Phase 1

Practical

Namespace:

```csharp
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();
        }
    }
}
```
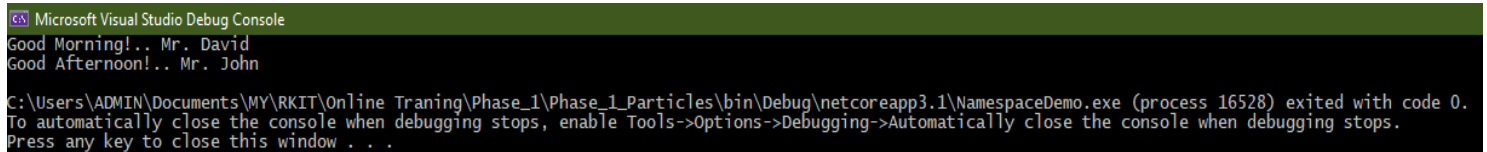
Output:-

```
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:

```csharp
using System;

namespace ClassDemo
{

    class Employe
    {
        // Class Attribute
        private readonly string _name;

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

        // Class Method
        public string GetName()
        {
            return _name;
        }
    }
    class ClassDemo
    {
        static void Main()
        {
            // Object Created by calling Constructor.
            Employe employe = new Employe("David");

            // Access Method via object.
            Console.WriteLine(employe.GetName());

        }
    }

}
```
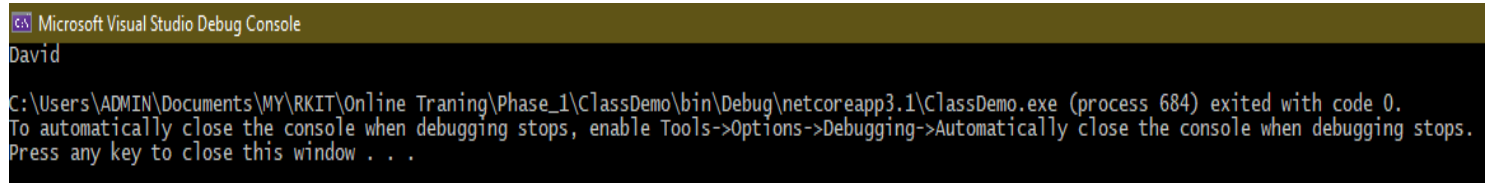
Output:-

```
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:

```csharp
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);
        }
    }
}
```
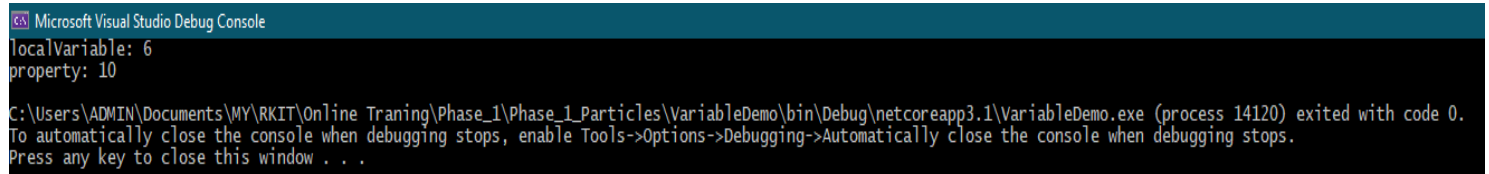
Output:

```
Microsoft Visual Studio Debug Console
localVariable: 6
property: 10

C:\Users\ADMIN\Documents\MY\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 . . .
```
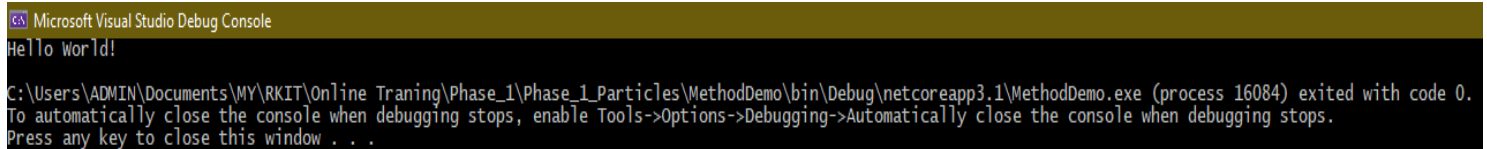
Method Declaration:

```csharp
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:

```csharp
using System;

namespace DatatypeConvertionDemo
{
    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;
```
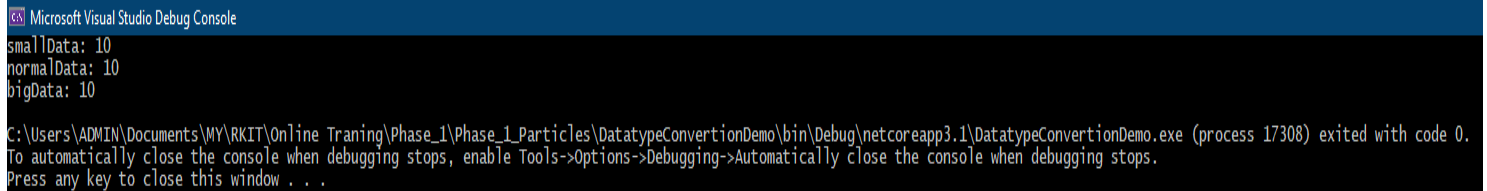
```
            Console.WriteLine("smallData: " + smallData + "\nnormalData: " + normalData +
"\nbigData: " + bigData);

        }
    }
}
```

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\DatatypeConvertionDemo\bin\Debug\netcoreapp3.1\DatatypeConvertionDemo.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:

```csharp
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:

```csharp
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:
```
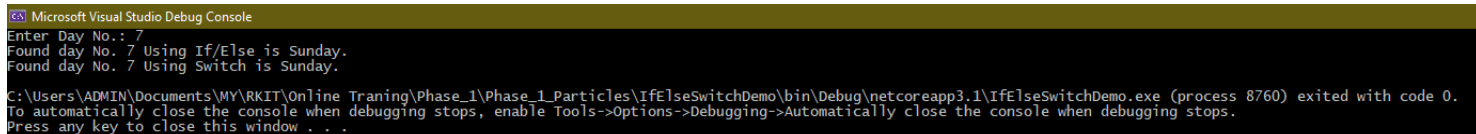
```csharp
                    Console.WriteLine("Wednesday.");
                    break;
                case 4:
                    Console.WriteLine("Thursday.");
                    break;
                case 5:
                    Console.WriteLine("Friday.");
                    break;
                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 . . .
```