Day 16 Assignment
By
Vinay Kudali
14-02-2022

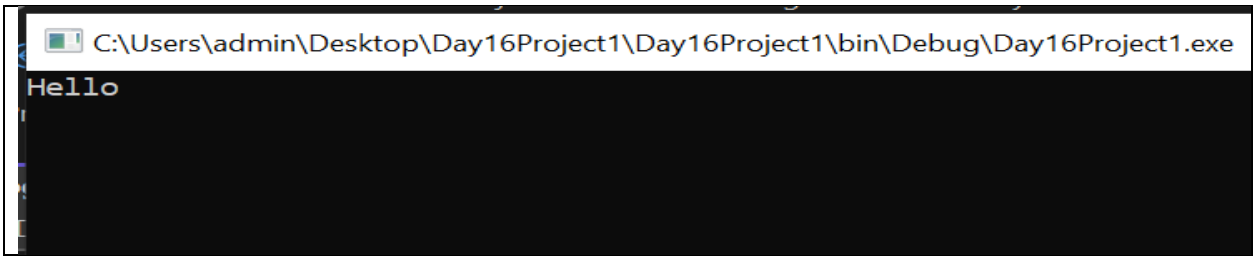
NB Healthcare Technologies

1. WACP to print Hello World Hint: Think object oriented

Code:

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

namespace Day16Project1
{
   //Author: Vinay Kudali
   //Purpose: Printing Hello World Program In Object Oriented
   public class Message
   {
      /// <summary>
      /// This method will Print "Hello"
      /// </summary>
      public void PrintHello()
      {
         Console.WriteLine("Hello");
      }
   }
   internal class Program
   {
      static void Main(string[] args)
      {
         Message message = new Message();
         message.PrintHello();
         Console.ReadLine();
      }
   }
}
```

Output:



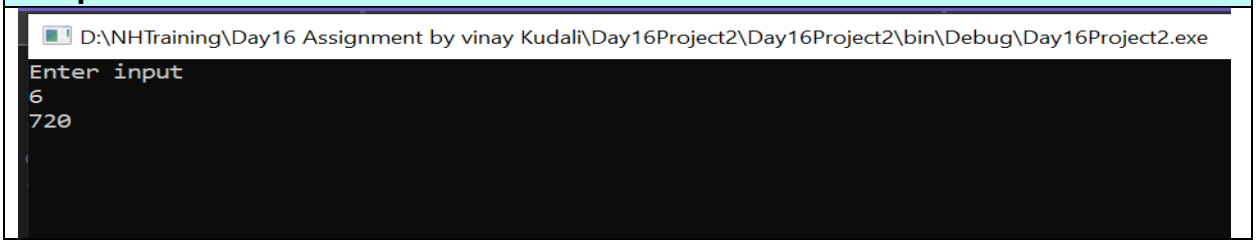
2. WACP to read a number from user and print factorial of it. Hink : Think object oriented

Code:

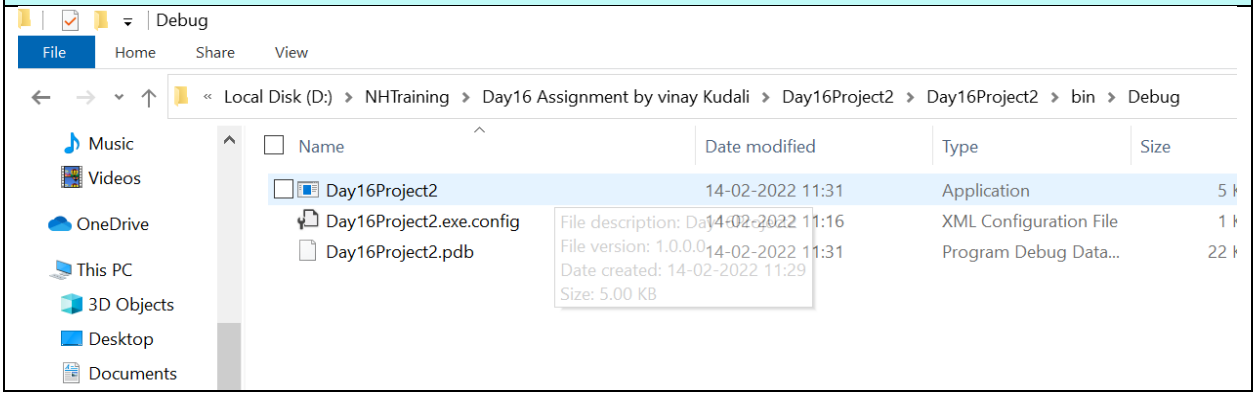
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day16Project2
{
   public class Mathematics
   {
      //Author : Vinay Kudali
      //Purpose: Reading and Printing Factorial Using Object Oriented
     int input;
      /// <summary>
      /// This method will Read Data
      /// </summary>
      public void ReadData()
      {
         Console.WriteLine("Enter input");
         input=Convert.ToInt32(Console.ReadLine());
      }
      /// <summary>
      /// This Method will Print Data
      /// </summary>
      /// <returns>fact</returns>
      public int PrintData()
      {
         int fact =1;
         for (int i = 1; i<=input; i++)
         {
            fact= fact*i;
         }
         return fact;
```

```
    }
  }
  internal class Program
  {
    static void Main(string[] args)
    {
      Mathematics m1 = new Mathematics();
      m1.ReadData();
      Console.WriteLine(m1.PrintData());
      Console.ReadLine();

    }
  }
}
```

