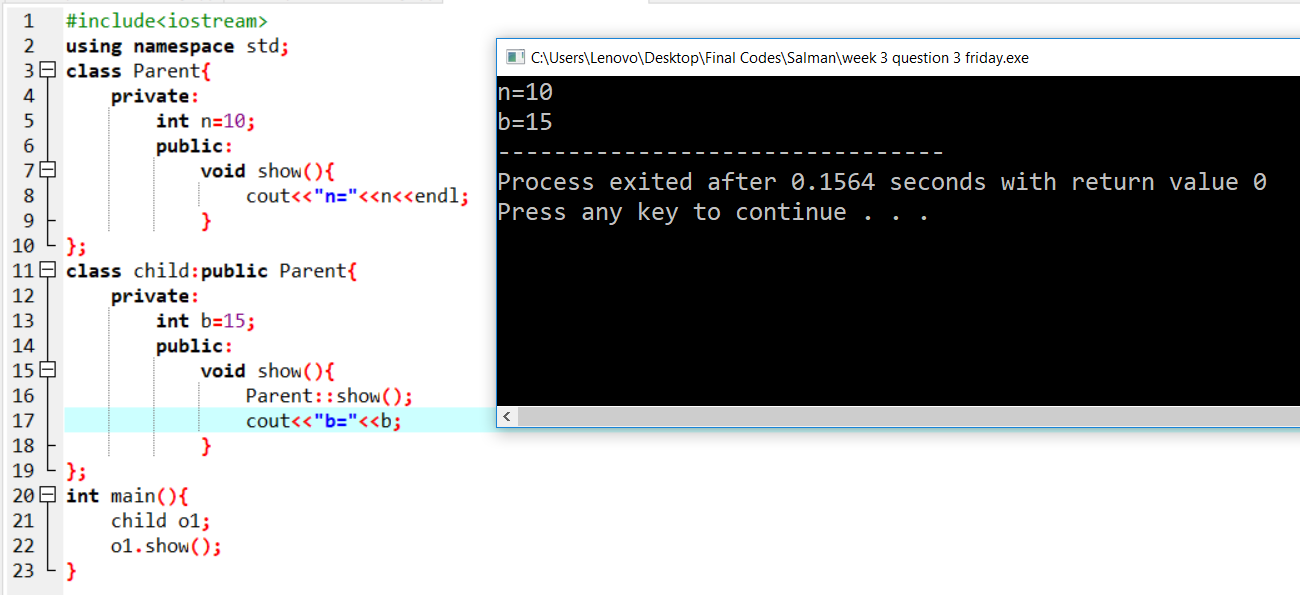
**int main(){**

**child o1;**

**o1.show();**

**}**

**Output:**



**4-Program:**

**#include<iostream>**

**using namespace std;**

**class Parent{**

**private:**

**int n=10;**

**public:**

**void show(){**

**cout<<"n="<<n<<endl;**

**}**

**};**

**class child:public Parent{**

**private:**

**int b=15;**

**public:**

**void show(){**

**Parent::show();**

**cout<<"b="<<b<<endl;**

**}**

**};**

**class child1:public child{**

**private:**

**int c=20;**

**public:**

**void show(){**

**child::show();**

**cout<<"c="<<c;**

**}**

**};**

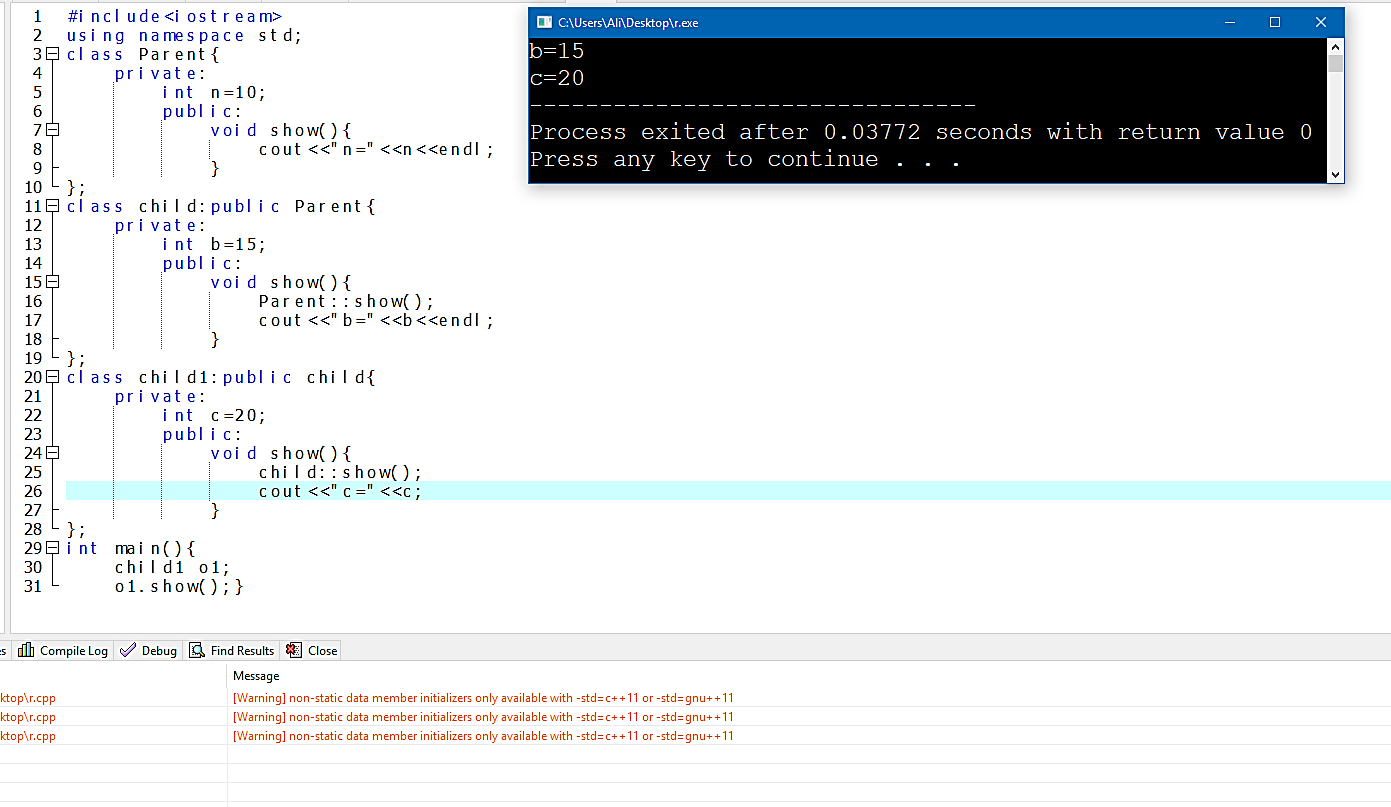
**int main(){**

**child1 o1;**

**o1.show();**

**}**

**Output:**



**5-Program:**

**#include<iostream>**

**using namespace std;**

**class Base{**

**protected:**

**int a;**

**public:**

**Base(){a=10;}};**

**class Derived:public Base{**

**int b;**

**public:**

**Derived(){b=20;}**

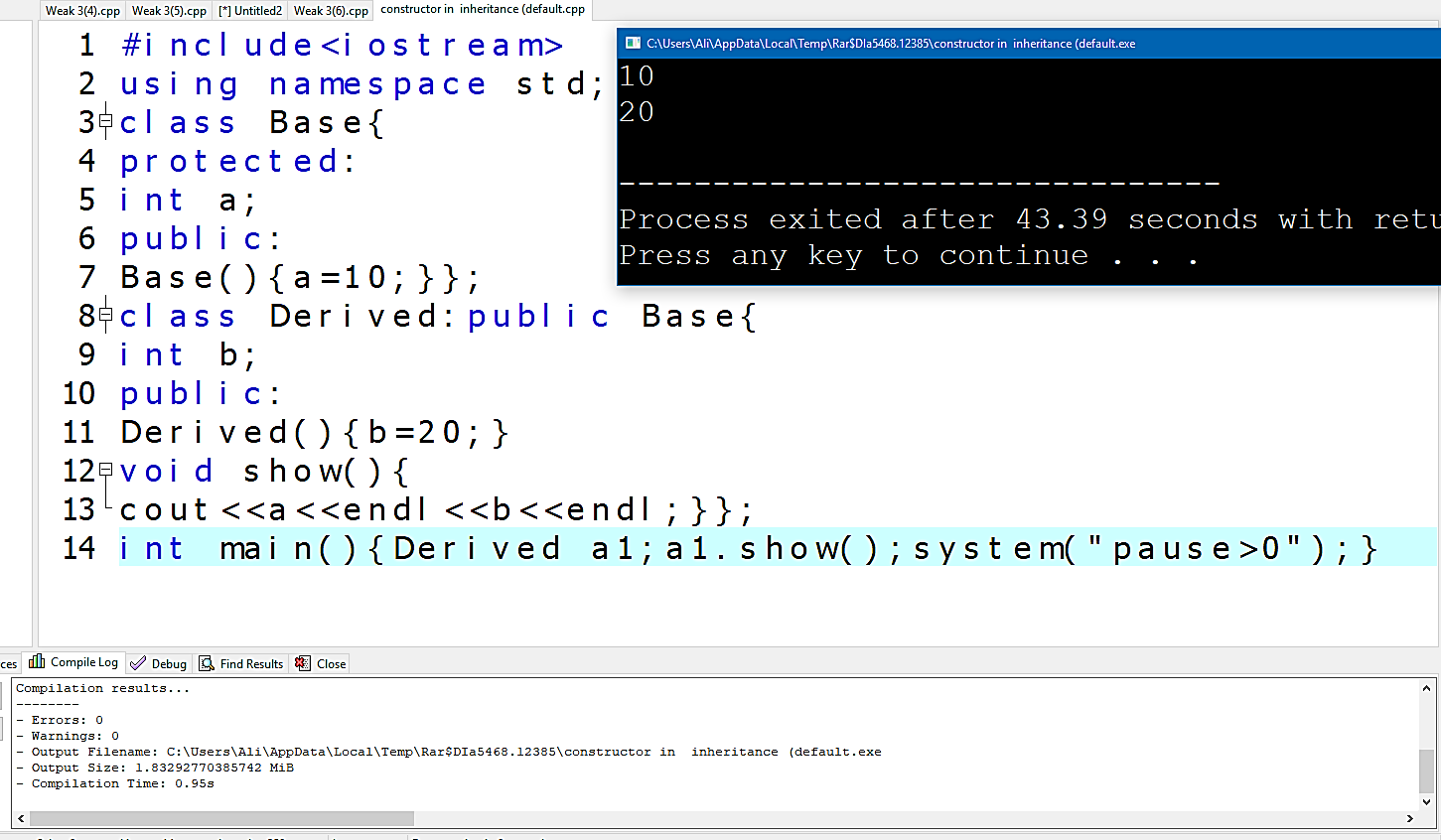
**void show(){**

**cout<<a<<endl<<b<<endl;}};**

**int main(){**

**Derived a1;a1.show();system("pause>0");**

**}**

**Output:**

**6-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**private:**

**int a;**

**public:**

**A(int z){a=z;}**

**void show(){**

**cout<<a<<endl;}};**

**class B:public A{**

**private:**

**int b;**

**public:**

**B(int x , int m):A(m){b=x;}**

**void show(){**

**A::show();cout<<b<<endl;}};**

**class C:public B{**

**private:**

**int c;**

**public:**

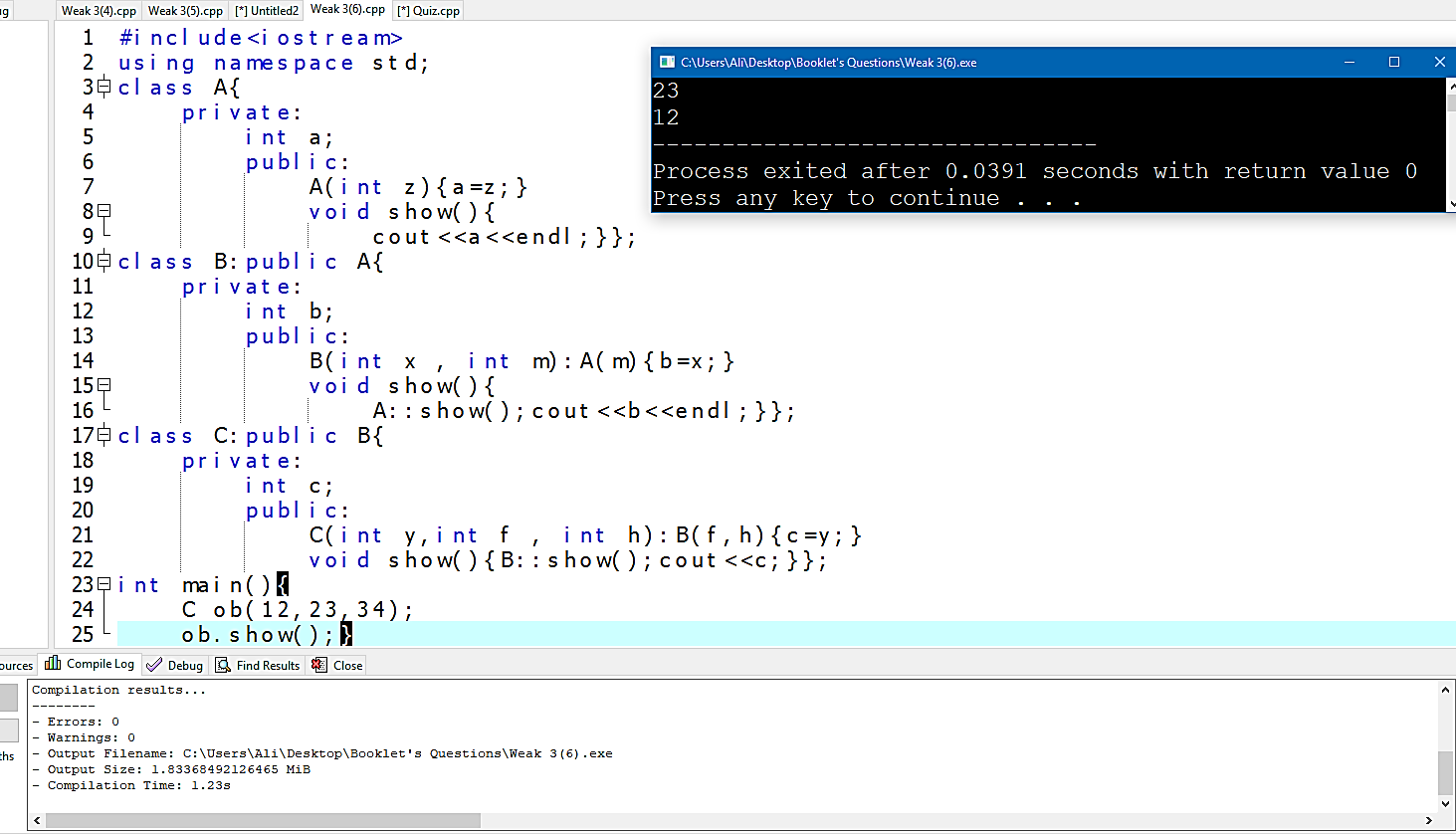
**C(int y,int f , int h):B(f,h){c=y;}**

**void show(){B::show();cout<<c;}};**

**int main(){**

**C ob(12,23,34);**

**ob.show();}**

**Output:**

**7-Program:**

**#include<iostream>**

**using namespace std;**

**class A{**

**public:**

**virtual void disp()=0;};**

**class B:public A{**

**int b;**

**public:**

**B(int x){**

**b=x;}**

**void disp()**

**{cout<<"Class B and b"<<b;}};**

**class C:public A{**

**int c;**

**public:**

**C (int x){**

**c=x;}**

**void disp(){cout<<"Class C and c="<<c;}};**

**int main(){**

**A \*p;**

**B o1(10);**

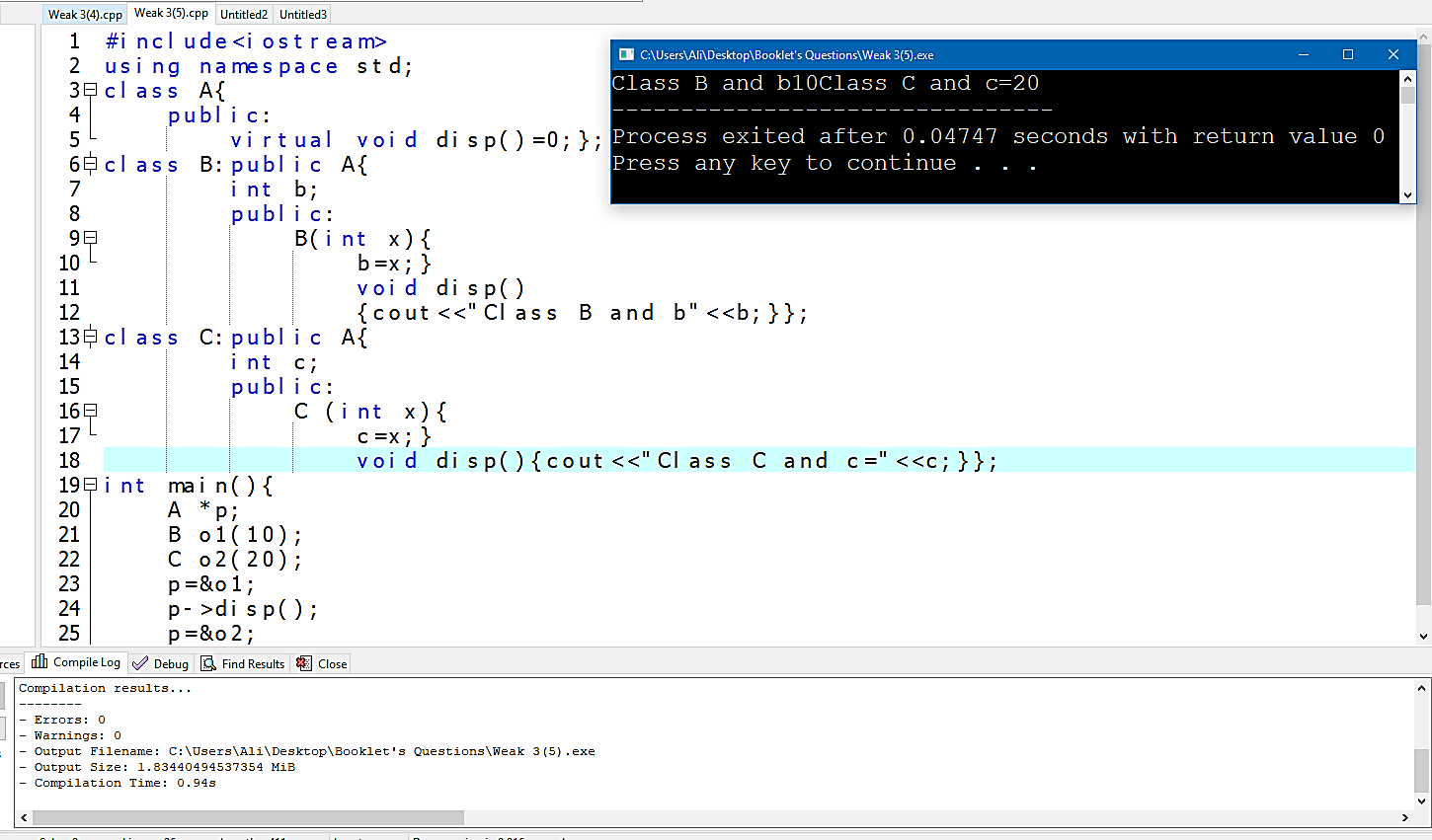
**C o2(20);**

**p=&o1;**

**p->disp();**

**p=&o2;**

**p->disp(); }**

**Output:**