

# Phase 1

## Practical

### Namespace:

```
using System;

namespace NamespaceDemo
{
    namespace MorningGreeting
    {
        class Greet
        {
            private readonly string _name;
            public Greet(string name)
            {
                this._name = name;
            }

            public void Greeting()
            {
                Console.WriteLine("Good Morning!.. " + _name);
            }
        }
    }

    namespace AfternoonGreeting
    {
        //Intentionally giving the same name to the class
        class Greet
        {
            private readonly string _name;
            public Greet(string name)
            {
                this._name = name;
            }

            public void Greeting()
            {
                Console.WriteLine("Good Afternoon!.. " + _name);
            }
        }
    }

    class UseOfNameSpace
    {
        static void Main(string[] args)
        {
            // Creating object of Greet class of MorningGreeting namespace
            MorningGreeting.Greet morningGreet = new MorningGreeting.Greet("Mr. David");

            // Creating object of Greet class of AfternoonGreeting namespace
            AfternoonGreeting.Greet afternoonGreet = new AfternoonGreeting.Greet("Mr. John");

            morningGreet.Greeting();
            afternoonGreet.Greeting();
        }
    }
}
```

## Output:-

```
Microsoft Visual Studio Debug Console
Good Morning!.. Mr. David
Good Afternoon!.. Mr. John

C:\Users\ADMIN\Documents\MY\RKIT\Online Traning\Phase_1\Phase_1_Particles\bin\Debug\netcoreapp3.1\NamespaceDemo.exe (process 16528) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

## Class:

```
using System;

namespace ClassDemo
{
    class Employee
    {
        // Class Attribute
        private readonly string _name;

        // Constructor
        public Employee(string name)
        {
            _name = name;
        }

        // Class Method
        public string GetName()
        {
            return _name;
        }
    }

    class ClassDemo
    {
        static void Main()
        {
            // Object Created by calling Constructor.
            Employee employee = new Employee("David");

            // Access Method via object.
            Console.WriteLine(employee.GetName());
        }
    }
}
```

## Output:-

```
Microsoft Visual Studio Debug Console
David

C:\Users\ADMIN\Documents\MY\RKIT\Online Traning\Phase_1\ClassDemo\bin\Debug\netcoreapp3.1\ClassDemo.exe (process 684) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

## Variable Declaration:

```
using System;

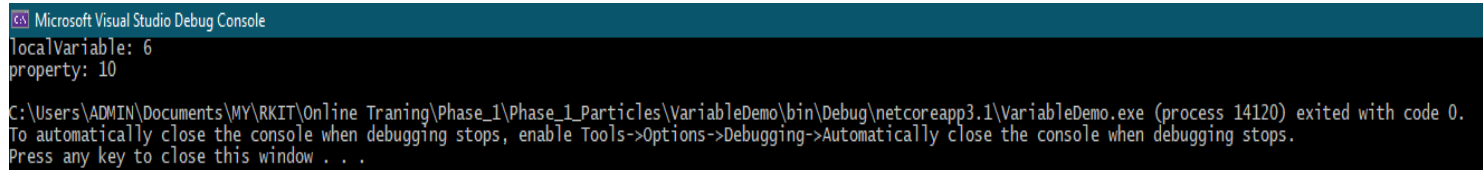
namespace VariableDemo
{
    class Program
    {
        // declaring Member Variable
        static int property;
        static void Main(string[] args)
        {
            // declaration of variable with initialization
            int localVariable = 5;

            // initialize with value
            property = 10;

            // override old value
            localVariable = 6;

            // getting data
            Console.WriteLine("localVariable: " + localVariable);
            Console.WriteLine("property: " + property);
        }
    }
}
```

## Output:



Microsoft Visual Studio Debug Console

```
localVariable: 6
property: 10
```

C:\Users\ADMIN\Documents\WY\RKIT\Online Traning\Phase\_1\Phase\_1\_Particles\VariableDemo\bin\Debug\netcoreapp3.1\VariableDemo.exe (process 14120) exited with code 0.  
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.  
Press any key to close this window . . .

## Method Declaration:

```
using System;

namespace MethodDemo
{
    class Program
    {
        // Method Declaration & Definition
        static void PrintHelloWorld()
        {
            Console.WriteLine("Hello World!");
        }

        static void Main(string[] args)
        {
```

```

        // Method Calling
        PrintHelloWorld();
    }
}

```

## Output: -

```

Microsoft Visual Studio Debug Console
Hello World!

C:\Users\ADMIN\Documents\MY\RKIT\Online Traning\Phase_1\Phase_1_Particles\MethodDemo\bin\Debug\netcoreapp3.1\MethodDemo.exe (process 16084) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