Output:



3. For the console application created in 2nd task, add screen shot of the .exe file location.

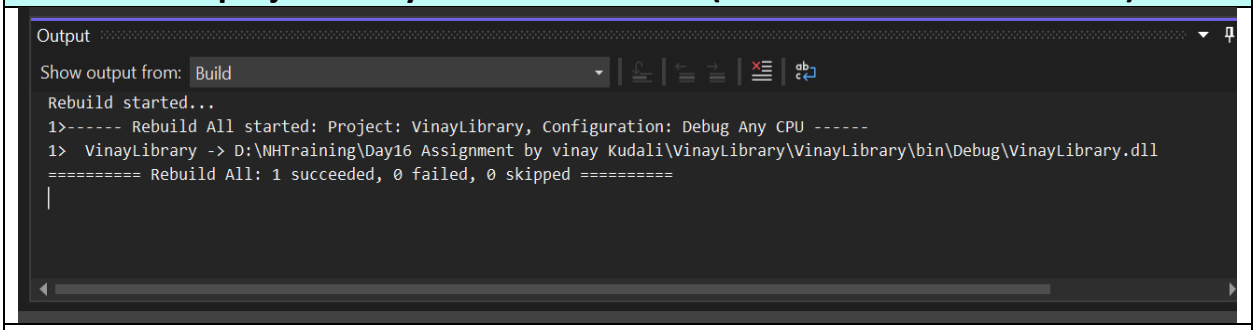


4. Create a Class Library Project with name as <Your Name>Library (Example: MeganadhLibrary) Create a class Mathematics as discussed in the class. [Add methods for reading number and finding factorial]

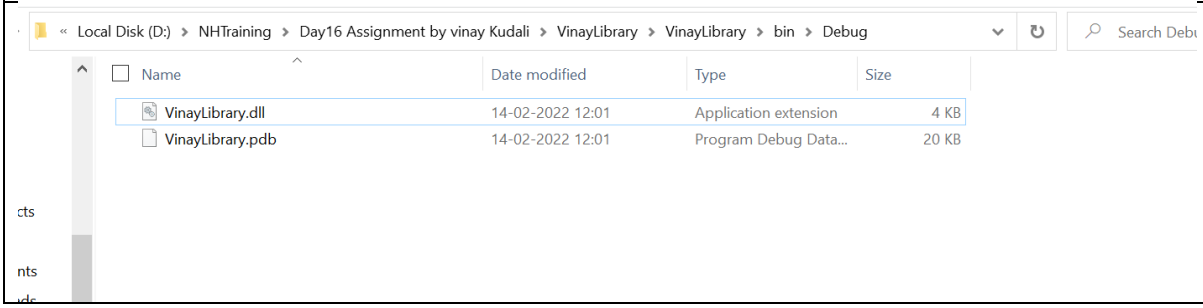
Code:

