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|------------------|--------------------------|----------------|------------|
| Ex. No. 0 | BASIC C# PROGRAMS | | |
| Date of Exercise | 20.07.2016 | Date of Upload | 24.08.2016 |

1. Command line arguments

```
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ZerothExperiment
{
    using System;

    class Program
    {
        static void Main(string[] args)
        {
            System.Console.WriteLine("This is line");
            for (int i = 0; i < args.Length; i++)
                System.Console.WriteLine(args[i]);
        }
    }
}
```

OUTPUT:

```
C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>Program MYCOMMAND
This is line
MYCOMMAND
C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>
```

2. Multiple Main

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ZerothExperiment
{
    class A
    {
        public static void Main()
        {
            System.Console.Write("I AM IN FUNCTION A");
            System.Console.ReadLine();
            B.Main();
        }
    }
}
```

```

    }
}
class B
{
    public static void Main()
    {
        System.Console.Write("I am in FUNCTION B");
        System.Console.ReadLine();
    }
}
}

```

OUTPUT:

```

:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>Program MYCOMMAND
his is line
VCOMMAND

:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>csc Program.cs
icrosoft (R) Visual C# Compiler version 1.2.0.60317
opyright (C) Microsoft Corporation. All rights reserved.

:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>Program.cs /main:A
:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>Program /main:A
his is line
main:A
:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>

```

3. Params keyword

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ZerothExperiment
{
    class Test1
    {
        public void fun(params object[] list)
        {
            for (int i = 0; i < list.Length; i++)
                Console.Write(list[i] + " ");
            Console.WriteLine();
        }
        public static void Main()
        {
            Test1 t = new Test1();
            t.fun(1, 2, 3);
            t.fun(6, 7, 8, 9, 10);
            t.fun("hi", "how", "are", "you");
            Console.ReadLine();
        }
    }
}

```

```
}
```

```
}
```

OUTPUT:

```
C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>csc Program.cs
Microsoft (R) Visual C# Compiler version 1.2.0.60317
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>Program.exe
1 2 3
6 7 8 9 10
hi how are you
```

4. Pass by value & Pass by reference (out, ref keyword and array)

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ZerothExperiment
{
    class Test
    {
        public void valuechange(int value)
        {
            value = value + 10;
        }
        public void refer(ref int value)
        {
            value = 100;
        }
        public void array(int[] value)
        {
            value[1] = 10;
        }
        public void outvalue(out int value)
        {
            value = 100;
        }
        public static void Main()
        {
            int value1 = 123;
            int value2 = 123;
            int z;
            Test obj = new Test();
            obj.valuechange(value1);
```

```

        System.Console.WriteLine("Passing 123 through VALUE  "+value1);
        obj.refer(ref value2);
        System.Console.WriteLine("Passing 123 through REF  " + value2);
        obj.outvalue(out z);
        System.Console.WriteLine("Passing through OUT  " + z);
        int[] arr = { 1, 2, 3, 4, 5 };
        obj.array(arr);
        System.Console.WriteLine("Passing ARRAY  " + arr[1]);
        Console.ReadLine();
    }
}
}

```

OUTPUT:

```

C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>csc Program.cs
Microsoft (R) Visual C# Compiler version 1.2.0.60317
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>Program.exe
Passing 123 through VALUE  123
Passing 123 through REF  100
Passing through OUT  100
Passing ARRAY  10

```

5. Create dll file (/t:library) and refer it in main program (/r:filename.dll)

MathClient.cs

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ZerothExperiment
{
    class Client
    {
        public static void Main()
        {
            MathLib mathObj = new MathLib();
            Console.WriteLine(mathObj.Add(7, 8));
        }
    }
}

```

MathLibrary.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ZerothExperiment
{
    public class MathLib
    {
        public int Add(int x, int y)
        {
            return x + y;
        }
    }
}
```

OUTPUT:

```
C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>cs
c /t:library MathLibrary.cs
Microsoft (R) Visual C# Compiler version 1.2.0.60317
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\chinnu\Documents\Visual Studio 2015\Projects\CSharpLab\ZerothExperiment\ZerothExperiment>cs
c MathClient.cs /r:MathLibrary.dll
Microsoft (R) Visual C# Compiler version 1.2.0.60317
Copyright (C) Microsoft Corporation. All rights reserved.
```