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| **DAY 16 ASSIGNMENT**  **By**  **ARUN KUMAR YADLAPALLI**  **@**  **NB Healthcare Technologies PVT LTD.** |

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| **Q1) WACP to print Hello World Hint: Think object oriented** |
| Code:  namespace Day\_16\_Project\_1  {  //Author: Arun  // Purpose: Hello world program using OOPS  class Hello  {  /\*string word;  public void ReadData()  {  Console.WriteLine("Enter the word");  word = Console.ReadLine();  }\*/    public void PrintData()  {  Console.WriteLine("Hello world");    }    }  class Program  {  static void Main(string[] args)  {  Hello h = new Hello();    h.PrintData();  Console.ReadLine();  }  }  } |
| Output: |

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| **Q2) WACP to read a number from user and print factorial of it. Hink : Think object oriented** |
| Code :  namespace Day\_16\_Project\_2  {  //Author: Arun  //Factorial using oops  class Factorial  {  int n;    public void ReadData()  {  Console.WriteLine("Enter number ");  n = Convert.ToInt32(Console.ReadLine());  }  public void PrintData()  {  int fact=1;  for (int i=1;i<=n; i++)  {  fact = fact \* i;  }  Console.WriteLine($"The factorial of {n} is: {fact}");  }  }  class Program  {  static void Main(string[] args)  {  Factorial f = new Factorial();  f.ReadData();  f.PrintData();  Console.ReadLine();    }  }  } |
| Output : |

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| **Q3) For the console application created in 2nd task, add screen shot of the .exe file location** |
| **Screenshot of .exe file ;** |

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| **Q4) 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 :  namespace ArunLibrary  {  //Author: Arun  // Creating Library and classes using Library  public class Mathematics  {  int n;    public void ReadData()  {  Console.WriteLine("Enter number ");  n = Convert.ToInt32(Console.ReadLine());  }  public void PrintData()  {  int fact = 1;  for (int i = 1; i <= n; i++)  {  fact = fact \* i;  }  Console.WriteLine($"The factorial of {n} is: {fact}");  }  }  } |
| Screenshots:  Rebuilding the ArunLibrary    Copying on the desktop : |

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| **Q5) 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 :  namespace Arun\_Library  {  public class Mathematics  {  public int Addition (int a, int b)  {  return a + b;  }    public int subtraction (int a, int b)  {  return a - b;  }      }  }  namespace Arun\_Library  {  public class Physics  {    public void TotalVelocity(int u, int a, int t)  {  Console.WriteLine("Final velocity is : {0}",u+a\*t);    }  }  }  namespace Arun\_Library  {  public class Chemistry  {  public void Benzene()  {  Console.WriteLine("c6h6");    }  public void Water()  {  Console.WriteLine("h2o");    }    public void Methane()  {  Console.WriteLine("ch4");  }  }  }  namespace Consoleapp  {  class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  Console.WriteLine(m.Addition(8, 9));    Console.WriteLine(m.subtraction(8, 2)) ;      Physics p = new Physics();  {  p.TotalVelocity(5, 6, 5);  }      Chemistry c = new Chemistry();  c.Benzene();  c.Water();  c.Methane();    Console.ReadLine();      }  }  } |
| Output: |

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| **Q6) WACP to print multiplication table of a number** |
| Code:  namespace Day\_16\_project\_5  {  public class MulTable  {  public int n;  public void ReadData()  {  Console.WriteLine("Enter the number");  n = Convert.ToInt32(Console.ReadLine());    }    public void PrintData()  {  for (int i=0;i<=10;i++)  {  Console.WriteLine(n + "x" + i +"=" + n\*i);  }    }    }  class Program  {  static void Main(string[] args)  {  MulTable m = new MulTable();  m.ReadData();  m.PrintData();    }  }  } |
| Output: |

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| **Q7) WACP to check if the given is number is Palindrome or not** |
| Code:  namespace Day\_16\_Project\_6  {  class Palindrome  {  int sum = 0;  int remainder;  int n, temp;    public void ReadData()  {  Console.WriteLine("Enter the number");  n = Convert.ToInt32(Console.ReadLine());  }  public void PrintData()  {  temp = n;  while(n>0)  {  remainder = n % 10;  sum = sum \* 10 + remainder;  n = n / 10;  }  if(temp==sum)  Console.WriteLine("palindrome");  else  Console.WriteLine("not a Palindrome");    }  }  class Program  {  static void Main(string[] args)  {  Palindrome p = new Palindrome();  p.ReadData();  p.PrintData();  Console.ReadLine();  }    }    } |
| Output: |

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| **Q8) 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)** |
| Code:  namespace ArunLibrary12  {  public class Mathematics  {    public static void Factorial(int n)  {  int fact = 1;  for (int i = 1; i <= n; i++)  {  fact = fact \* i;  }  Console.WriteLine(fact);  }  }  }  amespace ClassLibrary12  {  public static class Chemistry  {  public static string Benzene()  {  return "C6H6";  }  public static string Methane()  {  return "CH4";  }  }  }  namespace ClientaPP12  {  class Program  {  static void Main(string[] args)  {  Mathematics.Factorial(5);  Console.WriteLine(Chemistry.Benzene());  Console.WriteLine(Chemistry.Methane());    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.10. Research and write what is the use of partial classesin C# WRITE EXAMPLE CODE AND PUT SCREEN SHOTS** |
| Code:  namespace WindowsFormsApp2  {  public partial class Form1 : Form  {  public Form1()  {  InitializeComponent();  }    private void button1\_Click(object sender, EventArgs e)  {  int input = Convert.ToInt32(textBox1.Text);  int fact = Mathematics.Factorial(input);  textBox2.Text = fact.ToString();  }  }  } |
| Output: |

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| **Q10) Research and write what is the use of partial classesin C#** |
| Code:  namespace KumarLibrary  {  public static partial class Maths  {  public static int Addition(int a, int b)  {  return a + b;  }  public static int Subtraction(int a, int b)  {  return a - b;  }  }  }  namespace KumarLibrary  {  public static partial class Maths  {  public static int Multiplication(int a, int b)  {  return a \* b;  }    public static int Division(int a, int b)  {  return a / b;  }  }  }  namespace ConsoleApp12  {  class Program  {  static void Main(string[] args)  {  Console.WriteLine(Maths.Addition(5,5));  Console.WriteLine(Maths.Subtraction (5,5));  Console.WriteLine(Maths.Multiplication(5, 5));  Console.WriteLine(Maths.Division(5,5));  }  }  } |
| Output : |