Day 16 Assignment By M.Pallavi

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| Program 1: Write a c# program to print Hello World |
| Code:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace program1  {  class Program  {  public void Print()  {  Console.WriteLine("hello world");//printing hello world  }  static void Main(string[] args)  {  Program p=new Program();//creating object for class program  p.Print();//calling method by using object  Console.ReadLine();  }    }  } |
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| 2. Write a c# program to read a number from user and print factorial of it. |
| Code:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace program2  {  class Factorial  {  int n;  public void Readinput()  {  Console.WriteLine("enter number");  n = Convert.ToInt32(Console.ReadLine());  }  public int Fact()  {  int fact = 1;  for (int i = 1; i <= n; i++)  {  fact = fact \* i;  }  return fact;    }  static void Main(string[] args)  {  Factorial f = new Factorial();  f.Readinput();  Console.WriteLine("{0}",f.Fact());  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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| 6. WACP to print multiplication table of a number |
| Code:  using System;  // Author : Pallavi mechineni  // Purpose : Printing Multiplication table of a given number using Object Oriented Approach.  namespace Day16Project3  {  class Multi  {  int input;    public int ReadInput()  {  Console.Write("\n Enter any Number To Print its Multiplication Table : ");  input = int.Parse(Console.ReadLine());  Console.WriteLine("Displaying the Multiplication Table for {0}", input);  return input;  }  public void PrintTable()  {  for (int i = 1; i <= 10; i++)  {    Console.WriteLine("{0} x {1} = {2}", input, i, input \* i);  }  Console.WriteLine();  }  internal class Program  {  static void Main(string[] args)  {    Multi table = new Multi();  table.ReadInput();  table.PrintTable();  Console.ReadKey();  }  }  }  } |
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| 7. WACP to check if the given is number is Palindrome or not |
| Code:  using System;  namespace Day16Project4  {  class Palindrome  {  int input;    public int ReadInput()  {  Console.Write("Enter Any Number ");  input = int.Parse(Console.ReadLine());  return input;  }  public bool IsPalindrome()  {  int rev = 0, rem, m;  m = input;  while (m > 0)  {  rem = m % 10;  m = m / 10;  rev = rev \* 10 + rem;  }  if (input == rev)  return true;  else  return false;  }  }  internal class Program  {  static void Main(string[] args)  {  // Creating Object  Palindrome p = new Palindrome();  int input = p.ReadInput(); // Calling ReadInput()  bool isPalindrome = p.IsPalindrome(); // Calling IsPalindrome()  if (isPalindrome == true)  Console.WriteLine("Yes, {0} Is a Palindrome Number", input);  else  Console.WriteLine("No, {0} is Not a Palindrome Number", input);  Console.ReadLine();  }  }  } |
| Output: |

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| Program 4:Create a Class Library Project with name as  <YourName>Library ( Example : MeganadhLibrary ) |
| Code: using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace PallaviLibrary  {  internal class Mathematics  {  int input;  public void readdata()  {  Console.WriteLine("enter value");  input =Convert.ToInt32(Console.ReadLine());  }  public int factorial()  {  int fact = 1;  for (int i = 1; i < =input; i++)  {  fact = fact \* i;  }  return fact;  }  }  } |
| 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 ) |
| Create a class Mathematics as discussed in the class.  [ Add methods for reading number and finding factorial |
| Code:  using System;  using PallaviLibrary;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace dllprogram1  {  internal class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  m.readdata();  Console.WriteLine(m.factorial());  Console.ReadLine();  }  }  } |
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| Program : 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 in class library :  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace pgmLibray3classes  {  public class mathematics  {  int input;  public void readdata()  {  Console.WriteLine("enter value");  input = Convert.ToInt32(Console.ReadLine());  }  public int factorial()  {  int fact = 1;  for (int i = 1; i <= input; i++)  {  fact = fact \* i;  }  return fact;  }  }  public class chemistry  {  public string benzene()  {  return "C6H6";  }  public string water()  {  return "H20";  }  }  public class physics  {  public int Velocity(int u, int a, int t)  {  return u + a \* t;  }  }  }  Code in console application:  using System;  using pgmLibray3classes;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ConsoleApp2  {  internal class Program  {  static void Main(string[] args)  {    mathematics m = new mathematics();  m.readdata();  Console.WriteLine("factorial of number is" +m.factorial());  physics p = new physics();  Console.WriteLine("velocity is " +p.Velocity(3, 4, 5));  chemistry c = new chemistry();  Console.WriteLine("benezene value is " +c.benzene());  Console.WriteLine("water formula is" +c.water());  Console.ReadLine();  }  }  } |
| Output: |

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| Program 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) |
| Library class Code:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace mathlibrary  {  public class Mathematics  {  int input;  public void Readdata()  {  Console.WriteLine("enter value");  input = Convert.ToInt32(Console.ReadLine());  }  public int Factorial()  {  int fact = 1;  for (int i = 1; i <= input; i++)  {  fact = fact \* i;  }  return fact;  }  }  }  Second Library class:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace phylibrary  {  public class Physics  {  public int Velocity(int u, int a, int t)  {  return u + a \* t;  }  }  }  Console application Code:  using System;  using mathlibrary;  using phylibrary;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ConsoleApp1  {  internal class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  m.Readdata();  Console.WriteLine("factorial of number is{0}", + m.Factorial());  Physics p = new Physics();  Console.WriteLine("velocity is " + p.Velocity(3, 4, 5));  Console.ReadLine();  }  }  } |
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| Program 10:  10. Research and write what is the use of partial classes in C# WRITE EXAMPLE CODE AND PUT SCREEN SHOTS |
| Partial class:  Splitting the definition of a class over two or more source files. The source files contains a section of the definition of class, and all parts are combined when the application is compiled. For splitting a class definition, we need to use the partial keyword.  Uses:   1. While working on a larger projects with more than one developer, it helps the developers to work on the same class simultaneously. 2. Codes can be added or modified to the class without re-creating source files which are automatically generated by the IDE (i.e. Visual Studio |
| Code:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Math2Library  {  public static partial class Mathematics  {  public static int Addition(int a, int b)  {  int sum = a + b;  Console.WriteLine(sum);  return sum;  }  public static int Subtraction(int a, int b)  {  int diff = a - b;  Console.WriteLine(diff);  return diff;  }  public static int Multiplication(int a, int b)  {  int mul = a \* b;  Console.WriteLine(mul);  return mul;  }  public static int Division(int a, int b)  {  int div = a / b;  Console.WriteLine(div);  return div;  }  }  }  Class2:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Math2Library  {  public static partial class Mathematics  {  public static int Modulus(int a, int b)  {  int Mod = a %b;  Console.WriteLine(Mod);  return Mod;  }  }  }  Console app code:  using System;  using Math2Library;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace pgmonpartialClass  {  internal class Program  {  static void Main(string[] args)  {  Mathematics.Addition(1,2);  Mathematics.Subtraction(1, 2);  Mathematics.Multiplication(1, 2);  Mathematics.Division(2, 8);  Mathematics.Modulus(2, 8);  Console.ReadLine();  }  }  } |
| Output: |