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ASSIGNMENT_16

C# PROGRAMING

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NATIONS BENEFITS HEALTHCARE .TECH

Q. Print Hello World

CODE

```
public class Hello
    {
        public static void PrintHello()
        {
            Console.WriteLine
                (@"


                    ------------------------------------------------------
                    =                                                    =
                    =   HELLO HORLD !                                    =
                    =                                                    =
                    =                                                    =
                    =                                                    =
                    ------------------------------------------------------


");

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

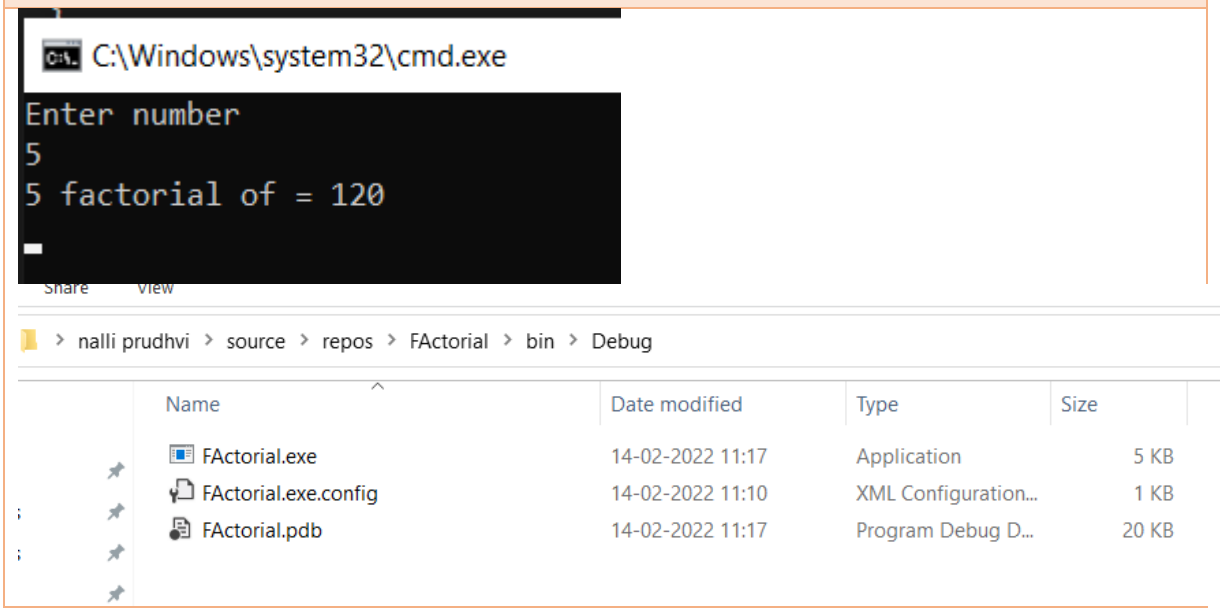
OUTPUT

Q.

```
/// <summary>
/// RETURNS FACTORIAL OF NUMBER
/// </summary>
public class Factorial
    {
        public int fact(int x)
        {
            if (x > 1)
                return x * fact(x - 1);
```

```
            else
                return 1;
        }
    }
    internal class Program
    {


        static void Main(string[] args)
        {

            //author :prudhvi
            //purpose: Factorial
            var f = new Factorial();
            Console.WriteLine("Enter number");
            int q = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine(q+" factorial of = "f.fact(q));
            Console.ReadLine();

        }
    }
```

OUTPUT



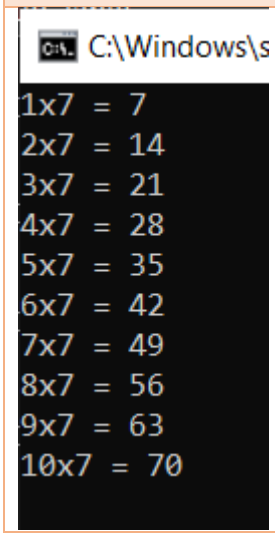
Q. Printing Table

CODE

```
public class Tabel
    {
        public void M_table(int a)
        {
            int i = 1;
            while(i < 11)
            {
                Console.WriteLine($"{i}x{a} = {i * a}");
                i++;
            }