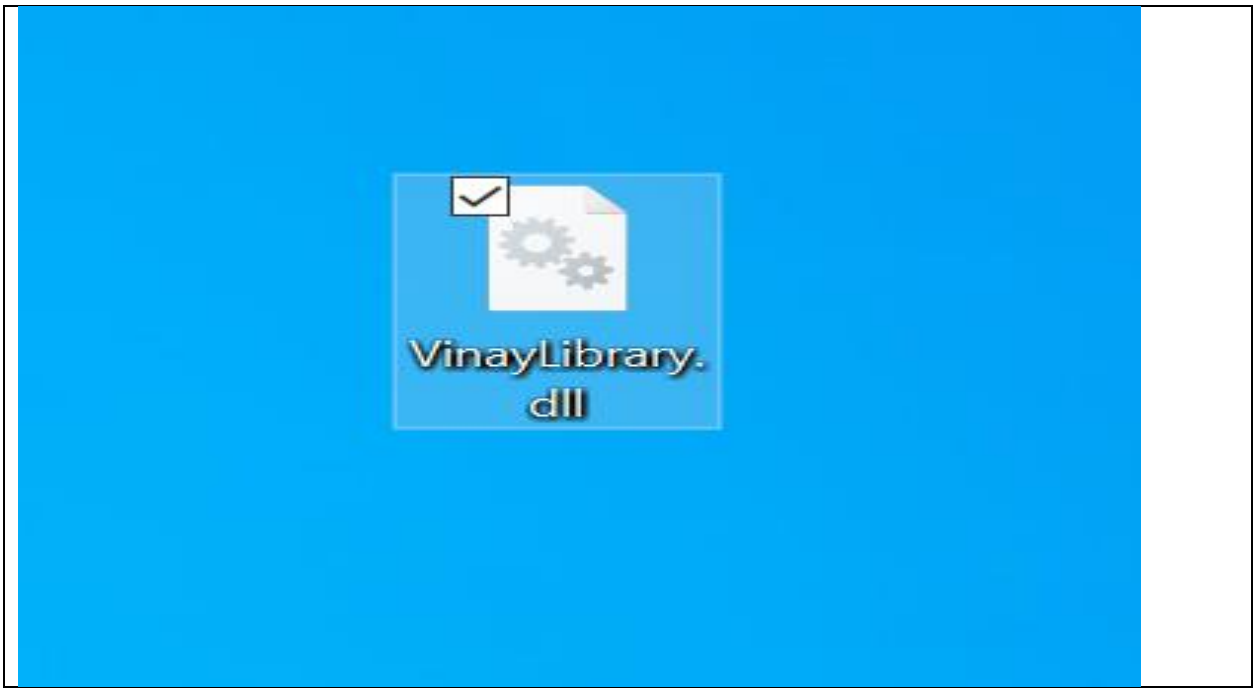
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace VinayLibrary
{
   internal class Mathematics
   {
      int input;
      public void ReadData()
      {
         Console.WriteLine("Enter A value");
         input=Convert.ToInt32(Console.ReadLine());
      }
      public int GetFactorial()
      {
        int  fact =1;
         for (int i = 1; i <= input; i++)
         {
            fact = fact*i;
         }
         return fact;
      }
   }
}
```

Re-Build the project and you will a .dll file. (Put the screen shot of this)



Copy the dll file to your desktop (Put the screen shot of this)





5. Create a class library with three classes in it: a. Mathematics b. Physics c. Chemistry
and add methods as discussed in the class.
refer all the three classes in a console application.

A. Mathematics:

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

namespace VinayLibrary
{
   public class Mathematics
   {
      int input;
      public void ReadData()
      {
         Console.WriteLine("Enter A value");
         input=Convert.ToInt32(Console.ReadLine());
      }
      public int GetFactorial()
```

```
    {
      int  fact =1;
       for (int i = 1; i <= input; i++)
       {
          fact = fact*i;
       }
       return fact;
    }
  }
}
```

