Day 16 Assignment

By
Triveni Anumolu

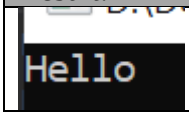
14-02-2022

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
{
    class PrintHello
    {
        public static void Hello()
        {
            Console.WriteLine("Hello");
        }
    }
    class Program
    {
        static void Main(string[] args)
        {
            PrintHello.Hello();
            Console.ReadLine();
        }
    }
}
```

Result:



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

Code:

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

namespace Day16Project2
{
    class Calculation
    {
        public  void Factorial()
        {
            int n, fact=1;
            Console.WriteLine("Enter a number");
            n = Convert.ToInt32(Console.ReadLine());
            for(int i=1;i<=n;i++)
            {
                fact = fact * i;
            }
            Console.WriteLine("Factorial of {0} is {1}", n,fact);

        }
    }
    class Program
    {
        static void Main(string[] args)
        {
            Calculation cal = new Calculation();
            cal.Factorial();
            Console.ReadLine();
        }
    }
}
```

Result:

```
Enter a number
7
Factorial of 7 is 5040
```

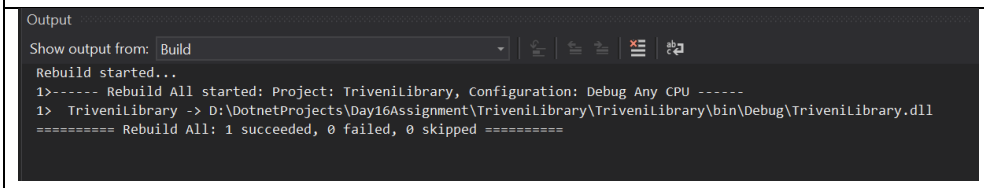
3. For the console application created in 2nd task, add screen shot of the .exe file location.

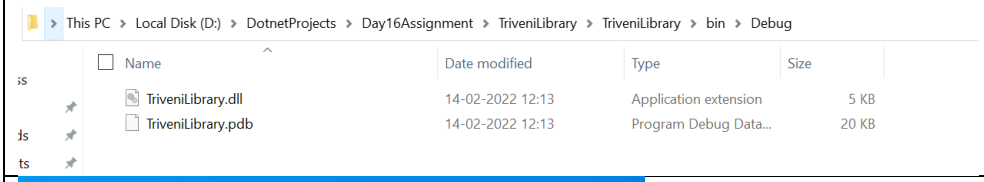
4. Create a Class Library Project with name as
<YourName>Library (Example : MeganadhLibrary)
Create a class Mathematics as discussed in the class.
[Add methods for reading number and finding factorial]
Re-Build the project and you will get a .dll file.
(Put the screen shot of this)
Copy the dll file to your desktop
(put the screen shot of this)

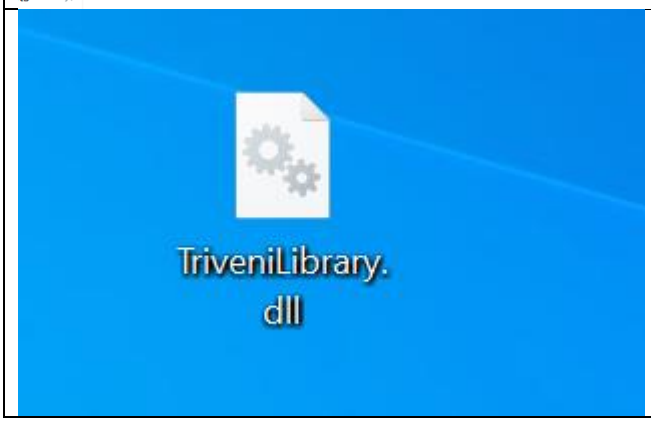
Code:

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

namespace TriveniLibrary
{
   class Mathematics
   {
      int n;
      public void ReadInput()
      {
         Console.WriteLine("Enter a number");
         n = Convert.ToInt32(Console.ReadLine());
      }
      public void Factorial()
      {
         int fact = 1;
         for (int i = 1; i <= n; i++)
```

```
        {
            fact = fact * i;
        }
        Console.WriteLine("Factorial of {0} is {1}", n, fact);