        }
```

```
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            var r = new Tabel();
            r.M_table(7);
            Console.ReadLine();
        }
    }
```

OUTPUT



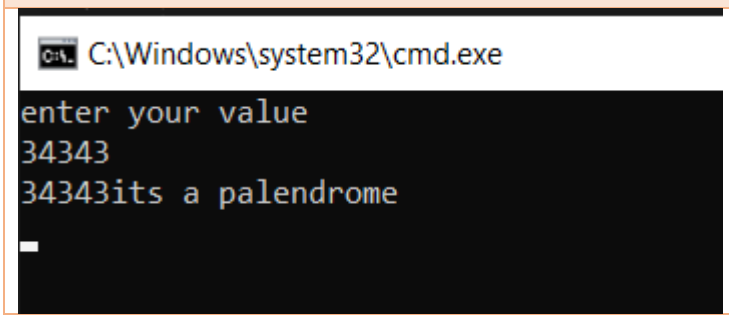
Q. CHECK PALENDROME

CODE

```
public class IsPalendrome
    {
        public void Check( int a)
        {
            int r=0,temp =a;
            bool flag=false;
            while(a>0)
            {

                int c = a%10;
                a = a/10;
                r = r * 10 + c;

            }
            if (temp == r)
            {
                Console.WriteLine(r+"its a palendrome");
            }
            else
            {
                Console.WriteLine(r+"it's not a palendrome");
            }
        }
    }
    internal class Program
    {
        static void Main(string[] args)
```

```
        {
            var x = new IsPalendrome();
            x.Check(123);
            Console.ReadLine();

        }
    }
```

OUTPUT



Create a Class Library Project

CODE :

ClintAPP:

```
using MAthLIbrary;
using PublicLibrarry;
namespace cClintApp
{
    internal class Program
    {
        static void Main(string[] args)
        {
            var q = new Mathop();
            Console.WriteLine("add "+q.Add(2,3));
            Console.WriteLine("sub ="+q.Sub(5,3));
            var j = new FactorialofNUm();
            Console.WriteLine("factorial of 5 = "+j.Fact(5));
        }
    }
}
```

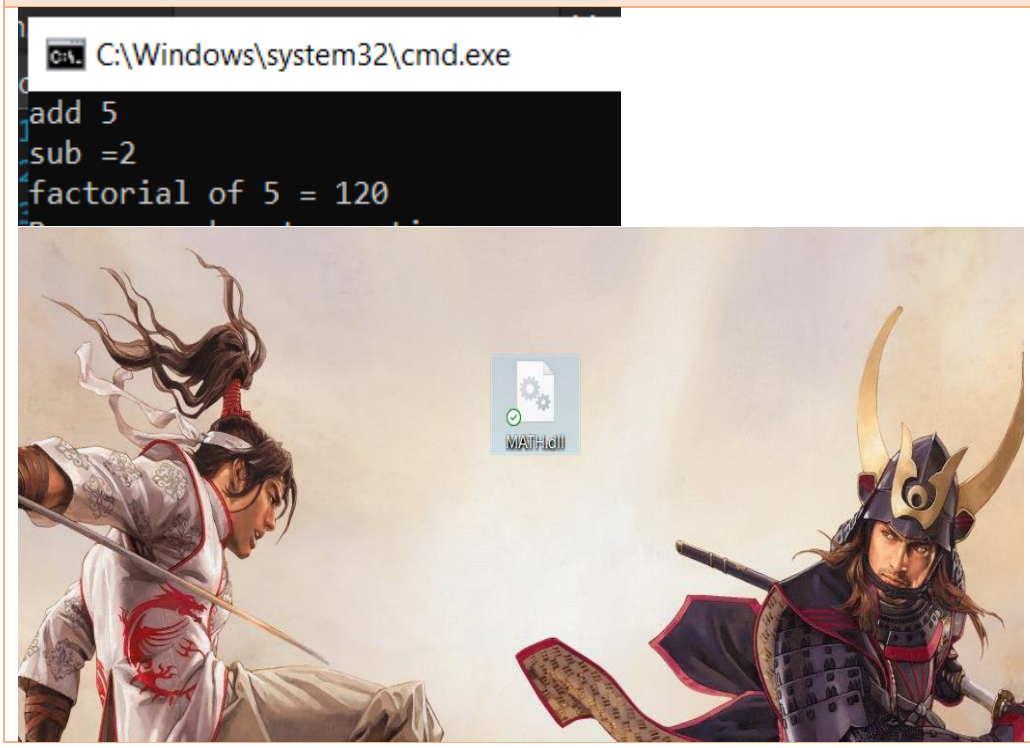
Mathlibrary:

