Module 1

➢ **Windows Form Application**

Code:

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace WindowsFormsApp
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void Form1_Load(object sender, EventArgs e)
        {

        }

        private void btnHello_Click(object sender, EventArgs e)
        {
            lblHello.Text = "Hello World!";
        }
    }
}
```
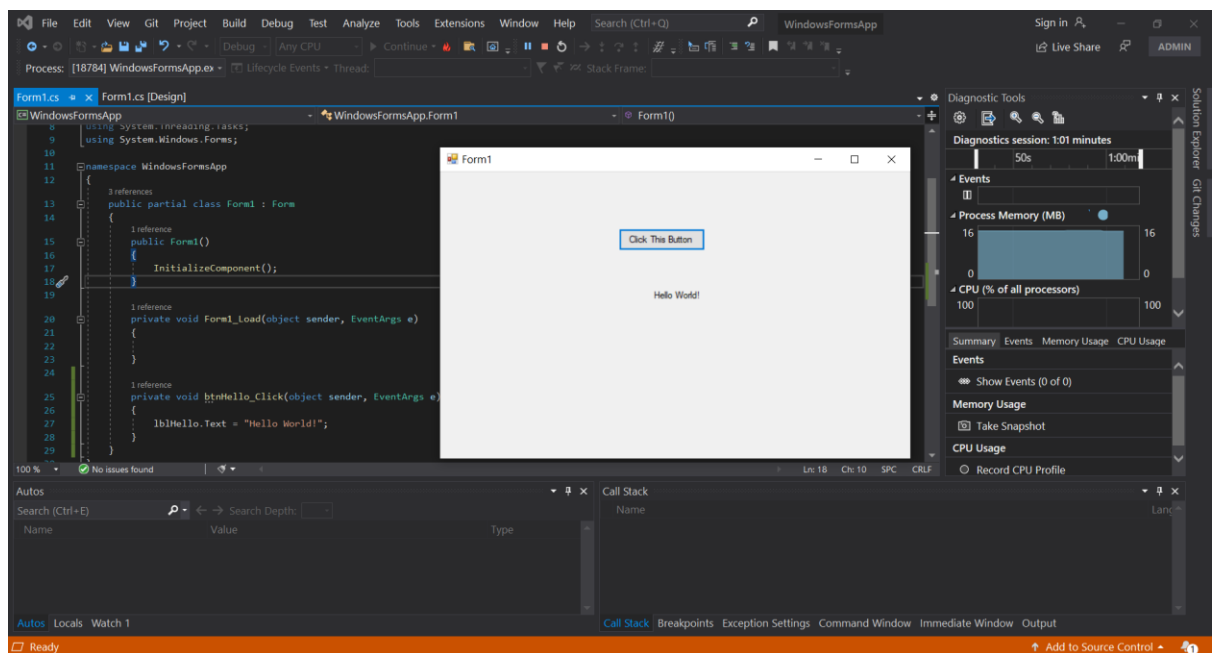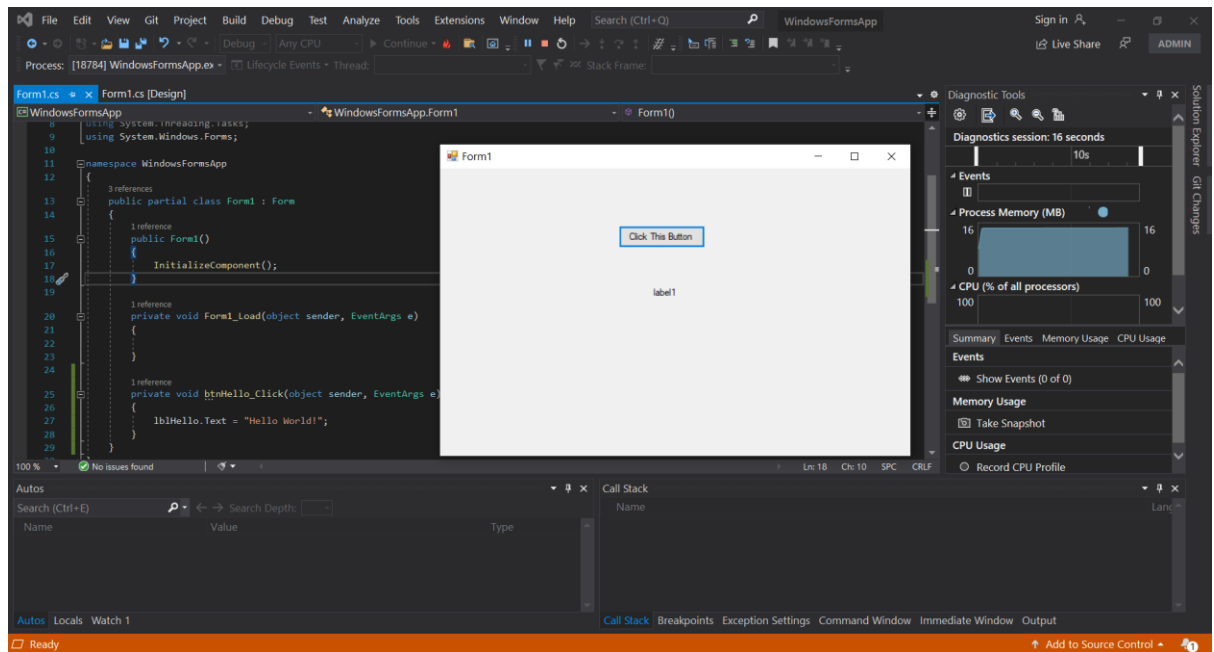
Output:

➢ Class Library Project

Code:

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

namespace ClassLibrary
{
    public sealed class Class1
    {
        public int add(int a, int b)
        {
            return a + b;
        }
        public int sub(int a, int b)
        {
            return a - b;
        }
    }
}
```

