



01CE0523 - .NET Technologies

# .NET TECHNOLOGIES (01CE0523) Lab Manual

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Batch: A



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11.	Program for Creating and using APIs			

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# **Experiment 1**

### AIM: Program on Class, Object and Constructor

```
Code: using System;
     public class Student
         String name;
         double cgpi;
         int sem;
         public Student() {
             Console.WriteLine("1. Calling parameterless constructor...");
         }
         public Student(String name)
             this.name = name;
             Console.WriteLine("2. Name: "+ this.name);
         }
         public Student(String name, double cgpi)
         {
             this.name = name;
             this.cgpi = cgpi;
             Console.WriteLine("3. Name: "+ this.name + " CGPI: "+ this.cgpi);
         }
         public Student(String name, double cgpi, int sem)
         {
             this.name = name;
             this.cgpi = cgpi;
             this.sem = sem;
             Console.WriteLine("4. Name: "+ this.name + " CGPI: "+ this.cgpi +"
     Sem: "+ this.sem);
         }
```



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```
public static void Main(String[] args)
    {
        Console.WriteLine("Menu\n");
        Console.WriteLine("1. Parameterless Constructor...");
        Console.WriteLine("2. Constructor with one parameter...");
        Console.WriteLine("3. Constructor with two parameter...");
        Console.WriteLine("4. Constructor with three parameter...");
        Console.WriteLine("Enter: ");
        int n = Convert.ToInt32(Console.ReadLine());
        switch (n)
        {
            case 1: Student s1 = new Student();
                break;
            case 2: Student s2 = new Student("Asif");
                break;
            case 3: Student s3 = new Student("Asif", 9.32);
                break;
            case 4: Student s4 = new Student("Asif", 9.32, 5);
                break;
            default: Console.WriteLine("Invalid Input");
                break;
        }
    }
}
```



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# **Output:**

```
Menu

1. Parameterless Constructor...
2. Constructor with one parameter...
3. Constructor with two parameter...
4. Constructor with three parameter...
Enter:
3
3. Name: Asif CGPI: 9.32
```



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# **Experiment 2**

**AIM**: Program on Inheritance and Interface

### Code:

```
interface C1
{
    void methodC1();
}
interface C2
{
    void methodC2();
}
interface C3
{
    void methodC3();
}
public class IC : C1, C2, C3
{
    public void methodC1()
    {
        Console.WriteLine("Method C1");
    }
    public void methodC2()
    {
        Console.WriteLine("Method C2");
    }
    public void methodC3()
        Console.WriteLine("Method C3");
    }
}
```



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```
public class R1
{
    public void methodR1()
    {
        Console.WriteLine("MethodR1");
    }
}
class R11 : R1
    public void methodR11()
        Console.WriteLine("MethodR11");
    }
}
class R12 : R1
{
    public void methodR12()
    {
        Console.WriteLine("MethodR12");
    }
}
class R111 : R11
    public void methodR111()
    {
        Console.WriteLine("MethodR111");
    }
}
class R112 : R12
{
    public void methodR112()
```



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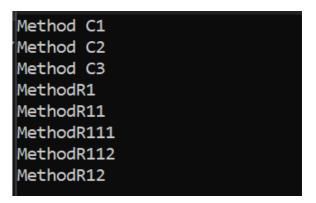
```
{
        Console.WriteLine("MethodR112");
    }
}
public class Prac2
{
    public static void Main(String[] args)
        IC obj1 = new IC();
        obj1.methodC1();
        obj1.methodC2();
        obj1.methodC3();
        R111 r1 = new R111();
        r1.methodR1();
        r1.methodR11();
        r1.methodR111();
        R112 r2 = new R112();
        r2.methodR112();
        r2.methodR12();
    }
}
```



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# **Output:**





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### **Experiment 3**

### **AIM: Program on Polymorphism and Exception Handling**

Code:

```
public class Calculator
{
    public void Add(int a, int b)
        Console.WriteLine("Add: "+a + " + " + b + ": "+(a+b));
    }
    public void Add(int a, int b, int c)
        Console.WriteLine("Add: "+a + " + " + b + " + " + c + ": "+(a+b+c));
    public int Divide(int a, int b)
        int d = a / b;
        return d;
    }
}
class Prac3
    public static void Main(String [] args)
    {
        Console.WriteLine("Choose :\n");
        Console.WriteLine("1. Polymorphism");
        Console.WriteLine("2. Exception Handling\n");
        int n = Convert.ToInt32(Console.ReadLine());
        switch (n){
            case 1: Calculator c = new Calculator();
                    c.Add(1, 2);
                    c.Add(2, 3, 4);
                break;
            case 2: Console.WriteLine("Exception Handling...");
                    Calculator c1 = new Calculator();
                try{
                    int d = c1.Divide(10, 0);
                }catch(ArithmeticException e){
                    Console.WriteLine(e);
                break;
```

}}}

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### **Output:**

```
Choose:

1. Polymorphism
2. Exception Handling

1
Add: 1 + 2: 3
Add: 2 + 3 + 4: 9
```

```
Choose:

1. Polymorphism
2. Exception Handling

2
Exception Handling...

System.DivideByZeroException: Attempted to divide by zero.
    at Calculator.Divide(Int32 a, Int32 b) in C:\Users\safet\source\repos\Prac3\Program.cs:line 13 at Prac3.Main(String[] args) in C:\Users\safet\source\repos\Prac3\Program.cs:line 35
```



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### NOTE:

### AIM:

- Font Type: Calibri (Body)

- Font Size: 14

- Bold

- Line Spacing: 1.5

### Code

- Font Type: Cascadia Mono

- Font Size: 10

- Normal

- Line Spacing: 1.0