

Practical 05 (22001212)

01)

```
1      #include <iostream>
2
3      using namespace std;
4
5      class Shape
6      {
7      protected:
8          float width, height;
9      public:
10         void setWidth(float w) {
11             width=w;
12         }
13         float getWidth() {
14             return width;
15         }
16         void setHeight(float h) {
17             height=h;
18         }
19         float getHeight() {
20             return height;
21         }
22         Shape(float w, float h) {
23             width=w;
24             height=h;
25         }
26         float showWidth() {
27             return width;
28         }
29         float showHeight() {
30             return height;
31         }
32         float AreaOfATriangle() {
33             float area=(width*height)/2;
34             return area;
35         }
36         float AreaOfARectangle() {
37             float area=width*height;
38             return area;
39         }
40     };
```

```

41
42     int main()
43     {
44         Shape s1=Shape(6,5);
45         float slwidth,slheight;
46         slwidth=s1.showWidth();
47         slheight=s1.showHeight();
48         float a1,a2;
49         a1=s1.AreaOfATriangle();
50         a2=s1.AreaOfARectangle();
51         cout<<"\nArea of a Triangle and a Rectangle which are having width "<<slwidth<<" and height "<<slheight<<endl;
52         cout<<"Triangle - "<<a1<<endl;
53         cout<<"Rectangle - "<<a2<<endl;
54
55
56         return 0;
57     }
58

```

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```

Area of a Triangle and a Rectangle which are having width 6 and height 5
Triangle - 15
Rectangle - 30

```

```

Process returned 0 (0x0)   execution time : 0.047 s
Press any key to continue.

```

02)

```

1      #include <iostream>
2
3      using namespace std;
4
5      class Student{
6      public:
7          string Name;
8          int rollNo;
9
10         void showInfo() {
11             cout<<"Name -"<<Name<<endl;
12             cout<<"Roll No -"<<rollNo<<endl;
13         }
14     };
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90
91     int main() {
92         //Question 02
93         Student s1={"John",2};
94         s1.showInfo();
95

```

```
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Name -John
Roll No -2
```

03)

```
16 class Triangle{
17 public:
18     int s1;
19     int s2;
20     int s3;
21
22     int Area() {
23         int area=(s1*s2)/2;
24         return area;
25     }
26
27     int Perimeter() {
28         int perimeter=s1+s2+s3;
29         return perimeter;
30     }
31 };
```

```
96 //Question 03
97 Triangle t1={3,4,5};
98 cout<<"\nArea of the triangle having sides of "<<t1.s1<<","<<t1.s2<<" and "<<t1.s3<<endl;
99 cout<<t1.Area()<<"\n";
100 cout<<"\nPerimeter of the triangle having sides of "<<t1.s1<<","<<t1.s2<<" and "<<t1.s3<<endl;
101 cout<<t1.Perimeter()<<"\n";
102
```

```
Area of the triangle having sides of 3,4 and 5
6

Perimeter of the triangle having sides of 3,4 and 5
12
```

04)

```
33 class TriangleProtected{
34     protected:
35         int s1;
36         int s2;
37         int s3;
38
39     public:
40         void setSide1(int S1) {
41             s1=S1;
42         }
43         int getSide1() {
44             return s1;
45         }
46         void setSide2(int S2) {
47             s2=S2;
48         }
49         int getSide2() {
50             return s2;
51         }
52         void setSide3(int S3) {
53             s3=S3;
54         }
55         int getSide3() {
56             return s3;
57         }
58         TriangleProtected(int S1,int S2,int S3) {
59             s1=S1;
60             s2=S2;
61             s3=S3;
62         }
63         int Area() {
64             int area=(s1*s2)/2;
65             return area;
66         }
67
68         int Perimeter() {
69             int perimeter=s1+s2+s3;
70             return perimeter;
71         }
72     };
73
```

```
103 //Question 04
104 TriangleProtected T1=TriangleProtected(3,4,5);
105 cout<<"\nArea of the triangle having sides of "<<T1.getSide1() <<","<<T1.getSide2()<<" and "<<T1.getSide3() <<endl;
106 cout<<T1.Area()<<"\n";
107 cout<<"\nArea of the triangle having sides of "<<T1.getSide1() <<","<<T1.getSide2()<<" and "<<T1.getSide3() <<endl;
108 cout<<T1.Perimeter()<<"\n";
109
```

```
Area of the triangle having sides of 3,4 and 5
6

Area of the triangle having sides of 3,4 and 5
12
```

05)

```
74  class Area{
75      public:
76          int length;
77          int breadth;
78
79      int setDim(int l,int b){
80          length=l;
81          breadth=b;
82          return length,breadth;
83      }
84
85      void getArea(){
86          int area=length*breadth;
87          cout<<"\nArea of the Rectangle is: "<<area;
88      }
89  };
```

```
110      //Question 05
111      int l1,b1;
112      cout<<"\nEnter the value for the length of the Rectangle :";
113      cin>>l1;
114      cout<<"\nEnter the value for the breadth of the Rectangle :";
115      cin>>b1;
116      Area R1={l1,b1};
117      R1.setDim(l1,b1);
118      R1.getArea();
119
```

```
Enter the value for the length of the Rectangle :6
Enter the value for the breadth of the Rectangle :20
Area of the Rectangle is: 120
Process returned 0 (0x0)   execution time : 491.966 s
Press any key to continue.
```

06)

```
91 class Employee{
92     protected:
93         int salary;
94     public:
95         string name;
96         int yearOfJoining;
97         string address;
98
99     void showInfo() {
100         cout<<name<<"\t";
101         cout<<yearOfJoining<<"\t\t\t";
102         cout<<address<<"\t";
103         cout<<"\n";
104     }
105 };
106
```

```
136 //Question 06
137 cout<<"\nName"<<"\t"<<"Year of Joining"<<"\t\t"<<"Address\n";
138 Employee e1;
139 e1.name="Robert";
140 e1.yearOfJoining=1994;
141 e1.address="64C- WallsStreat";
142 Employee e2;
143 e2.name="Sam";
144 e2.yearOfJoining=2000;
145 e2.address="68D- WallsStreat";
146 Employee e3;
147 e3.name="John";
148 e3.yearOfJoining=1999;
149 e3.address="26B- WallsStreat";
150 e1.showInfo();
151 e2.showInfo();
152 e3.showInfo();
153
```

Name	Year of Joining	Address
Robert	1994	64C- WallsStreat
Sam	2000	68D- WallsStreat
John	1999	26B- WallsStreat