Console application which uses the class library method:

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

namespace use_library
{
    class Program
    {
        static void Main(string[] args)
        {
            Class1 c = new Class1();
```
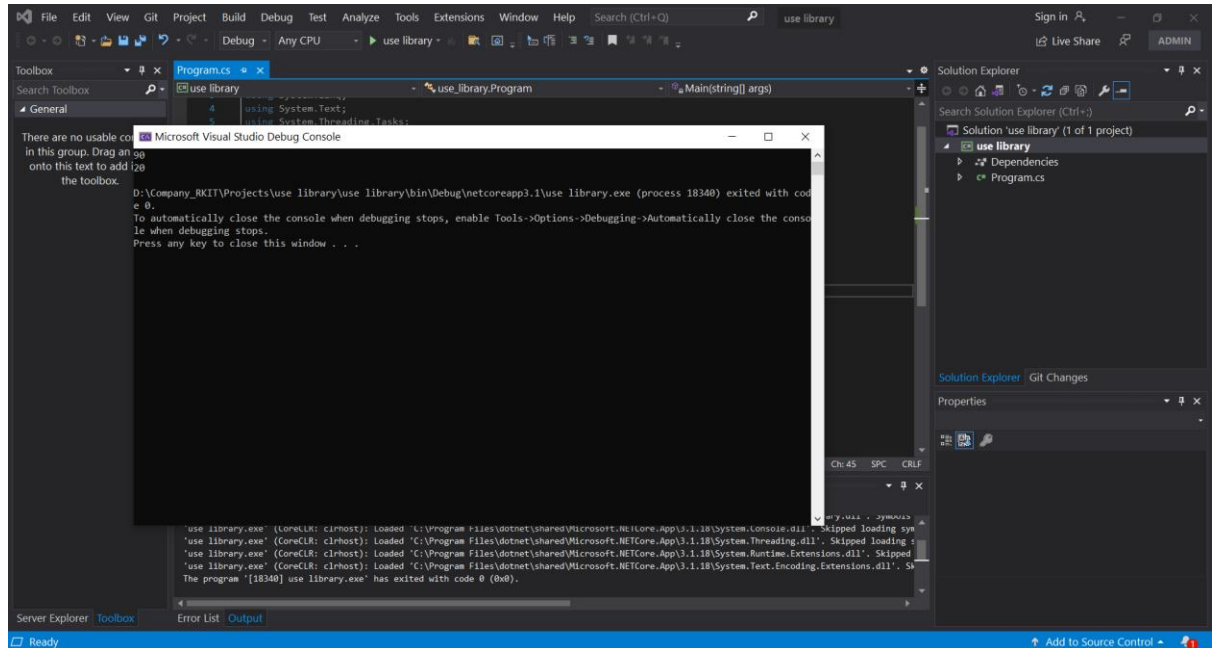
```
            Console.WriteLine(c.add(15,75));
            Console.WriteLine(c.sub(95, 75));
        }
    }
}
```

Output:

➢ **Web Application**

Code:

