DSA0136-OBJECT ORIENTED PROGRAMMING WITH C++

DATE:30-09-22

NAME: c,varshitha
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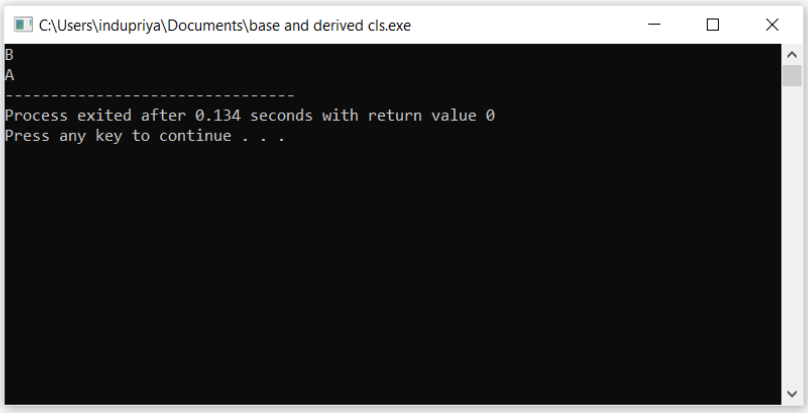
1.WRITE A C++ PROGRAAM TO DERIVE CLASS FROM BASE CLASS.

```cpp
using namespace std;
#include<iostream>
class base
{
public:
    void a()
    {
        cout<<"\nA";
    }
};
class derived:public base
{
public:
    void b()
    {
        cout<<"B";
    }
};
int main()
{
    derived B;
    B.b();
    B.a();
    return 0;
}
```



2.WRITE APROGRAM TO CALCULATE THE BONUS OF THE EMPLOYEE,THE CLASS MASTER DERIVE THE INFORMATION FROM BOTH ADMIN AND ACCOUNT CLASS WHICH DERIVE INFORMATION FROM THE CLASS PERSON.CREATE A BASE AND ALL DERIVED CLASS WITH NECESSARY FUNCTIONS.

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```
using namespace std;
#include <iostream>
class master
{
    int emp_id;
    char emp_name;
    public:
        void getdata()
        {
            cin>>emp_id>>emp_name;
        }
};
class admin:public master
{
    int bp;
    public:
        void getdata1()
        {
            cin>>bp;
        }
};
class account:public master
{
    public:
        int hra,ta,da,bp,home,pf;
        void getdata2()
        {
            hra=bp*15/100;
            ta=bp*20/100;
            da=bp*100/100;
            cin>>home>>pf;
        }
};
class person:public admin,public account
{
    public:
        void getdata3()
        {
```

```
        }
};
class account:public master
{
    public:
        int hra,ta,da,bp,home,pf;
        void getdata2()
        {
            hra=bp*15/100;
            ta=bp*20/100;
            da=bp*100/100;
            cin>>home>>pf;
        }
};
class person:public admin,public account
{
    public:
        void getdata3()
        {
            int emp_id,emp_name,bp;
            cout<<"emp_id";
            cin>>emp_id;
            cout<<"emp_name";
            cin>>emp_name;
            int gs=hra+da+ta;
            int ded=home-pf;
            int ns=gs-ded;
        }
};
main()
{
    person p;
    p.getdata3();
    p.getdata2();
    p.getdata1();
    master m;
    m.getdata();
}
```

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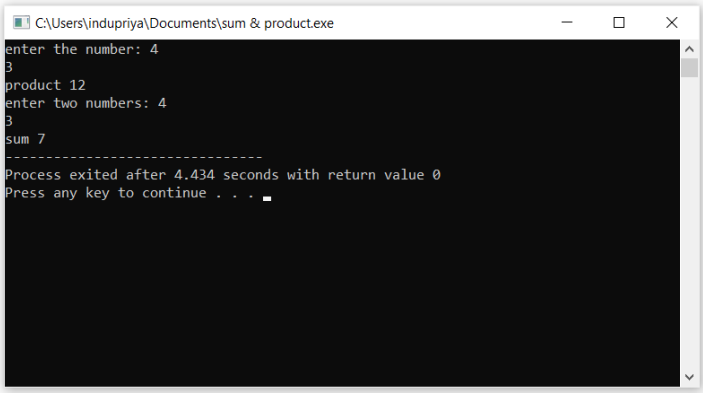
3.DEVELOP A C++ PROGRAM TO FIND THE SUM AND PRODUCT OF TWO NUMBER USING SINGLE INHERITANCE.