B. Chemistry:

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

namespace VinayLibrary
{
  public class Chemistry
  {
    public string Carbondioxide()
    {
      return "Co2";
    }
    public string Ammonium()
    {
      return "NH4";
    }
    public string Aluminuim()
    {
      return "al";
    }
  }
}
```

C. Physics:

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

namespace VinayLibrary
{
  public class Chemistry
  {
```

```
    public string Carbondioxide()
    {
        return "Co2";
    }
    public string Ammonium()
    {
        return "NH4";
    }
    public string Aluminuim()
    {
        return "al";
    }
  }
}
```

VinayLibrary:

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

namespace Day16Project3
{
  internal class Program
  {
    static void Main(string[] args)
    {
      Console.WriteLine("***Mathematics calss***");
      Mathematics m1 = new Mathematics();
      m1.ReadData();
      Console.WriteLine(m1.GetFactorial());
      Console.WriteLine("\n");
      Console.WriteLine("***Chemistry Class");
      Chemistry c = new Chemistry();
      Console.WriteLine(c.Carbondioxide());
      Console.WriteLine(c.Aluminuim());
      Console.WriteLine(c.Ammonium());
      Console.WriteLine("\n");
      Console.WriteLine("***Physics Class");
      Physics p=new Physics();
      Console.WriteLine(p.FinalVelocity(5,3,2));

      Console.ReadLine();

    }
  }
```

```
}
```

Output:

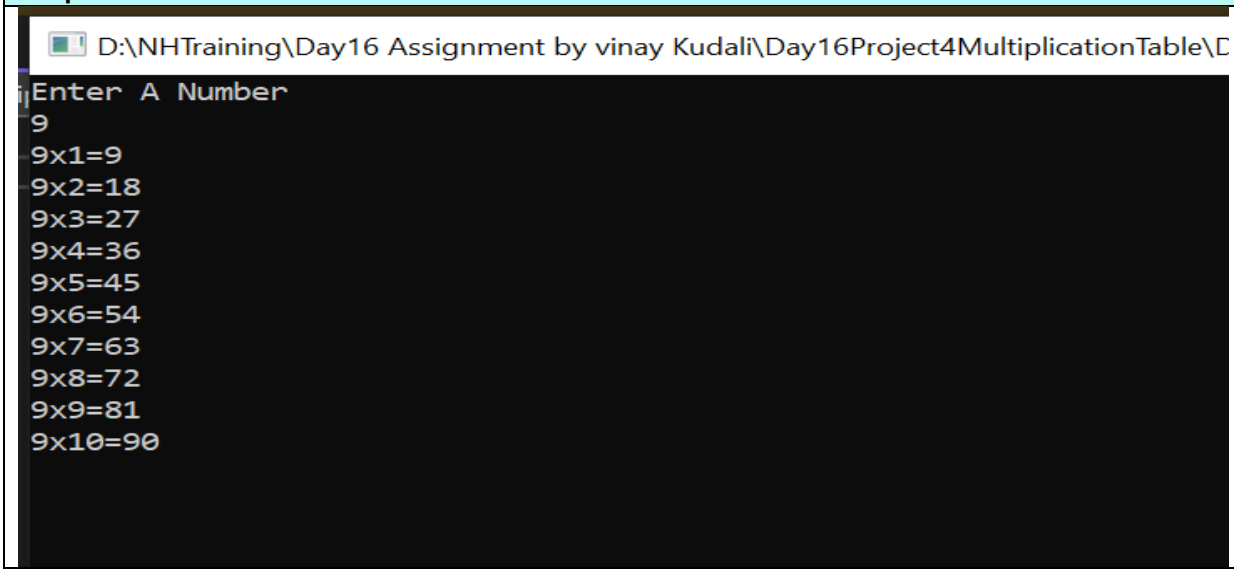
6. WACP to print multiplication table of a number

Code:

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

namespace Day16Project4MultiplicationTable
{
   internal class Multiplication
   {
      //Author: Vinay Kudali
      //Purpose: Writing Multplication Table  using OOps
      int input;
      /// <summary>
      /// This method will Read data
      /// </summary>
      public void ReadData()
      {
         Console.WriteLine("Enter A Number");
         input=Convert.ToInt32(Console.ReadLine());
      }
      /// <summary>
      /// This method will perform Multiplication Table
      /// </summary>
      public void GetMultiplication()
```

```
    {
        for (int i = 1; i <= input; i++)
        {
            Console.WriteLine(input+"x"+i+"="+input*i);
        }
    }

    static void Main(string[] args)
    {
        Multiplication m = new Multiplication();
        m.ReadData();
        m.GetMultiplication();
        Console.ReadLine();
    }
  }
}
```