```
@page
@model IndexModel
@{
    ViewData["Title"] = "Home page";
}

<div class="text-center">
    <h1 class="display-4">Hello World!</h1>
    <p>Welcome to my Web Application.</p>
</div>
```
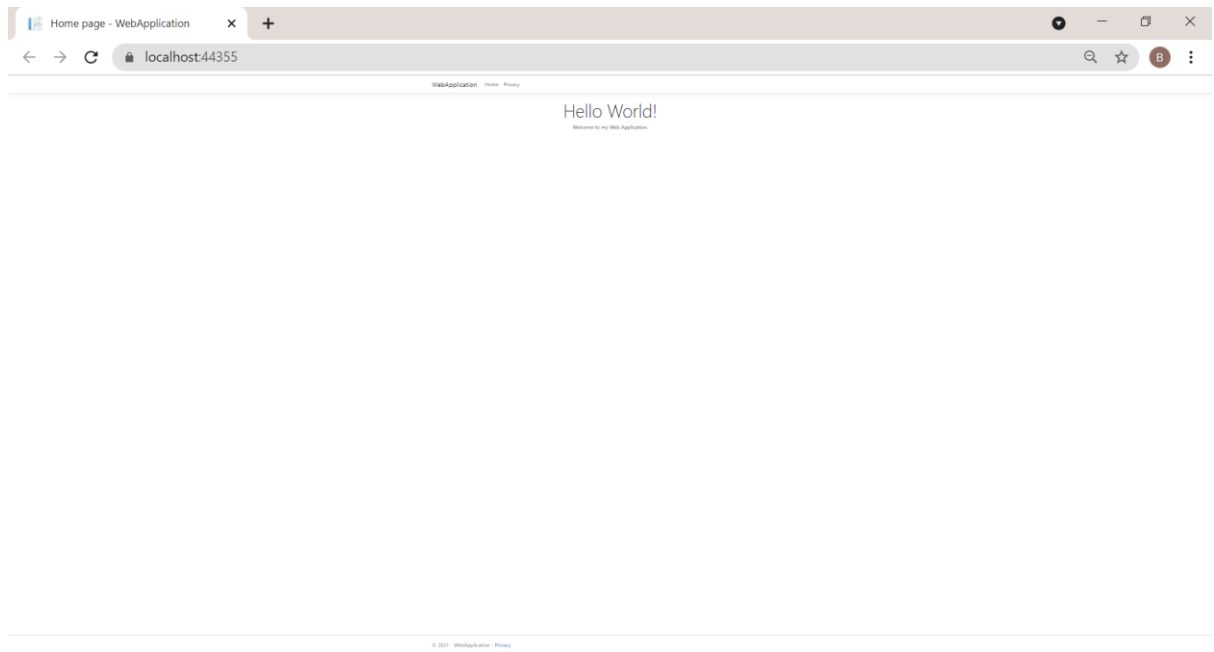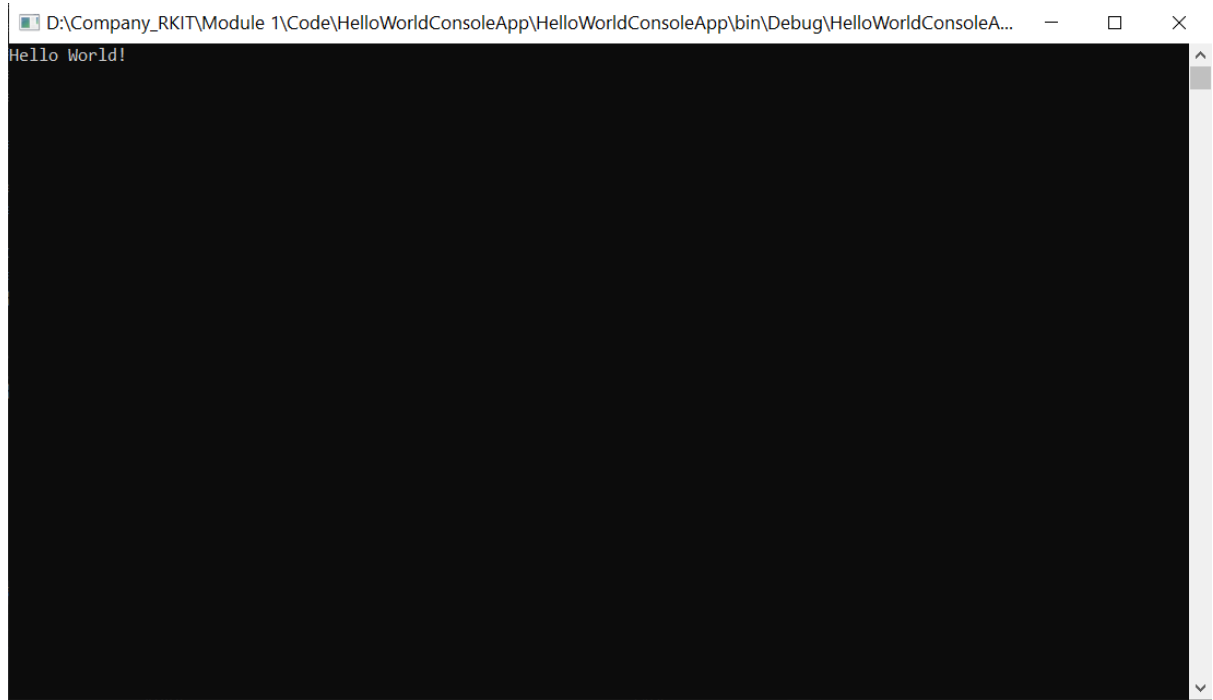
Output:

> ➢ **Simple Console Application for Hello World Program**

Code:

```csharp
using System;
namespace HelloWorldConsoleApp
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hello World!");
            Console.ReadLine();
        }
    }
}
```
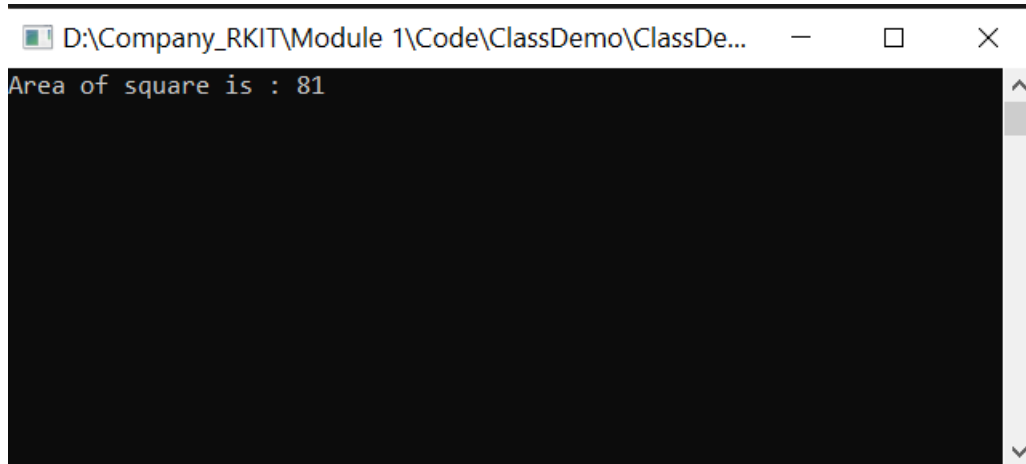
Output:

➢ Usage and working of class

Code:

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

namespace classDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            Square s = new Square();
            s.length = 9;
            int area = s.length * s.length;
            Console.WriteLine("Area of square is : {0}", area);
            Console.ReadLine();
        }
    }
}
```

```
class Square
{
    public int length;
}
}
```

