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| DAY 16 Assignment  By  Nanam Vaishnavi  14- Feb -2022 |

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| 1. **Write a C# program to write Hello World** |
| **CODE** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author : Nanam Vaishnavi  // purpose : program to print Hello World in Object Oriented way.  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Day16Project1  {  class Message  {  public string PrintHi()  {  return "Hello World";  }    }  internal class Program  {  static void Main(string[] args)  {  Message m = new Message();  Console.WriteLine(m.PrintHi());  Console.ReadLine();  }  }  } |
| **OUTPUT** |
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| 1. **Write a C# Program 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 day\_16Project2  {  class Mathematics  {  int input, fact = 1;  public void ReadData()  {  Console.WriteLine("Enter Number: ");  input = Convert.ToInt32(Console.ReadLine());    }  public int GetFactorial()  {  for (int i = 1; i <= input; i++)  fact = fact \* i;  return fact;  }    }  internal class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  m.ReadData();  Console.WriteLine(m.GetFactorial());  Console.ReadLine();  }  }  } |
| **OUTPUT** |
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| 1. **For the console application created in 2nd task, add screen shot of the .exe file location.** |
| **OUTPUT** |
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| 1. **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 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 VaishnaviLibrary  {  internal class Mathematics  {  int input, fact = 1;  /// <summary>  /// Read Data  /// </summary>  public void ReadData()  {  Console.WriteLine("Enter Number: ");  input = Convert.ToInt32(Console.ReadLine());  }  /// <summary>  /// GetFactorial  /// </summary>  /// <returns></returns>  public int GetFactorial()  {  for (int i = 1; i <= input; i++)  fact = fact \* i;  return fact;  }  }  } |
| **OUTPUT** |
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| 1. **Create a class library with three classes in it:**    1. **Mathematics**    2. **Physics**    3. **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 VaishnaviLibrary;  namespace day16Project3  {  internal class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  m.ReadData();  Console.WriteLine(m.GetFactorial());  Console.WriteLine("==================================");  Physics p = new Physics();  Console.WriteLine(p.FinalVelocity(5,3,1));  Console.WriteLine("==================================");  Chemistry c = new Chemistry();  Console.WriteLine(c.Benzene());  Console.WriteLine(c.Water());  Console.WriteLine("==================================");  Console.ReadLine();    Console.ReadLine();  }  }  } |
| **OUTPUT** |

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| 1. **Write a C# program to print multiplication table of a number** |
| **CODE** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author : Nanam Vaishnavi  // Purpose : Multiplication Table in object oriented way.  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace Day16Project4  {  class Multable  {  int n;  /// <summary>  /// Read input from user  /// </summary>  public void ReadData()  {  Console.WriteLine("Enter n: ");  n = Convert.ToInt32(Console.ReadLine());  }  /// <summary>  /// GetFactorial  /// </summary>  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)  {  Multable mult = new Multable();  mult.ReadData();  mult.GetMultiplication();  Console.ReadLine();      }  }  } |
| **OUTPUT** |
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| 1. **Write a C# Program 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, 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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| 1. **Create a solution "MyProject" (as discussed in class)**   **Add three projects**   * 1. **YourNameLibrary (and add any class with methods)**   2. **PublicLibrary (add any class with methods)**   **c. ClientApp (and here refer above two libraries)** |
| **CODE** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using VaishuLibrary;  using PublicLibrary;  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  // Author : Nanam Vaishnavi  // Purpose : Create a solution "MyProject" and Adding three projects  // \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  namespace ClientApp  {  internal class Program  {  /// <summary>  /// Import 2 Class Libraries  /// </summary>  /// <param name="args"></param>  static void Main(string[] args)  {  Console.WriteLine(Mathematics.Factorial(5));  Console.WriteLine(Physics.FinalVelocity(5,8,2));  Console.ReadLine();  }  }  } |
| **OUTPUT** |
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| 1. **Add one more project (windows application)**   **Add some 3 or 4 screen shots just to prove that you have done this.** |
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| 1. **Research and write what is the use of partial classes in C#**   **WRITE EXAMPLE CODE AND PUT SCREEN SHOTS** |
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