Output:



7. WACP to check if the given number is Palindrome or not

Code:

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

namespace Day16Project5Pallindrome
{
```

```
  //Author : Vinay Kudali
  //Purpose : Writing Palindrome Using OOPs
  public class Palindrome
  {
    int input;
    /// <summary>
    /// This method will read data from user
    /// </summary>
    public void ReadData()
    {
      Console.WriteLine("Enter value");
      input=Convert.ToInt32(Console.ReadLine());
    }
    /// <summary>
    /// This method will Check The given value is  Palindrome or not
    /// </summary>
    public void CheckPalindromeOrNot()
    {
      int sum = 0, rem = 0, temp = input;
      while (input>0)
      {

        rem=input%10;
        sum = sum*10+rem;
        input= input/10;
      }
      if (temp==sum)
      {
        Console.WriteLine("{0} is a palindrome", temp);
      }
      else
        Console.WriteLine("{0} Given value is Not a Palindrome", temp);

    }

  }
  internal class Program
  {
    static void Main(string[] args)
    {
      Palindrome p = new Palindrome();
      p.ReadData();
      p.CheckPalindromeOrNot();
      Console.ReadLine();
    }
  }
}
```

Output:

8. Create a solution "MyProject" (as discussed in class) Add three projects a. YourNameLibrary (and add any class with methods) b. PublicLibrary (add any class with methods) c. ClientApp (and here refer above two libraries)

Physics:

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

namespace PublicLibrary
{
   public class Physics
   {


      public int Velocity(int m, int a)
      {
         return m*a;
      }
   }
}
```

Mathematics:

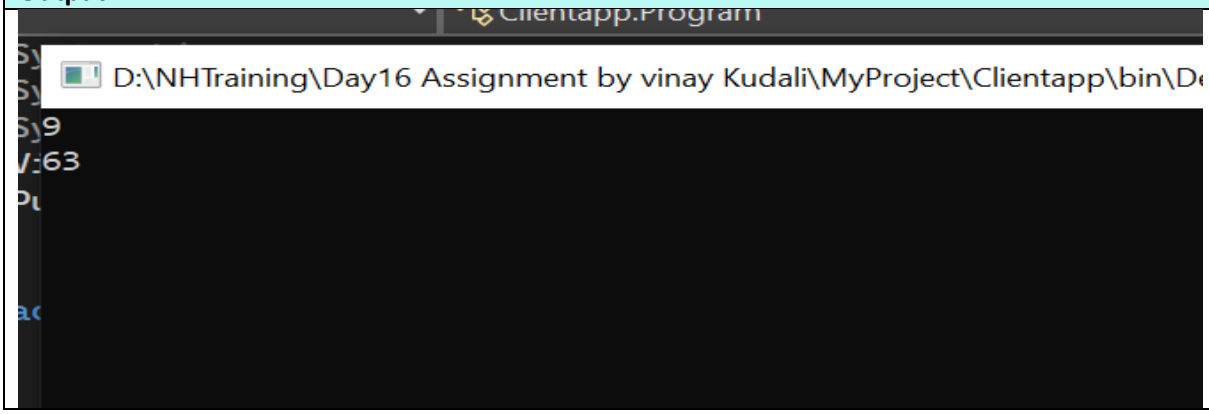
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Vinay1Library
{
   public class Mathematics
   {
```

```
    int a = 5;
    int b = 4;

    public void Addition()
    {
       Console.WriteLine(a+b);
    }

    public int Subtraction()
    {
       return a-b;
    }
  }
}
```

Client App:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using Vinay1Library;
using PublicLibrary;


namespace Clientapp
{

  public class Program
  {
    static void Main(string[] args)
    {
       Mathematics m=new Mathematics();
       m.Addition();
       m.Subtraction();
       Physics p = new Physics();
       Console.WriteLine(p.Velocity(7, 9));


        Console.ReadLine();

    }
  }
}
```