Output:

> **Use of variable**
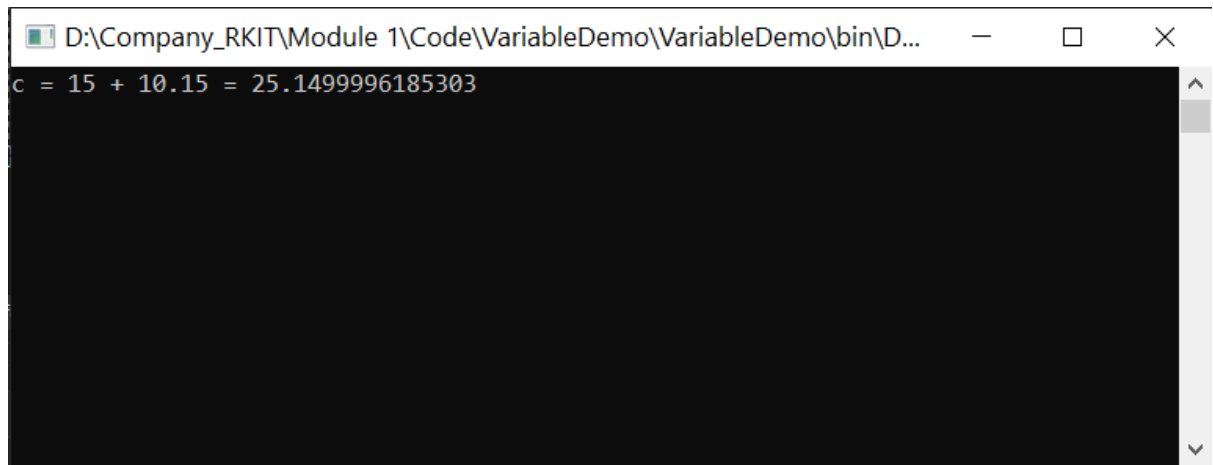
Code:

```
using System;
namespace variableDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            int a = 15;
            float b = 10.15F;
            double c;
            c = a + b;
            Console.WriteLine("c = {0} + {1} = {2}", a,b,c);
            Console.Read();
        }
    }
}
```

Output:

```
c = 15 + 10.15 = 25.1499996185303
```

➢ **How to define and call Method**

Code:

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

namespace methodDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            Rectangle r = new Rectangle();
            int l = 4;
            int b = 7;
            int area = r.Area(l, b);
            Console.WriteLine("Area of rectangle with length {0} and breadth {1} = {2}", l,b,area);
            Console.Read();
        }
    }
    class Rectangle
    {
        public int Area (int length, int breadth)
```
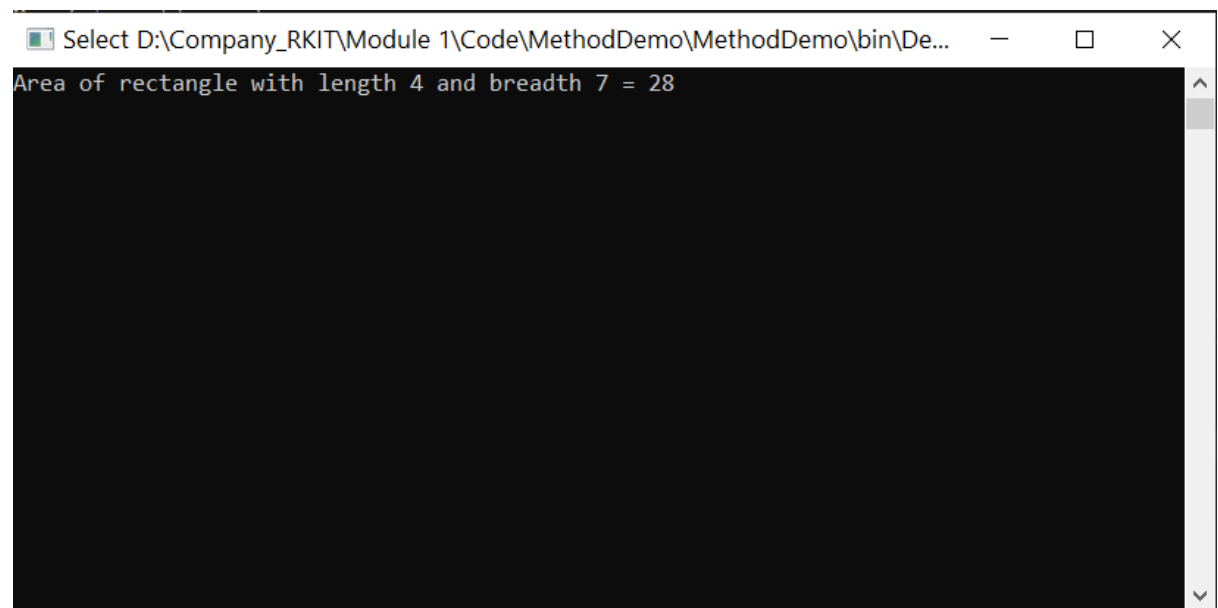
```
        {
            int ans = length * breadth;
            return ans;
        }
    }
}
```

Output:

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```
Area of rectangle with length 4 and breadth 7 = 28
```

➢ Explicit type conversion

Code:

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

namespace TypeCasting
{
    class Program
    {
        static void Main(string[] args)
        {
            double d = 987654.321;
```
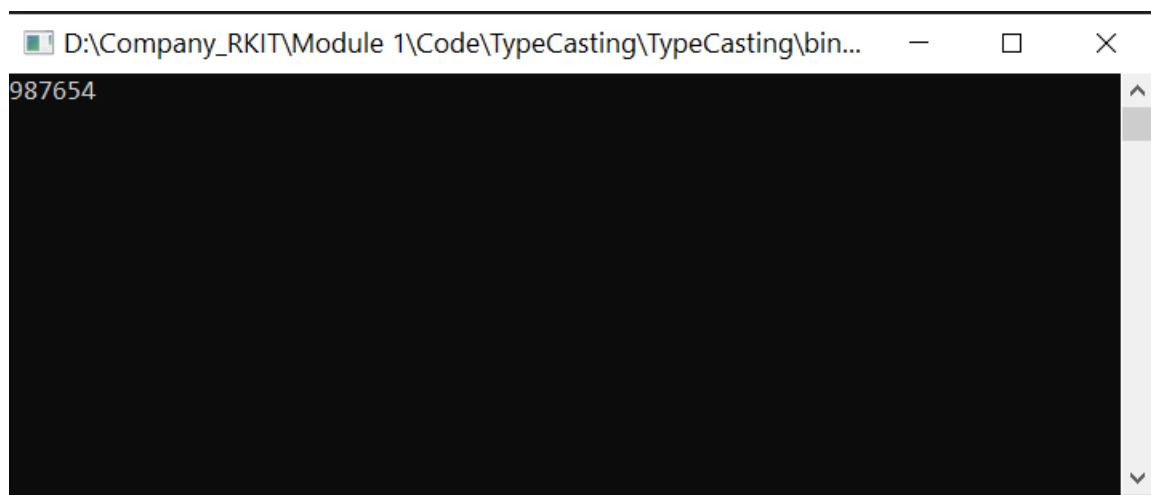
```csharp
        int i;
        i = (int)d;
        Console.WriteLine(i);
        Console.Read();

