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| **Day 16 ASSIGNMENT**  **BY**  **PALURU MOUNIKA**  **14-02-2022** |

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| **1.WRITE A C# PROGRAM TO PRINT HELLO WORLD IN OBJECT ORIENTED.** |
| **CODE:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //Purpose:print helloworld in object oriented method  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace day16project1  {  /// <summary>  /// methode for message  /// </summary>  class message  {  public string PrintHello()  {  return"Hello World";  }  }  internal class Program  {  static void Main(string[] args)  {  message m=new message();  Console.WriteLine(m.PrintHello());  Console.ReadLine();  }  }  } |
| **OUTPUT:** |
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| **2.write a c# to read a number from user and print factorial of it in object oriented way.** |
| **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //Purpose:to print factorial of a number  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace day16\_project2  {  class mathmatics  {  int input;  /// <summary>  /// read data  /// </summary>  public void ReadData()  {  Console.WriteLine("enter a number");  input = Convert.ToInt32(Console.ReadLine());    }  /// <summary>  /// getfactorial  /// </summary>  /// <returns></returns>  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)  {  mathmatics math = new mathmatics();  math.ReadData();  Console.WriteLine(math.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**  **<YourName>Library**  **Create a class Mathematics as discussed in the class.**  **[ Add methods for reading number and finding factorial ]**  **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 )** |
| **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //Purpose:to print factorial of a number  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace day16\_project2  {  class mathmatics  {  int input;  /// <summary>  /// read data  /// </summary>  public void ReadData()  {  Console.WriteLine("enter a number");  input = Convert.ToInt32(Console.ReadLine());  }  /// <summary>  /// getfactorial  /// </summary>  /// <returns></returns>  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)  {  mathmatics math = new mathmatics();  math.ReadData();  Console.WriteLine(math.GetFactorial());  Console.ReadLine();  }  }  } |
| **Output:** |
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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:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using MounikaLibrary;  namespace day16project3  {  internal class Program  {  static void Main(string[] args)  {  Mathmatics m = new Mathmatics();  m.ReadData();  Console.WriteLine(m.GetFactorial());  Physics p = new Physics();  Console.WriteLine(p.FinalVelocity(5,2,1));  Chemistry c = new Chemistry();  Console.WriteLine(c.Benzene());  Console.ReadLine();  }  }  } |
| **Output**: |
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| **6. write a c# program to print multiplication table.** |
| **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author : paluru mounika  // Purpose : Multiplication Table in object oriented way.  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Day16Project4  {  class Multiple  {  int n;  public void ReadData()  {  Console.WriteLine("Enter n: ");  n = Convert.ToInt32(Console.ReadLine());  }  public void GetMultiplication()  {  for (int i = 1; i <= 10; i++)  {  Console.WriteLine("{0}\*{1}={2}", n, i, n \* i);  }  }  }  internal class Program  {  static void Main(string[] args)  {  Multiple mult = new Multiple();  mult.ReadData();  mult.GetMultiplication();  Console.ReadLine();  }  }  } |
| **Output:** |
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| **7.write a c# program to if the given number is palindrom or not.** |
| **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //purpose:check whether the number is palindrom or not  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace day16Project5  {  class Palindrome  {  int n, rev, s = 0, temp;  /// <summary>  /// for read data  /// </summary>  public void ReadData()  {  Console.WriteLine("Enter the Number: ");  n = Convert.ToInt32(Console.ReadLine());  }  /// <summary>  /// to find palindrome  /// </summary>  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 "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.cs:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace MounikaLibrary  {  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;  }  }  }   |  | | --- | | **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //Purpose:physics class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace PublicLibrary  {  public static class Physics  {  public static int FinalVelocity(int u, int a,int t)  {  return u + a + t;  }  }  } | | **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using MounikaLibrary;  using PublicLibrary;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //purpose:clint class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace ClintApp  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine(Mathematics.Factorial(5));  Console.WriteLine(Mathematics.Add(4,5));  Console.WriteLine(Mathematics.Mul(5,6));  Console.WriteLine(Physics.FinalVelocity(3, 4, 6));  Console.ReadLine();  }  }  } | |
| **Output:** |
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| **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.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //purpose:mathematics class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace MounikaLibrary  {  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;  }    }  }   |  | | --- | | **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Threading.Tasks;  using System.Windows.Forms;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //purpose:mywindows class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace MywindowsApp  {  internal static class Program  {  /// <summary>  /// The main entry point for the application.  /// </summary>  [STAThread]  static void Main()  {  Application.EnableVisualStyles();  Application.SetCompatibleTextRenderingDefault(false);  Application.Run(new Form1());  }  }  } | |
| **Output:** |
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| **10. Research and write what is the use of partial classes**  **in C#**  **WRITE EXAMPLE CODE AND PUT SCREEN SHOTS.** |
| **Uses:**  **-**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 these files are combined into a single class file when the application is compiled. A partial class is created by using a partialkeyword. This keyword is also useful to split the functionality of methods, interfaces, or structure into multiple files. |
| **Code:**  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  //Author:paluru mounika  //purpose:mathematics class  //\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace MounikaLibrary  {  public static partial 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;  }    }  }   |  | | --- | | **Code:** using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace MounikaLibrary  {    public static partial class mathematics  {  public static int Divid(int a, int b)  {  return a \* b;  }  }  } | |
| **Output:** |