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| **Day 16 Morning Assignments**  **By**  **Manoj yekolla**  **14-Feb-2022** |

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| **1. WACP to print Hello World**  **Hint: Think object oriented** |
| Code |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day16\_Project1  {  class Hello  {  public static void Manoj()  {  Console.WriteLine("Hello World");  }  internal class Program  {  static void Main(string[] args)  {  Hello obj = new Hello();  Hello.Manoj();    Console.ReadLine();  }  }  }  } |
| Output:  Screenshot (265) |

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| **2. WACP to read a number from user and print factorial of it.**  **Hink : Think object oriented** |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day16Project2  {  class Math  {  private int Input;    public void ReadData()  {  Console.WriteLine("Enter a Factorial Number is :");  Input =Convert.ToInt32( Console.ReadLine());  }  public int PrintData()  {  int fact = 1;  for (int i=1;i<=Input;i++)  {  fact = fact \* i;    }  return fact;  }    }  internal class Program  {  static void Main(string[] args)  {  Math obj = new Math();  obj.ReadData();  Console.WriteLine(obj.PrintData());  Console.ReadLine();  }  }  } |
| Output :  Screenshot (267) |

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| **3. For the console application created in 2nd task,**  **add screen shot of the .exe file location** |
| Location : Exe File |
| Screenshot (269) |
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| **4. 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 ]** |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ManojYLibarary  {  public class Mathmatics  {  private int Input;  public void ReadData()  {  Console.WriteLine("Enter a Factorial Number is :");  Input = Convert.ToInt32(Console.ReadLine());  }  public int PrintData()  {  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 )** |
| **Screenshot (272)** |
| **Copy the dll file to your desktop**  **(put the screen shot of this )** |
| **Screenshot (273)** |

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| **5. Create a class library with three classes in it:**  **and add methods as discussed in the class refer all the three classes in a console application.** |
| **a. Mathematics class : Lib** |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ManojYLibarary  {  public class Mathmatics  {  private int Input;  public void ReadData()  {  Console.WriteLine("Enter a Factorial Number is :");  Input = Convert.ToInt32(Console.ReadLine());  }  public int PrintData()  {  int fact = 1;  for (int i = 1; i <= Input; i++)  {  fact = fact \* i;  }  return fact;  }  }  } |
| **b ) Chemistry Class-Lib :** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ManojYLibarary  {  public class Chemistry  {  public string GetBenZene()  {  return "c6h6";  }  public string GetWater()  {  return "H2o";  }  public string GetMethane()  {  return "ch4";  }  }  } |
| **C ) Physics Class-Lib :** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ManojYLibarary  {  public class Physics  {  public static int FinalVelocity(int u,int a,int t)  {  return u + a + t;  }  }  } |
| **D ) refer all the three classes in a console application.** |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using ManojYLibarary;  namespace Day16Project5  {  internal class Program  {  static void Main(string[] args)  {  /\* Mathmatics obj=new Mathmatics();  obj.ReadData();  Console.WriteLine(obj.PrintData()); \*/  /\* Chemistry obj=new Chemistry();  Console.WriteLine(obj.GetBenZene());\*/  int u = 4;  int a = 5;  int t = 8;  //var p=new Physics();  //var v = p.FinalVelocity(u,a,t);  Console.WriteLine(Physics.FinalVelocity(u,a,t));    Console.ReadLine();  }  }  } |
| **6. WACP to print multable table of a number** |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day16Project\_6  {  class Mathmetics  {  private int Input;  private int i;  public void ReadData()  {  Console.WriteLine("Enter any Number");  Input=Convert.ToInt32(Console.ReadLine());  }  public void PrintData()  {  for (i = 1; i <= 10; i++)  {  //Printing OutPut using String Formating  Console.WriteLine("{0} x {1} = {2}", Input, i, Input \* i);  }  }  }  internal class Program  {  static void Main(string[] args)  {  Mathmetics obj=new Mathmetics();    obj.ReadData();  Console.WriteLine("------------");  obj.PrintData();  Console.ReadLine();  }  }  } |
| **Output :**  **Screenshot (275)** |

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| **7. WACP 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 Day16Project7  {  class Program1  {  private int n;  public void ReadData()  {  Console.WriteLine("Enter a Number is :");  n=Convert.ToInt32(Console.ReadLine());  }  public void PrintData()  {  int r, sum = 0, temp;  temp = n;  while (n > 0)  {  r = n % 10;  sum = (sum \* 10) + r;  n = n / 10;  }  if (temp == sum)  Console.Write("Number is Palindrome.");  else  Console.Write("Number is not Palindrome");  }  }  internal class Program  {  static void Main(string[] args)  {  Program1 obj = new Program1();  obj.ReadData();  obj.PrintData();  Console.ReadLine();  }  }  } |
| Output :  Screenshot (279) |
| Screenshot (280) |

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| 1. **Create a solution "MyProject"**   **A)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 ManojLibarary;  using PublicLibrary;  namespace ClientApp  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine("Factorial is :{0}",Mathematics.Factorial(5));  Console.WriteLine("\nvelocity is :{0}",Physics.Finalvelocity(3,4,5));  Console.ReadLine();  }  }  } |
| Output :  Screenshot (282) |
| **B). Manoj Library (and add any class with methods)** |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace ManojLibarary  {  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;  }  }  } |
| **b. PublicLibrary (add any class with methods)** |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace PublicLibrary  {  public class Physics  {  public static int Finalvelocity(int u,int a,int t)  {  return u + a + t;  }  }  } |

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| **9. Add one more project (windows application)**  **Add some 2 or 3 screen shots just to prove that**  **you have done this.** |
| Code : |
| 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 ManojLibarary;  using PublicLibrary;  namespace WindowsApplication\_Form  {  public partial class Form1 : Form  {  public Form1()  {  InitializeComponent();  }  private void button1\_Click(object sender, EventArgs e)  {  int input=Convert.ToInt32(textBox1.Text);  int factorial=Mathematics.Factorial(input);  textBox2.Text = factorial.ToString();  }  }  } |
| Output :  Screenshot (286) |
| Screenshot (287) |

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| **10. Research and write what is the use of partial classes**  **in C#**  **WRITE EXAMPLE CODE AND PUT SCREEN SHOTS** |
| * It provides a special ability to implement the functionality of a   Single class into multiple files and,   * All these files are combined into single class file. * Partial class is created by using Partial keyword. |
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| Screenshot (290) |
| Screenshot (291) |