    }
  }
}
```

Output:

> ➢ **Boxing and Unboxing**

Code:

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

namespace BoxingUnboxing
{
  class Program
  {
    static void Main(string[] args)
    {
      int i = 65;
```
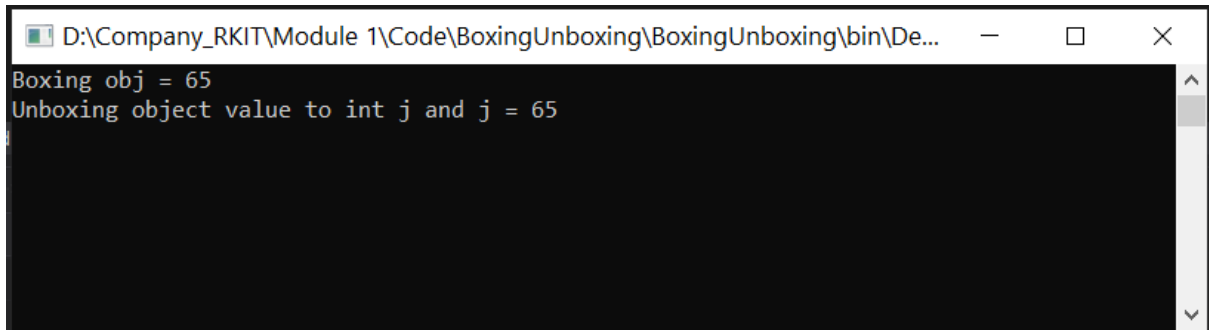
```
            Object obj = i; //Boxing
            Console.WriteLine("Boxing obj = {0}", obj);
            int j = (int)obj; //Unboxing
            Console.WriteLine("Unboxing object value to int j and j = {0}", j);
            Console.Read();


        }
    }
}
```

Output:

➢ Type of If statements

Code:

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

namespace IfElse
{
    class Program
    {
        static void Main(string[] args)
        {
            int a = 9;
            int b = 15;
            if (a > 0)
            {
```