    }
  }

}
```







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.
Chemistry:

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

namespace TriveniLibrary
{
```

```
  public class Chemistry
   {
      public string GetBenzene()
      {
         return "C6H6";
      }
      public string GetWater()
      {
         return "H2O";
      }
      public string GetMethane()
      {
         return "CH4";
      }
   }
}
```

Physics:

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

namespace TriveniLibrary
{
   public class Physics
   {
     public int GetForce(int m, int a)
      {
         return m * a;
      }
   }
}
```

Mathematics:

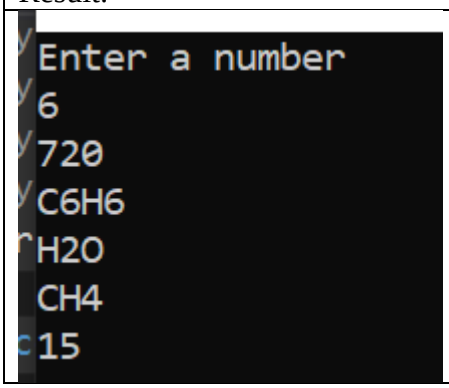
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace TriveniLibrary
{
   public class Mathematics
   {
      int n;
```

```
        public void ReadInput()
        {
            Console.WriteLine("Enter a number");
            n = Convert.ToInt32(Console.ReadLine());
        }
        public int Factorial()
        {
            int fact = 1;
            for (int i = 1; i <= n; i++)
            {
                fact = fact * i;
            }
            return fact;
            //Console.WriteLine("Factorial of {0} is {1}", n, fact);

        }
    }

}
```

Library:

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

namespace Day16Assignment
{
    class Program
    {
        static void Main(string[] args)
        {
            Mathematics m = new Mathematics();
            m.ReadInput();
            Console.WriteLine(m.Factorial());
            Chemistry c = new Chemistry();
            Console.WriteLine(c.GetBenzene());
            Console.WriteLine(c.GetWater( ));
            Console.WriteLine(c.GetMethane());
            Physics p = new Physics();
            Console.WriteLine(p.GetForce(3,5));
            Console.ReadLine();

        }
    }
}
```

Result:



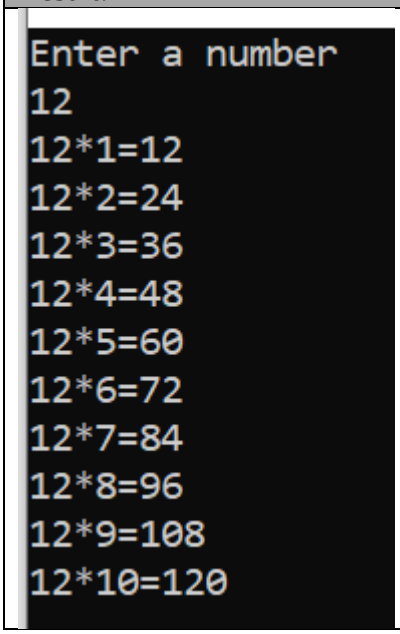
6. WACP to print multtiple table of a number

Code:

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

namespace Day16project4
{
    class MulTable
    {
        int n;
        public  void ReadData()
        {
            Console.WriteLine("Enter a number");
            n = Convert.ToInt32(Console.ReadLine());
        }
        public void PrintTable()
        {
            for(int i=1;i<=10;i++)
            {
                Console.WriteLine(n+"*"+i+"="+n*i);
            }

        }
    }
    class Program
    {
        static void Main(string[] args)
        {
            MulTable mt = new MulTable();
            mt.ReadData();
```

```
            mt.PrintTable();
            Console.ReadLine();
        }
    }
}
```

Result:



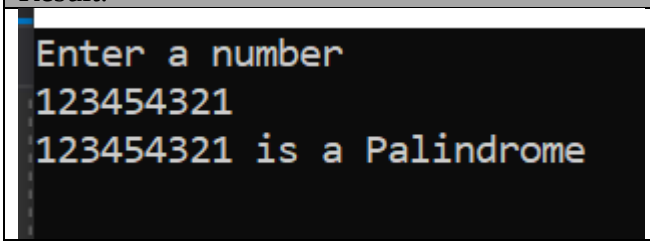
7. WACP to check if the given is number is Palindrome or not

Code:

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

namespace Day16Project5
{
    class Palindrome
    {
        int n;

        public void ReadInput()
        {

            Console.WriteLine("Enter a number");
            n = Convert.ToInt32(Console.ReadLine());