Output:



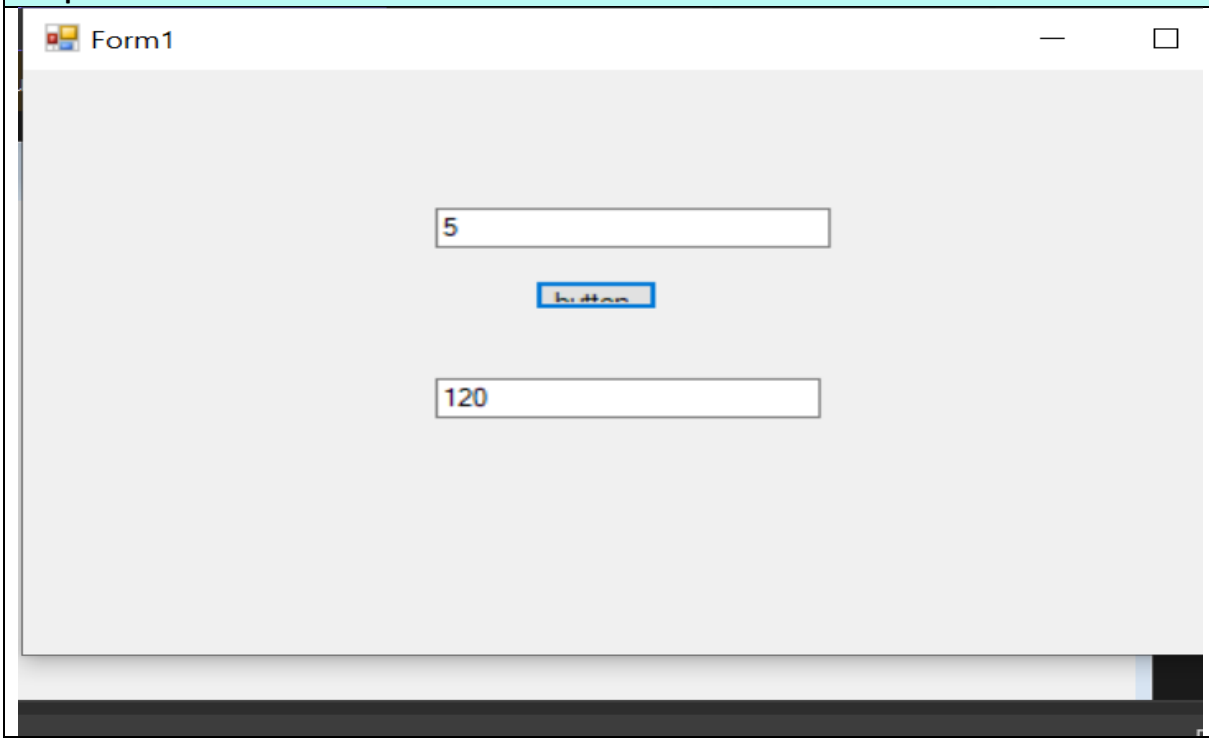
9. Add one more project (windows application) Add some 3 or 4 screen shots just to prove that you have done this.