```csharp
            Console.WriteLine("a is positive");
            if (b > 10)
            {
                if (a > b)
                {
                    Console.WriteLine("a is greater than b");
                }
                else
                    Console.WriteLine("a is lesser than b");
            }
        }
        else if (a < 0)
            Console.WriteLine("a is negative");
        else
            Console.WriteLine("a = 0");
        Console.Read();
        }
    }
}
```
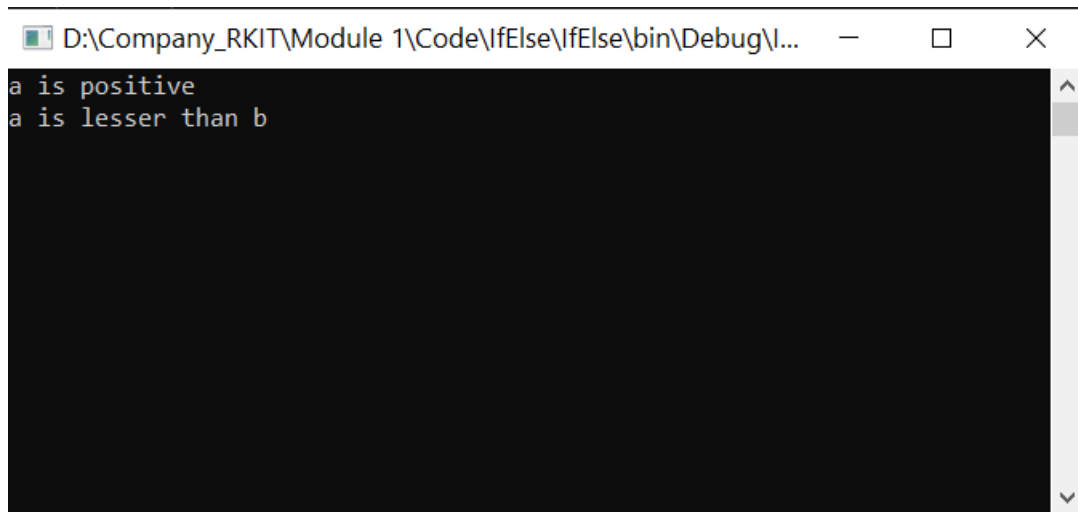
Output:

> **Switch Case**

Code:

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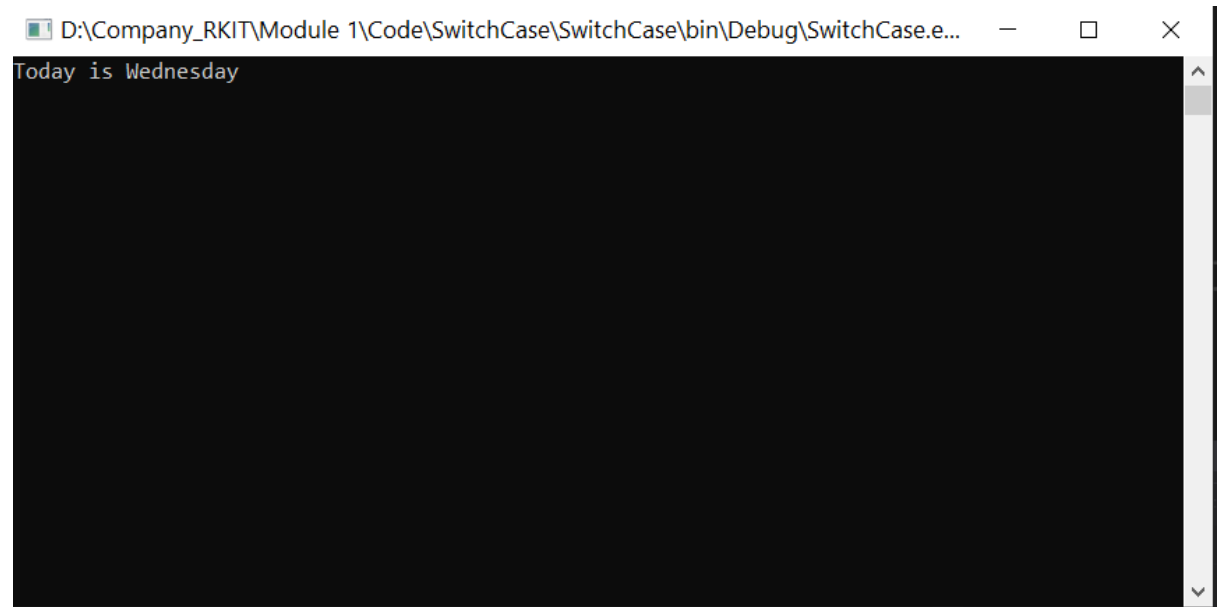
```csharp
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace SwitchCase
{
    class Program
    {
        static void Main(string[] args)
        {
            int day = 3;
            switch (day)
            {
                case 1:
                    Console.WriteLine("Today is Monday");
                    break;
                case 2:
                    Console.WriteLine("Today is Tuesday");
                    break;
                case 3:
                    Console.WriteLine("Today is Wednesday");
                    break;
                case 4:
                    Console.WriteLine("Today is Thursday");
                    break;
                case 5:
                    Console.WriteLine("Today is Friday");
                    break;
                case 6:
                    Console.WriteLine("Today is Saturday");
                    break;
                case 7:
                    Console.WriteLine("Today is Sunday");
                    break;
                default:
                    Console.WriteLine("There is a Weekend.");
                    break;
            }
            Console.Read();
        }
```

```
        }
}
```

Output: