PRN: 2020BTEIT00041

Virtual Base Class:

CODE:

```cpp
/*
    PRN: 2020BTEIT00041
    Virtual Base Class:
*/

#include<bits/stdc++.h>
using namespace std;

class student                          //Base Class
{
    public:
    int roll;
    string name;
    void get_name();
    void put_name();
    void get_number();
    void put_number();

};

void student::get_name()
{
    string s;
    cout<<"Enter the name of the student: "<<endl;
    cin>>s;
    name = s;
}

void student::put_name()
{
    cout<<"Name of the student: "<<name<<endl;
}

void student::get_number()
{
    int r;
    cout<<"Enter the roll no. of the student: "<<endl;
    cin>>r;
    roll = r;
}

void student::put_number()
{
    cout<<"Roll no. of the student: "<<roll<<endl;
}

class test : virtual public student                     // Derieved Class
{
    public:
    int t1,t2;
    void get_marks();
    void put_marks();

};

void test::get_marks()
{
    int T1,T2;
    cout<<"Enter the Marks of the student: "<<endl;
    cout<<"T1: ";
    cin>>T1;
    cout<<"T2: ";
    cin>>T2;
    t1=T1;
    t2=T2;
}

void test::put_marks()
```

```cpp
69     {
70         cout<<"The marks of the student in T1 are : "<<t1<<endl;
71         cout<<"The marks of the student in T2 are : "<<t2<<endl;
72     }
73
74     class sports : virtual public student                    // Derieved Class
75     {
76         public:
77         int score;
78         void get_score();
79         void put_score();
80     };
81
82     void sports::get_score()
83     {
84         int s;
85         cout<<"Enter the Score of the student in sports: "<<endl;
86         cin>>s;
87         score=s;
88     }
89
90     void sports::put_score()
91     {
92         cout<<"The Score of the student in sports is : "<<score<<endl;
93     }
94
95     class result : public test,public sports                 // Derieved Class
96     {
97         public:
98         int total;
99         void getEverything();
100        void display();
101
102    };

103
104    void result::getEverything()
105    {
106        get_name();
107        get_number();
108        get_marks();
109        get_score();
110    }
111
112    void result::display()
113    {
114        cout<<"\n\n";
115        cout<<"----------------Result----------------\n";
116        put_name();
117        put_number();
118        put_marks();
119        put_score();
120        cout<<"The Total of marks and score : "<<(t1+t2+score)<<endl;
121        cout<<"---------------------------------------\n";
122        cout<<"---------------------------------------\n";
123
124    }
125
126    int main()
127    {
128        result s1;
129        s1.getEverything();
130        s1.display();
131
132    return 0;
133    }
```

OUTPUT:

```
Enter the name of the student:
Om
Enter the roll no. of the student:
41
Enter the Marks of the student:
T1: 99
T2: 98
Enter the Score of the student in sports:
100


----------------Result----------------
Name of the student: Om
Roll no. of the student: 41
The marks of the student in T1 are : 99
The marks of the student in T2 are : 98
The Score of the student in sports is : 100
The Total of marks and score : 297
---------------------------------------
---------------------------------------
```