```
namespace MAthLIbrary
{
    public class Mathop
    {
        public int Add(int a, int b)
        {
            return a + b;
        }
        public int Sub(int c, int d)
        {
            return c-d;
        }
        public int mul(int e, int f)
        {
            return e*f;
        }
    }
}
```

Publiclibrary:

```
namespace PublicLibrarry
{
    public class FactorialofNUm
    {
        public int Fact(int z)
        {
            if (z <= 1)
            {

                return 1;
            }
            else
            {
                return z*Fact(z-1);
            }
        }
    }
}
```

OUTPUT



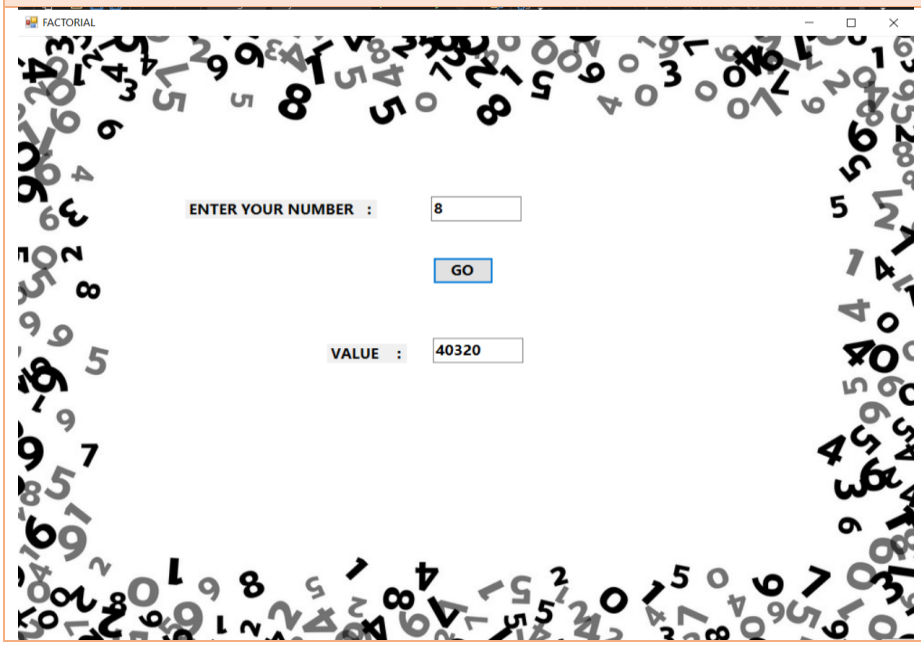
Q. WINDOWS APP.

CODE

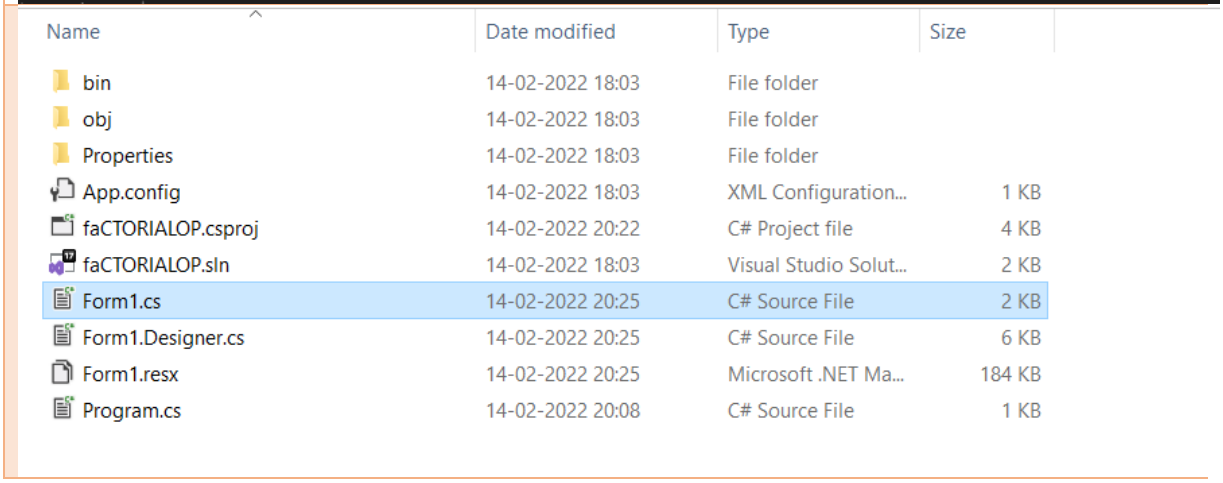
```
using System;

namespace faCTORIALOP
{
    public partial class WELCOME : Form
    {
        public WELCOME()
        {
            InitializeComponent();
```

