AIM: Write C# programs for object oriented concepts of C# such as:

a. Program using classes
b. Inheritance
c. Namespace

Program using Classes:

1. **Program to demonstrate how to define the and how to access members of class.**

SOURCE CODE-

```
using System;
public class Student
{
   int roll_no;..
   string student_name;

   public static void Main(string[] args)
   {
      Student std= new Student();
      std.roll_no = 101;
      std.student_name = "Siddhi";
      Console.WriteLine (std.roll_no);
      Console.WriteLine (std.student_name);

   }

}
```

```
Output
mono /tmp/udjPfhOcdD.exe
101Siddhi
```

2. **Program to demonstrate the class where we are having the main() method in another.**

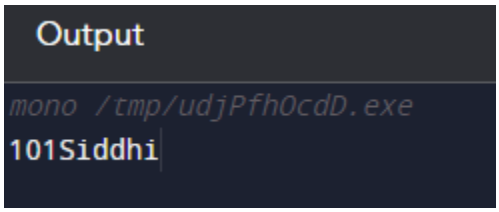
SOURCE CODE:

```
using System;
public class Student
{
  public int roll_no;
  public string student_name;
}
class TestStudent
{
   public static void Main(string[] args)
   {
```

```
        Student std= new Student();
        std.roll_no = 101;
        std.student_name = "Siddhi";
        Console.WriteLine (std.roll_no);
        Console.WriteLine (std.student_name);

    }

}
```



Inheritance:

SOURCE CODE:

```
using System;
namespace InheritanceApplication
{

class Shape
{

   public void setWidth(int w)
   {
      width = w;
   }

   public void setHeight(int h)
   {
      height = h;
   }
   protected int width;
   protected int height;
}

// Derived class
class Rectangle: Shape
{

   public int getArea()
   {
```

```
        return (width * height);
    }
}

class RectangleTester
{

    static void Main(string[] args)
    {
        Rectangle Rect = new Rectangle();

        Rect.setWidth(5);
        Rect.setHeight(7);

        // Print the area of the object.
        Console.WriteLine("Total area: {0}",  Rect.getArea());
        Console.ReadKey();
    }
}
}
```

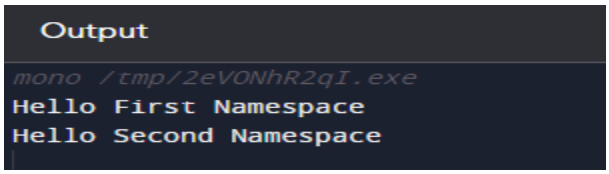
Namespace:

SOURCE CODE:

```
using System;
namespace First {
public class Hello
{
    public void sayHello() { Console.WriteLine("Hello First Namespace"); }
}
}
namespace Second
{
    public class Hello
    {
        public void sayHello() { Console.WriteLine("Hello Second Namespace"); }
    }
}
public class TestNamespace
{
    public static void Main()
    {
        First.Hello h1 = new First.Hello();
        Second.Hello h2 = new Second.Hello();
        h1.sayHello();
```

```
        h2.sayHello();

    }
}
```


Output
mono /tmp/2eVONhR2qI.exe
Hello First Namespace
Hello Second Namespace