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| Day 16(14 Feb) Assignment  By Ramakrishna |

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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 Day\_16\_\_project1  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* name:Ramakrishna  \* purpose:Print Hello World  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class Message  {  public static void PrintHello()  {  Console.WriteLine("Hello");  }  }    internal class Program  {  static void Main(string[] args)  {  Console.WriteLine("Hello");  Console.ReadLine();  }  }  } |
| Output: |
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| 2. WACP 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\_16\_Project\_2  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* name:Ramakrishna  \* purpose:Print Factorial  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class mathametics  {  int fact = 1 ;  int n ;  public void Readdata()  {  Console.WriteLine("Enter number");  n = Convert.ToInt32(Console.ReadLine());  }  public int Factorial()  {  for (int i=1; i<=n; i++)  fact = fact\*i;  return fact;  }  }  internal class Program  {  static void Main(string[] args)  {  mathametics m = new mathametics();  m.Readdata();  Console.WriteLine(m.Factorial());  Console.ReadLine();  }  }  } |
| Output: |
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| 3. For the console application created in 2nd task,  add screen shot of the .exe file location |
| Output: |
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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 ] |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Ramakrishna\_libary  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* name:Ramakrishna  \* purpose:Create a Class Libray  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  internal class Mathamatics  {  int fact = 1;  int n;  public void Readdata()  {  Console.WriteLine("Enter number");  n = Convert.ToInt32(Console.ReadLine());  }  public int Factorial()  {  for (int i = 1; i<=n; i++)  fact = fact\*i;  return fact;  }  }  } |
| 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 Rk\_libray;  using System.Text;  using System.Threading.Tasks;  namespace ConsoleApp2  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* name:Ramakrishna  \* purpose:Create a Class Libray and Refer three classes in Console Application  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  internal class Program  {  static void Main(string[] args)  {  mathamatics m = new mathamatics();  Console.WriteLine( m.Factorial(8));  Console.WriteLine(m.add(33, 22));  Console.WriteLine(m.mul(4, 4));  Physics p = new Physics();  Console.WriteLine( p.Finalvelocity(4, 5, 6));  Chemistry c = new Chemistry();  Console.WriteLine( c.benzene());  Console.WriteLine( c.water());  Console.WriteLine( c.Methane());  Console.ReadLine();  }  }  } |
| Output: |
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| 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 Multiple\_table\_of\_number  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* name:Ramakrishna  \* purpose:Multiple table of Number  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class Mathematics  {  int n;  public void Readdata()  {  Console.WriteLine("enter number");  n = Convert.ToInt32(Console.ReadLine());  }    public void Printdata()  {  for (int i = 1; i <= 10; i++)  {  Console.WriteLine($"{n}\*{i}={i \* n}");  }  }  }  internal class Program  {  static void Main(string[] args)  {  Mathematics m = new Mathematics();  m.Readdata();  m.Printdata();  Console.ReadLine();  }  }  } |
| Output: |
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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 Palindrome  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* name:Ramakrishna  \* purpose:Chek Palindrome or not  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class maths  {  int n, r;  int sum = 0;  int temp;  public void Readdata()  {  Console.WriteLine("Enter the Number: ");  n = Convert.ToInt32(Console.ReadLine());  }  public void Palindrome()  {  temp = n;  while (n > 0)  {  r = n % 10;  sum = (sum \* 10) + r;  n = n / 10;  }  if (temp == sum)  Console.WriteLine("Number is Palindrome.");  else  Console.WriteLine("Number is not Palindrome");  }  internal class Program  {  static void Main(string[] args)  {  maths m = new maths();  m.Readdata();  m.Palindrome();  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) |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Ramakrishna\_library  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* name:Ramakrishna  \* purpose:Create a Solution “my project”  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  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;  }  }  } |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace public\_library  {  public class Physics  {  public static int FinalVelocity(int u,int a,int t)  {  return u + a\*t;  }  }  } |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using Ramakrishna\_library;  using public\_library;  namespace Client\_App  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine(Mathematics.Factorial(5));  Console.WriteLine(Physics.FinalVelocity (5,6,7));  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.ComponentModel;  using System.Data;  using System.Drawing;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using System.Windows.Forms;  using Ramakrishna\_library;  namespace MyWindows\_App  {  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: |
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| Research and write what is the use of partial classes  in C# |
| 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 partial keyword. |

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| 10. Research and write what is the use of partial classes  in C#  WRITE EXAMPLE CODE AND PUT SCREEN SHOTS |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Ramakrishna\_library  {  public static partial class Mathematics  {  public static int Divide(int a , int b)  {  return a / b;  }  }  } |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Ramakrishna\_library  {  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;  }  }  } |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  using Ramakrishna\_library;  using public\_library;  namespace Client\_App  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine(Mathematics.Factorial(5));  Console.WriteLine(Mathematics.Add(5, 6));  Console.WriteLine(Mathematics.mul(5,4));  Console.WriteLine(Mathematics.Divide(20,5));  Console.WriteLine(Physics.FinalVelocity (5,6,7));  Console.ReadLine();  }  }  } |
| Output : |
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