```
        }

        private void textBox1_TextChanged(object sender, EventArgs e)
        {

        }

        private void textBox2_TextChanged(object sender, EventArgs e)
        {

        }

        private void Form1_Load(object sender, EventArgs e)
        {

        }

        private void button1_Click(object sender, EventArgs e)
        {
            int Num = Convert.ToInt32(textBox2.Text);
            int Tem = 1;
            for(int i = Num; i >= 1; i--)
            {
                Tem *= i;
            }
            textBox1.Text = Tem.ToString();
        }

        private void textBox1_TextChanged_1(object sender, EventArgs e)
        {

        }
    }
}
```

OUTPUT



```
    }

    1 reference
    private void button1_Click(object sender, EventArgs e)
    {
        int Num = Convert.ToInt32(textBox2.Text);
        int Tem = 1;
        for(int i = Num; i >= 1; i--)
        {
            Tem *= i;
        }
        textBox1.Text = Tem.ToString();
    }

    1 reference
    private void textBox1_TextChanged_1(object sender, EventArgs e)
    {
```



Name	Date modified	Type	Size
bin	14-02-2022 18:03	File folder	
obj	14-02-2022 18:03	File folder	
Properties	14-02-2022 18:03	File folder	
App.config	14-02-2022 18:03	XML Configuration...	1 KB
faCTORIALOP.csproj	14-02-2022 20:22	C# Project file	4 KB
faCTORIALOP.sln	14-02-2022 18:03	Visual Studio Solut...	2 KB
Form1.cs	14-02-2022 20:25	C# Source File	2 KB
Form1.Designer.cs	14-02-2022 20:25	C# Source File	6 KB
Form1.resx	14-02-2022 20:25	Microsoft .NET Ma...	184 KB
Program.cs	14-02-2022 20:08	C# Source File	1 KB

Q. PARTIAL CLASS

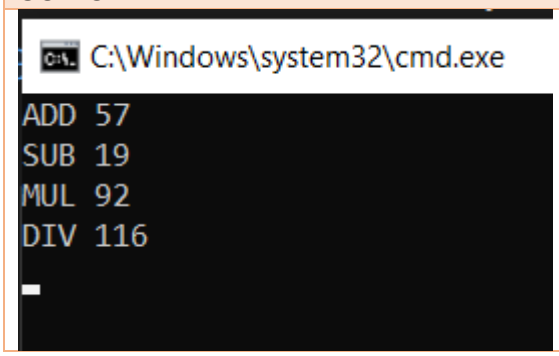
A. A partial CLASS is a unique feature of c#. It gives a special capacity to implement the functionality of a Single class into a couple of documents and these kinds of files are combined right into a single class while the app is compiled. A partial class is created via using a partial key-word. This key-word is also useful to break up the functionality of methods, interfaces, or shape into more than one documents.

CODE :

```
public partial class Math
    {
        public int Add(int a, int b)
        {
            return a + b;
        }
        public int Sub(int c, int d)
        {
            return c - d;
        }
```

```
    }
    public partial class Math
    {
        public int mul(int e,int f)
            { return e * f; }
        public int div(int g,int h)
            { return g / h; }
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            var op =new Math();
            Console.WriteLine($"ADD {op.Add(23,34)}");
            Console.WriteLine($"SUB {op.Sub(53, 34)}");
            Console.WriteLine($"MUL {op.mul(23, 4)}");
            Console.WriteLine($"DIV {op.div(232, 2)}");
            Console.ReadLine();
        }
    }
```

OUTPUT



Q. Create a class library with three classes Physics, maths, chemistry

CODE

Math_lib:

```
namespace MATH
{
    /// <summary>
    /// RETURNS FACTORIAL OF NUMBER
    /// </summary>
    public class Factorial
    {
        //author :prudhvi
        //purpose: Factorial
        public int fact(int x)
        {
            if (x > 1)
                return x * fact(x - 1);

            else
                return 1;
        }
    }

}
```

Physics_lib:

```
amespace pHYSICs
{
    public class Phsics
    {
        public void Power(int v , int i)
        {
            Console.WriteLine( $"power = {v*i}watts");
        }
        public void voltage(int i, int r)
        {
            Console.WriteLine($"power = {r * i}watts");
        }
        public void current(int v, int r)
        {
            Console.WriteLine($"current = {v/r}");
        }
    }
}
```

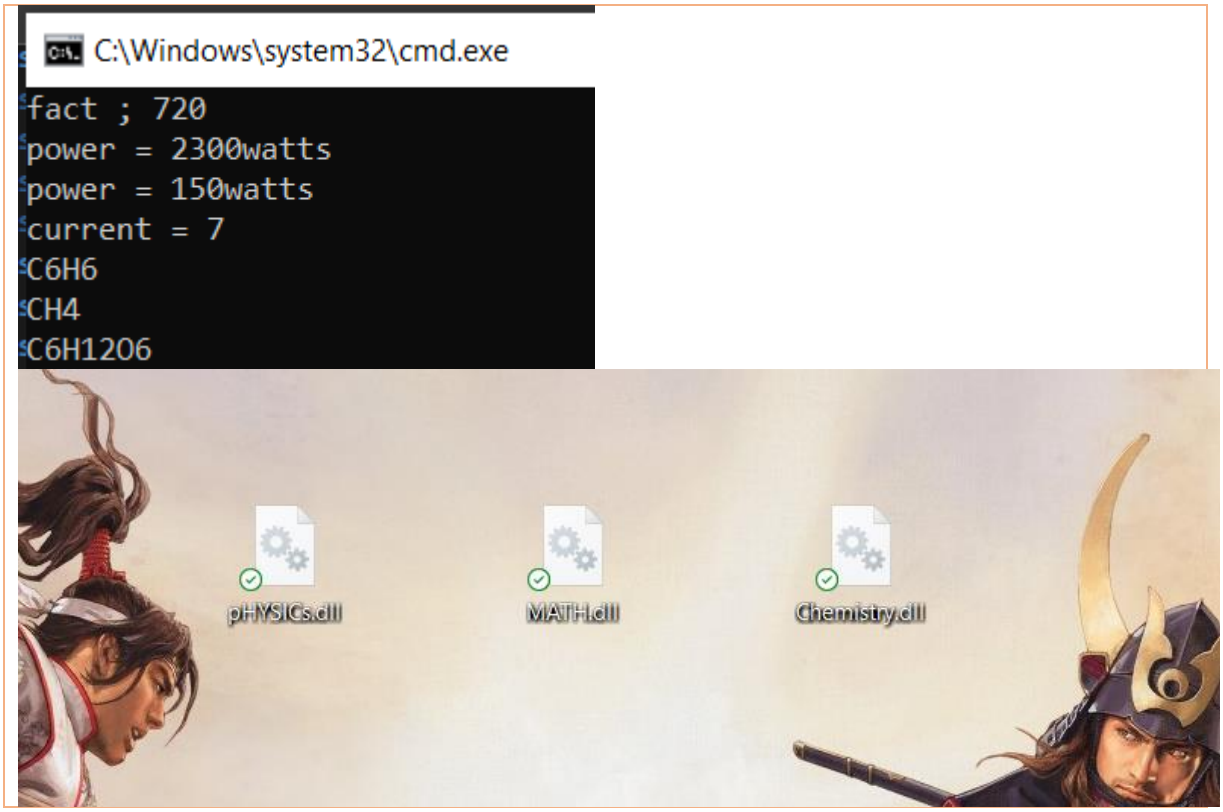
Chem_lib:

```
namespace Chemistry
{
    public class Chem_Form
    {
        public void PrintBenzen()
        {
            Console.WriteLine("C6H6");
        }
        public void Printmethane()
        { Console.WriteLine("CH4"); }
        public void Printglucose()
        { Console.WriteLine("C6H12O6"); }
    }
}
```

Console app:

```
namespace Three_Class
{
    internal class Program
    {
        static void Main(string[] args)
        {
            var ma = new Factorial();
            var e =ma.fact(6);
            Console.WriteLine($"fact ; {e}");
            var py = new Phsics();
            py.Power(230, 10);
            py.voltage(5, 30);
            py.current(230, 30);
            var ch = new Chem_Form();
            ch.PrintBenzen();
            ch.Printmethane();
            ch.Printglucose();
            Console.ReadLine();
        }
    }
}
```

OUTPUT


C:\Windows\system32\cmd.exe
fact ; 720
power = 2300watts
power = 150watts
current = 7
C6H6
CH4
C6H12O6
pHYSICs.dll
MATH.dll
Chemistry.dll