```

## Datatype Conversion:

```

using System;

namespace DatatypeConversionDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            // Implicit Conversion
            short smallData = 10;
            int normalData = smallData;
            long bigData = normalData;

            //Explicit Conversion
            normalData = (int)bigData;
            smallData = (short)normalData;

            Console.WriteLine("smallData: " + smallData + "\nnormalData: " + normalData +
"\nbigData: " + bigData);
        }
    }
}

```

## Output: -

```

Microsoft Visual Studio Debug Console
smallData: 10
normalData: 10
bigData: 10

C:\Users\ADMIN\Documents\MY\RKIT\Online Traning\Phase_1\Phase_1_Particles\DatatypeConversionDemo\bin\Debug\netcoreapp3.1\DatatypeConversionDemo.exe (process 17308) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

```

## Boxing/Unboxing:

```
using System;

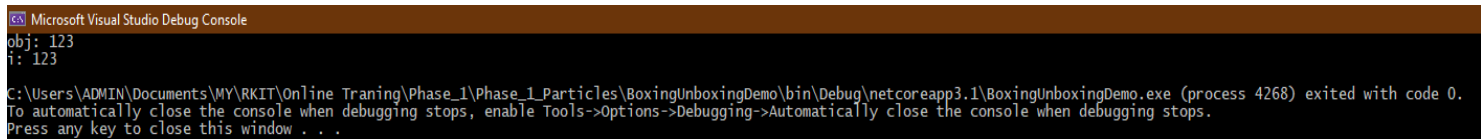
namespace BoxingUnboxingDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            //Implicit Boxing
            int i = 123;
            Object obj = i;

            Console.WriteLine("obj: " + obj);

            //Explicit Unboxing
            i = (int)obj;

            Console.WriteLine("i: " + i);
        }
    }
}
```

### Output:-



Microsoft Visual Studio Debug Console

```
obj: 123
i: 123
```

C:\Users\ADMIN\Documents\MY\RKIT\Online Traning\Phase\_1\Phase\_1\_Particles\BoxingUnboxingDemo\bin\Debug\netcoreapp3.1\BoxingUnboxingDemo.exe (process 4268) exited with code 0.  
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.  
Press any key to close this window . . .

## If/Else/Switch:

```
using System;

namespace IfElseSwitchDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.Write("Enter Day No.: ");
            int day = Convert.ToInt32(Console.ReadLine());

            //Demonstrate If/Else
            if (day > 0 && day <= 7)
            {
                Console.Write("Found day No. " + day + " Using If/Else is ");
                if (day == 1)
                    Console.WriteLine("Monday.");
                else if (day == 2)
                    Console.WriteLine("Tuesday.");
            }
        }
    }
}
```

```

else if (day == 3)
    Console.WriteLine("Wednesday.");
else if (day == 4)
    Console.WriteLine("Thursday.");
else if (day == 5)
    Console.WriteLine("Friday.");
else if (day == 6)
    Console.WriteLine("Saturday.");
else if (day == 7)
    Console.WriteLine("Saturday.");

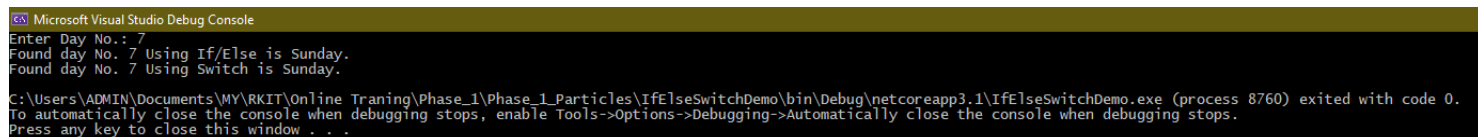
Console.Write("Found day No. " + day + " Using Switch is ");

//Demonstrate Switch
switch (day)
{
    case 1:
        Console.WriteLine("Monday.");
        break;
    case 2:
        Console.WriteLine("Tuesday.");
        break;
    case 3:
        Console.WriteLine("Wednesday.");
        break;
    case 4:
        Console.WriteLine("Thursday.");
        break;
    case 5:
        Console.WriteLine("Friday.");
        break;
    case 6:
        Console.WriteLine("Saturday.");
        break;
    case 7:
        Console.WriteLine("Sunday.");
        break;
    default:
        //Nothing to do here...
        break;
}

}
else
{
    Console.WriteLine("Enter valid integer between [1-7].");
}
}
}
}
}

```

## Output:-



Microsoft Visual Studio Debug Console

```

Enter Day No.: 7
Found day No. 7 Using If/Else is Sunday.
Found day No. 7 Using Switch is Sunday.
C:\Users\ADMIN\Documents\MY\RKIT\Online Traning\Phase_1\Phase_1_Particles\IfElseSwitchDemo\bin\Debug\netcoreapp3.1\IfElseSwitchDemo.exe (process 8760) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

```