



ROLL NO : 20P-0165

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Section : 2A**

CODE NO 1



```
1 #include <iostream>           // Including the Input-Output Stream
2
3 using namespace std;        // Using std namespace to use cout
4
5 class Circle    // Declaration of class Name Circle
6 {
7     public:   // Access Specifier of public mean it can be accessed in main
8         double radius;    // radius of data type double
9         double ComputerArea(); // Method
10    {
11        return 3.14 * radius * radius; // Area Calculating
12    }
13 };
14
15 int main() // Main Function to call our class and make objects of it
16 {
17     Circle obj;    // Instance of Class named Circle Instance name = obj
18     obj.radius = 5.5; // Setting radius to 5.5
19
20     cout << "The Radius is = " << obj.radius << endl; // Printing the Radius
21     cout << "The Area is = " << obj.ComputerArea() << endl; // Printing the area
22     return 0; // Returning an Integer value
23 }
```

CODE NO 2



```
1 #include <iostream>          // Including the Input-Output Stream
2
3 using namespace std;        // Using std namespace to use cout
4
5 class Circle    // Class Name of Circle
6 {
7     private:   // Access Specifier private that it only accessed in the class
8         double radius = 1.5;
9     public:    // Access Specifier of public that it can be accessed in main
10        double computeArea() // Method that will calculate area
11    {
12        return 3.14 * radius * radius;
13    }
14};
15
16 int main()    // main function where we make instances of class
17 {
18     Circle obj;    // Instance of Circle Class named as obj
19
20     // obj.radius = 5; // Cannot do that because radius is private
21
22     cout << "Area is = " << obj.computeArea() << endl;    // Printing the area and private radius will be used
23     return 0;
24 }
```

CODE NO 3



```
1 #include <iostream>           // Including the Input-Output Stream
2
3 using namespace std;        // Using std namespace to use cout
4
5 class Circle    // Declaration of the class and class name is Circle
6 {
7     private:   // Private Access Specifier that these variables can only be accessed in class
8         double radius = 1.5; // radius variable of data type double
9     public:    // Access Specifier of public that it can be accessed in main
10        double computeArea() //Function that will return double
11    {
12        return 3.14 * radius * radius; // returning the area
13    }
14    void setRadius(double radius) // Set radius of private
15    {
16        this->radius = radius; // Setting the class radius to given value by user
17    }
18
19    double getRadius()
20    {
21        return radius; // Getting the radius
22    }
23};
24
25 int main()
26 {
27    Circle obj; // Instance of class Circle of name obj
28    double radius = 0; // Variable of data type double
29    cout << "Enter the Radius: "; // Enter the Radius
30    cin >> radius; // Storing radius in radius variable using Extraction operator
31
32    obj.setRadius(radius); // Caaling the Set radius function
33    cout << "The Radius is = " << obj.getRadius() << endl; // Getting the radius the private radius
34    cout << "The area is = " << obj.computeArea() << endl; // Gettting the area
35    return 0; // Returning the integer value
36}
37
38
```

CODE NO 4



```
1 #include <iostream>           // Including the Input-Output Stream
2
3 using namespace std;         // Using std namespace to use cout
4
5 class Parent    // Claass name as Parent
6 {
7     protected: // Access Specifier Protected
8         int protectedID;
9
10 };
11
12 class Child : public Parent // Child Class
13 {
14     public:
15         void setId(int id)
16     {
17         protectedID = id;
18     }
19     void displayId() // Function to display the ID
20     {
21         cout << "Protected id = " << protectedID << endl;
22     }
23
24 };
25
26 int main()
27 {
28     Child obj1; // Making the Object of class Child
29
30     obj1.setId(81); // Setting the Protected variable to 81
31     obj1.displayId(); // Displaying the ID
32     return 0; // Returining the Integer
33 }
```

CODE NO 5



```
1 #include <iostream>           // Including the Input-Output Stream
2
3 using namespace std;         // Using std namespace to use cout
4
5 class Employee{             // Class name of Employee
6     public:                 // Access Specifier of public
7         Employee()          // Default Constructor which called when object of class is maked
8     {
9         cout << "Default Constructor Called" << endl;
10    }
11 };
12 int main()
13 {
14     Employee e1;           // 1st Instance oc Employee
15     Employee e2;           // 2nd Instance of Employee
16     return 0;
17 }
```

CODE NO 6

```
● ● ●

1 #include <iostream> // Including the Header file of Input-Output Stream
2 #include <string.h>
3
4 using namespace std; // Using the Namespace of std
5
6 class Student // Class Declaration of name Student
7 {
8     // ByDefault the Access Specifier is private
9     int Roll;
10    char Name[25];
11
12    float Marks;
13    // Access Specifier Declaration of public
14 public:
15     Student() // Default Construct that call on instance creation
16     {
17         Roll = 1;
18         strcpy(Name, "Kumar");
19         Marks = 78.42;
20     }
21
22     void Display() // Function that display the private members
23     {
24         cout << "The Roll No: " << Roll << endl;
25         cout << "The Name: " << Name << endl;
26         cout << "The marks: " << Marks << endl;
27     }
28
29 };
30
31 int main()
32 {
33     Student S; // Instance creation
34     S.Display(); // Calling the method
35     return 0; // Returning the integer
36
37 }
38
```

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