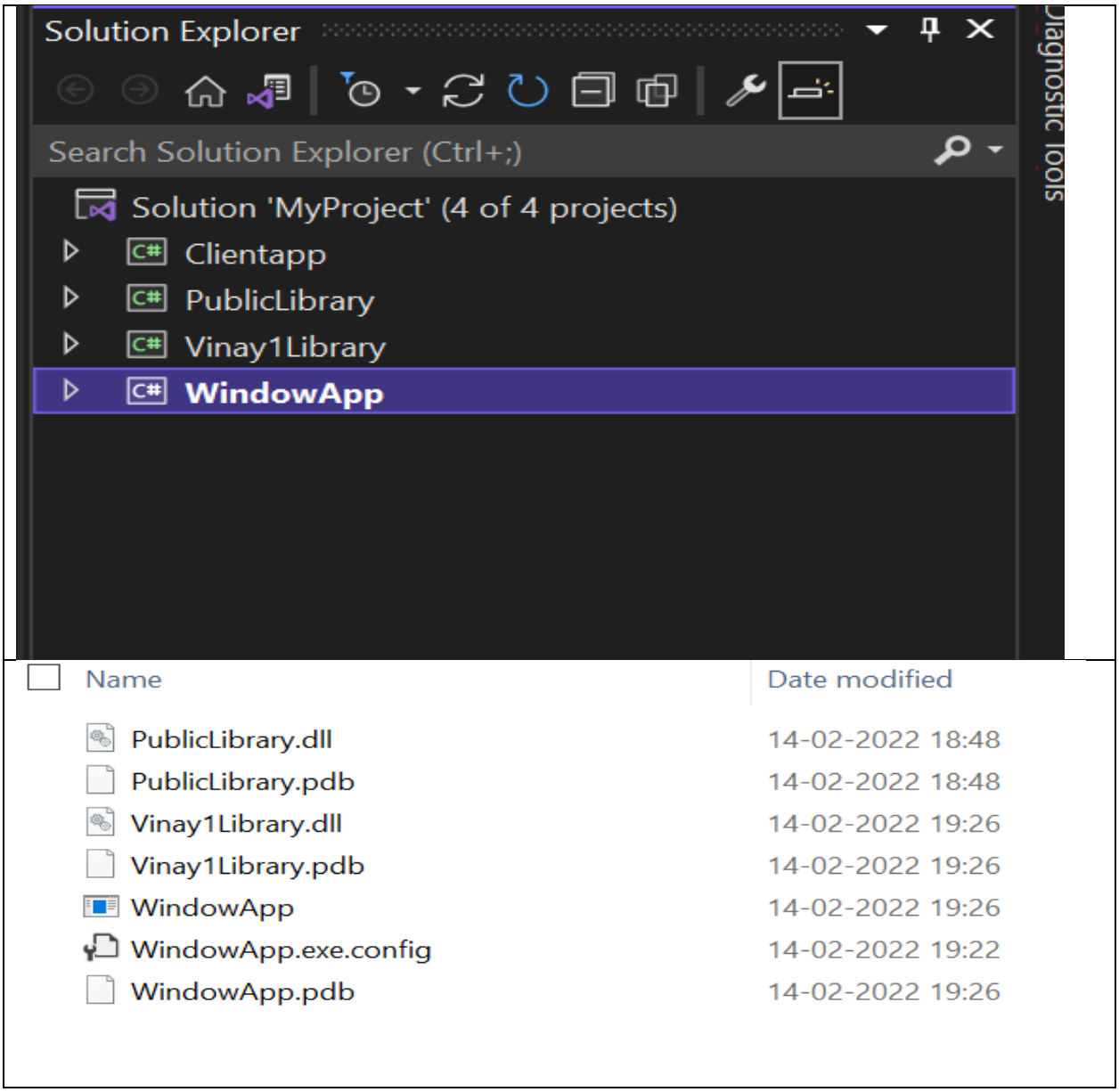
Code:

```
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;
using PublicLibrary;
using Vinay1Library;

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

      private void button1_Click(object sender, EventArgs e)
      {
         int input=Convert.ToInt32(textBox1.Text);
         int fact=Mathematics.Fact(input);
         textBox2.Text = fact.ToString();
      }
```

```
        private void Form1_Load(object sender, EventArgs e)
        {

        }
    }
}
```

Output:




Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'MyProject' (4 of 4 projects)
Clientapp
PublicLibrary
Vinay1Library
WindowApp
Diagnostic Tools
Name
Date modified
PublicLibrary.dll
14-02-2022 18:48
PublicLibrary.pdb
14-02-2022 18:48
Vinay1Library.dll
14-02-2022 19:26
Vinay1Library.pdb
14-02-2022 19:26
WindowApp
14-02-2022 19:26
WindowApp.exe.config
14-02-2022 19:22
WindowApp.pdb
14-02-2022 19:26