```
using namespace std;
#include <iostream>
class sum
{
    int x,y,z;
    public:
        void add()
        {
            cout<<"\nenter two numbers: ";
            cin>>x>>y;
            z=x+y;
            cout<<"sum "<<z;
        }
};
class product:public sum
{
    int a,b,c;
    public:
        void display()
        {
            cout<<"enter the number: ";
            cin>>a>>b;
            c=a*b;
            cout<<"product "<<c;
        }
};
int main()
{
    product p;
    p.display();
    p.add();
    return 0;
}
```



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4.ASSUME THAT TEST RESULT OF BATCH OF STUDENTS STORED IN THREE CLASSES.CLASS STUDENT STORES THE ROLL NO,CLASS TEST STORES MARKS OBTAINED FOR 3 SUBJECTS AND CLASS RESULTS CONTAINS TOTAL MARKS FOR THE TESTS.THE CLASS RESULT INHERIT THE DETAILS OF THE MARKS OBTAINED IN THE TEST AND ROLL NUMBER OF THE STUDENTS THROUGH THE DERIVED CLASS.

```
1  using namespace std;
2  #include <iostream>
3  class student
4  {
5      int rollno;
6  public:
7      void a()
8      {
9          cout<<"enter rollno: ";
10         cin>>rollno;
11     }
12 };
13 class test:public student
14 {
15 public:
16     int m1,m2,m3;
17     void display()
18     {
19         cout<<"enter marks: ";
20         cin>>m1>>m2>>m3;
21     }
22 };
23 class result:public test
24 {
25 public:
26     int tot,m1,m2,m3;
27     void b()
28     {
29         tot=m1+m2+m3;
30         cout<<"total marks"<<tot;
31     }
32 };
33 main()
34 {
35
36     result r;
37     r.a();
38     r.display();
39     r.b();
40 }
```

```
C:\Users\indupriya\Documents\student  results(inheritance).exe
enter rollno: 192110486
enter marks: 6
6
4
total marks16
--------------------------------
Process exited after 17.17 seconds with return value 0
Press any key to continue . . .
```

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5.MAKE A CLASS NAME FRUIT WITH THE DATA MEMBER TO CALCULATE THE NUMBER OF FRUITS.CREATE OTHER TWO CLASSES NAMES APPLE AND MANGO,TO CALCULATE THE NUMBER OF APPLES AND MANGOES IN THE BASKET.PRINT THE NUMBER OF FRUITS IN EACH TYPE AND TOTAL NUMBER FRUITS IN THE BASKET.

```cpp
using namespace std;
#include <iostream>
class fruit
{
    public:
        int z;
        void a()
        {
            cout<<"total fruits: ";
            cin>>z;
        }
};
class apple:public fruit
{
    public:
        int x;
        void b()
        {
            cout<<"enter number of apples,";
}};
class mango:public fruit
{
    public:
        int y;
        void c()
        {
            cout<<"enter number of mango: ";
}};
class total:public apple,public mango
{
    public:
        int x,y,z;
        void getdata()
        {
            cin>>x>>y;
            z=x+y;
            cout<<"total fruits "<<z;
}};
int main()
{
    total t;
    t.b();
    t.c();
    t.getdata();
    return 0;
}
```