        }
```

```
        public void Check()
        {
            int temp = n;
            int rem, sum = 0;
            while (n > 0)
            {
                rem = n % 10;
                sum = sum * 10 + rem;
                n = n / 10;
            }
            if (temp == sum)
                Console.WriteLine("{0} is a Palindrome", temp);
            else
                Console.WriteLine("{0} is not a Palindrome", temp);
        }

    }
    class Program
    {
        static void Main(string[] args)
        {
            Palindrome p = new Palindrome();
            p.ReadInput();
            p.Check();
            Console.ReadLine();

        }
    }
}
```

Result:



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)
Note : If you are confused., see the video

Code:

Mathematics:

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

namespace TriveniALibrary
{
   public class Mathematics
   {
      public int Mul(int a , int b)
      {
         return a * b;
      }

   }
}
```

Physics:

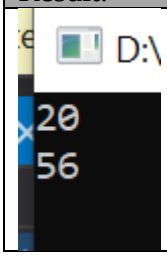
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PublicLibrary
{
   public class Physics
   {
      public int Force(int m, int a)
      {
         return m * a;
      }

   }
}
```

ClientApp:

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

```
namespace ClientApp
{
   class program
   {
      static void Main(string[] args)
      {
         Mathematics m = new Mathematics();
         Console.WriteLine(m.Mul(4, 5));
         Physics p = new Physics();
         Console.WriteLine(p.Force(7, 8));
         Console.ReadLine();
      }
   }
}
```

Result:



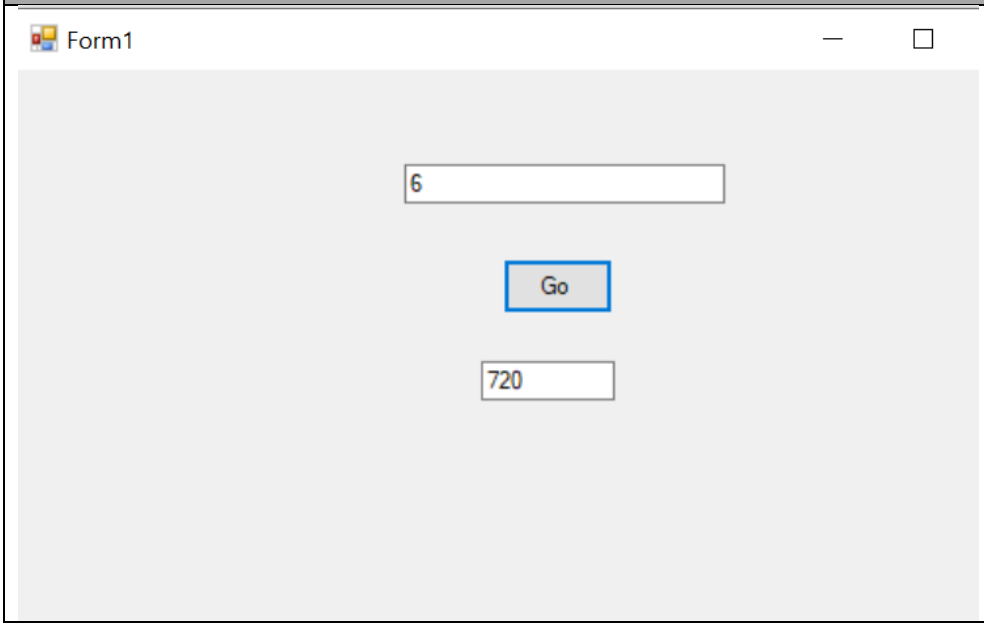
9. Add one more project (windows application) Add some 3 or 4 screen shots just to prove that you have done this.

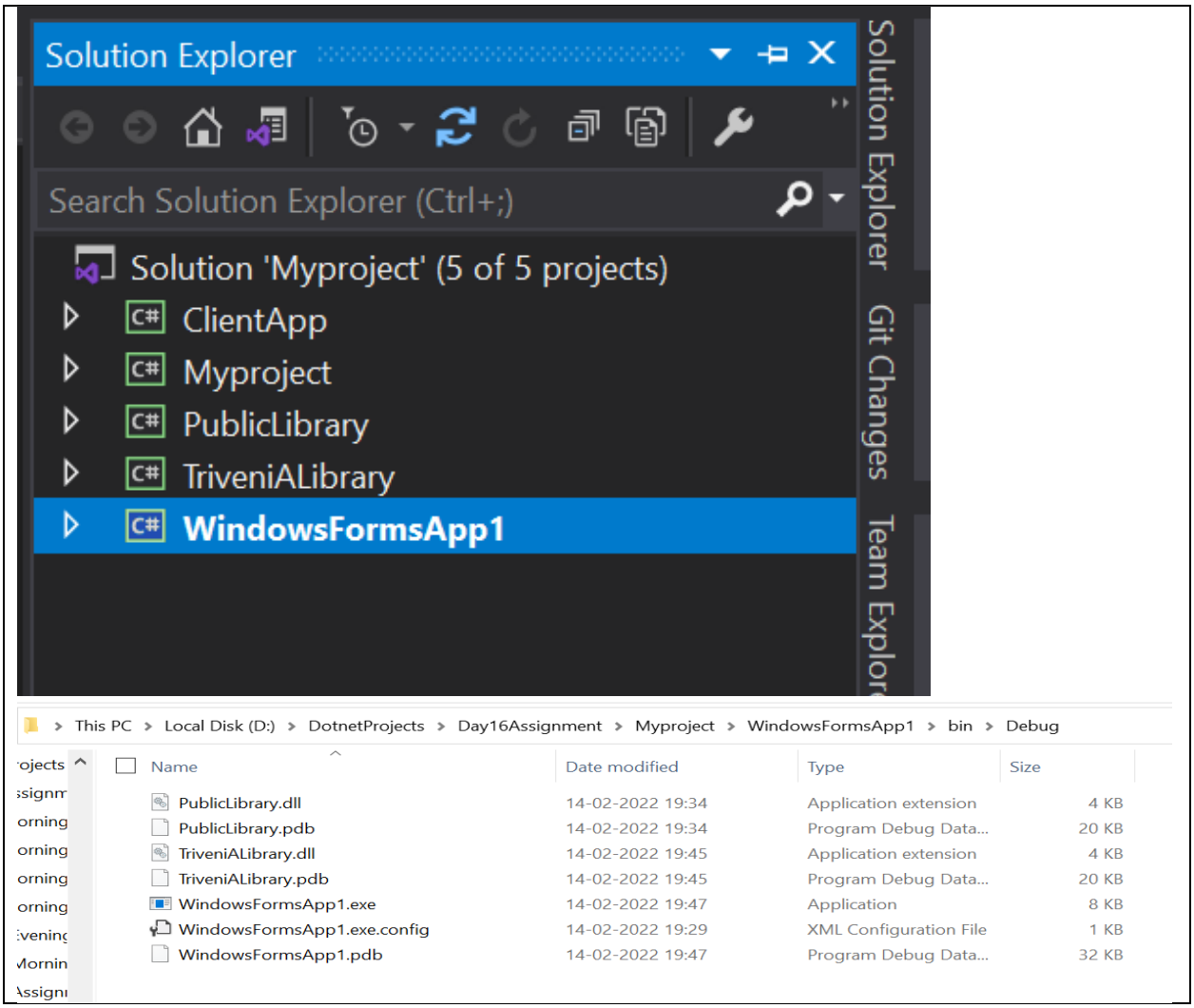
Code:

```
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 TriveniALibrary;

namespace WindowsFormsApp1
{
   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();
        }
    }
}
```

Result:




Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'Myproject' (5 of 5 projects)
ClientApp
Myproject
PublicLibrary
TriveniALibrary
WindowsFormsApp1
Solution Explorer
Git Changes
Team Explor
This PC > Local Disk (D:) > DotnetProjects > Day16Assignment > Myproject > WindowsFormsApp1 > bin > Debug
Name
Date modified
Type
Size
PublicLibrary.dll 14-02-2022 19:34 Application extension 4 KB
PublicLibrary.pdb 14-02-2022 19:34 Program Debug Data... 20 KB
TriveniALibrary.dll 14-02-2022 19:45 Application extension 4 KB
TriveniALibrary.pdb 14-02-2022 19:45 Program Debug Data... 20 KB
WindowsFormsApp1.exe 14-02-2022 19:47 Application 8 KB
WindowsFormsApp1.exe.config 14-02-2022 19:29 XML Configuration File 1 KB
WindowsFormsApp1.pdb 14-02-2022 19:47 Program Debug Data... 32 KB