**DAY 16 ASSIGNMENT PRESENTED**

**BY**

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**14-02-2022**

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| **1.WACP to print hello world. [Think Object Oriented]** |
| **Code:-** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  // Purpose: To print hello world [Think object oriented]  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Project\_1  {  class Message  {  public static void PrintHelloWorld()  {  Console.WriteLine("Hello World");  }  }  internal class Program  {  static void Main(string[] args)  {  Message.PrintHelloWorld();  Console.ReadLine();  }  }  } |
| **Output:-** |
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| **2. WACP to read a number from user and print factorial of it. [Think Object Oriented]** |
| **Code:-** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author: JEEVITHA  //Purpose: To read a number from user and print Factorial of it [ think object oriented ]  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Project\_2  {  class Mathematics  {  int input;  public void ReadData()  {  Console.WriteLine("Enter a number:");  input = Convert.ToInt32(Console.ReadLine());  }  public int GetFactorial()  {  int fact = 1;  for (int i = 1; i <=input; i++)  {  fact= fact \* i;  }  return fact;  }  }  internal class Program  {  static void Main(string[] args)  {  Mathematics obj= new Mathematics();  obj.ReadData();  Console.WriteLine(obj.GetFactorial());  Console.ReadLine();  }  }  } |
| **Output:-** |
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| **3. For the console application created in 2nd task, add screen shot of the .exe file location .** |
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| **4. Create a class library project with name as <your name> library. Create a Class mathematics as discussed in the class. [ Add method for reading number and finding factorial ]. Rebuild the project and you will a .dll file. [ put the screenshot of this ] Copy the dll file to your desktop. [ put the screenshot of this ]** |
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| **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.** |
| **Code:-** |
| **Mathematics:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: create a class library with the Mathematics class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace JEEVILibrary  {  public class Mathematics  {  int input;  public void ReadData()  {  Console.WriteLine("Enter a number:");  input = Convert.ToInt32(Console.ReadLine());  }  public int GetFactorial()  {  int fact = 1;  for (int i = 1; i <= input; i++)  {  fact = fact \* i;  }  return fact;  }  }  } |
| **Physics:-**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: create a class library with Physics class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace JEEVILibrary  {  public class Physics  {  public int FinalVelocity(int u, int a, int t)  {  return u + a \* t;  }  }  } |
| **Chemistry:-**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: create a class library with Chemistry class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace JEEVILibrary  {  public class Chemistry  {  public string GetBenzene()  {  return "C6H6";  }  public string GetWater()  {  return "H2O";  }  public string GetMethane()  {  return "CH4";  }  }  } |
| **Console Application:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using JEEVILibrary;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: Console Application  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace project\_5  {  internal class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  m.ReadData();  Console.WriteLine(m.GetFactorial());  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  Chemistry c = new Chemistry();  Console.WriteLine(c.GetMethane());  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  int u = 10;  int a = 5;  int t = 4;  var p = new Physics();  var v = p.FinalVelocity(u, a, t);  Console.WriteLine(v);  Console.ReadLine();  }  }  } |
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| **6. WACP to print multiple table of a number.** |
| **Code:-** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: to print multiplication of a table  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Project\_6  {  class Mathematics  {  int n;  public void ReadData()  {  Console.WriteLine("enter n number");  n = Convert.ToInt32(Console.ReadLine());  }  public void GetMultiplication()  {  for (int i = 1; i <= 10; i++)  {  Console.WriteLine(n + "x" + i + "=" + n \* i);  }  }    }  internal class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  m.ReadData();  m.GetMultiplication();  Console.ReadLine();  }  }  } |
| **Output:-** |
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| **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 palindrome  {  class Palindrome  {  int n, rev, s = 0, temp;  public void ReadData()  {  Console.WriteLine("enter the number");  n=Convert.ToInt32(Console.ReadLine());  }  public void GetPalindrome()  {  temp = n;  while(n>0)  {  rev = n % 10;  s = (s \* 10) + rev;  n = n / 10;  }  if (temp == s)  Console.WriteLine("palindrome", n);  else  Console.WriteLine("not palindrome",n);  }  }  internal class Program  {  static void Main(string[] args)  {  Palindrome p = new Palindrome();  p.ReadData();  p.GetPalindrome();  Console.ReadLine();  }  }  } |
| **Output:-** |
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| **8. Create a solution “My Project” (as discussed in class) add three projects**  **a. your name library ( and add any class with methods )**  **b. Public Library ( add any class with methods)**  **c. Client App ( and here refer above two libraries )** |
| **Code:-** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose; To create a johney library  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace JohneyLibrary  {  public static class Mathematics  {  public static int Factorial(int n)  {  int fact = 1;  for (int i = 1; i <= n; i++)    fact = fact \* i;  return fact;  }  public static int Add(int a, int b)  {  return a + b;  }  public static int mul(int a, int b)  {  return (a \* b);  }  }  } |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: Public Library  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace PublicLibrary  {  public static class Physics  {  public static int FinalVelocity(int u, int a, int t)  {  return u + a + t;  }  }  } |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using JohneyLibrary;  using PublicLibrary;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: to create a client app and using johneylibrary and publiclibrary  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace ClientApp  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine(Mathematics.Factorial(6));  Console.WriteLine(Mathematics.Add(5, 6));  Console.WriteLine(Mathematics.mul(5, 5));  Console.WriteLine(Physics.FinalVelocity(6, 7, 8));  Console.ReadLine();  }  }  } |
| **Output:-** |
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| **9. add one more project ( windows application )**  **Add some 3 or 4 screenshots just to prove that you have done this.** |
| **Code:** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: factorial of a number using windows application  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace jeevitha7library  {  public class Mathematics1  {  public static int Factorial(int n)  {  int fact = 1;  for (int i = 1; i <= n; i++)  fact = fact \* i;  return fact;  }    }  } |
| **Windows Application:**  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 jeevitha7library;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author: JEEVITHA  //Purpose: windows application  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace MyWindows  {  public partial class Form1 : Form  {  public Form1()  {  InitializeComponent();  }  private void button1\_Click(object sender, EventArgs e)  {  int input = Convert.ToInt32(textBox1.Text);  int Factorial = Mathematics1.Factorial(input);  textBox2.Text = Factorial.ToString();  }  }  } |
| **Output:** |
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| **10. Research and write what is the use of Partial Classes in C# . Write example code and put screenshots.** |
| **Use:-**  A partial class is a special feature of C#. It provides a special ability to implement the functionality of a single class into multiple files and all the files are combined into a single class file when the application is compiled.  A partial class is created by using a partial keyword. This keyword is also useful to split the functionality of methods, interfaces, or structure into multiple files. |
| **Code:-** |
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