C# Lab Tutorials

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Day 04

** Please Note that I'm typing out the answers in a word/pdf file and uploading it to github since I own an iPad and VSCode is not available on my device. Please excuse me and I apologize for any inconvenience caused. Thank you. **

Question 01

01) Create a C# Console application to convert user given Kilo Meter (km) Value to Meter (m) value. Take a separate Class call "ConvertValues" and inside the class create a method call kilometerTOmeter. (No return type No Parameter Method). And display the answer within the method. Then create an object in main Class (program class) and call the method.

```
- using System;
-
- namespace KilometerToMeterConverter
- {
-     class ConvertValues
-     {
-         public void kilometerToMeter()
-         {
-             Console.Write("Enter the value in kilometers (km): ");
-             if (double.TryParse(Console.ReadLine(), out double km))
-             {
-                 double meter = km * 1000;
-                 Console.WriteLine("{0} kilometers is equal to {1} meters.", km, meter);
-             }
-             else
-             {
-                 Console.WriteLine("Invalid input. Please enter a valid numeric value.");
-             }
-         }
-     }
-
-     class Program
-     {
-         static void Main(string[] args)
-         {
-             ConvertValues converter = new ConvertValues();
-             converter.kilometerToMeter();
-         }
-     }
```

```
- }
```

02) Modify the same user defined method to method which accepts a parameter value. That parameter value is the user given Km value. (No return type with parameter method). Display the answer by using the class object.

```
- using System;
-
- namespace ModifyLastAnswer
- {
-     internal class ConvertValues
-     {
-         public void kilometersToMetersWithParameter(float kmValue)
-         {
-             float meters = kmValue * 1000;
-             Console.WriteLine("{0} kilometers is equal to {1} meters.", kmValue, meters);
-         }
-     }
-
-     internal class Program
-     {
-         static void Main(string[] args)
-         {
-             ConvertValues converter = new ConvertValues();
-
-             Console.Write("Enter a value in kilometers (km): ");
-             if (float.TryParse(Console.ReadLine(), out float km))
-             {
-                 converter.kilometersToMetersWithParameter(km);
-             }
-             else
-             {
-                 Console.WriteLine("Invalid input. Please enter a valid numeric value.");
-             }
-         }
-     }
- }
```

03) Modify the same user defined method to method which accept a parameter and returns the answer at the end of the method. You should return the calculated Meter value at the end of the method. (With return type with parameter method). Display the answer by using object.

```
- using System;
-
- namespace ModifyFurther
- {
-     internal class ConvertValues
-     {
-         public float kilometersToMetersWithParameterAndReturn(float kmValue)
-         {
```

```
-            float meters = kmValue * 1000;
-            return meters;
-        }
-    }
-
-    internal class Program
-    {
-        static void Main(string[] args)
-        {
-            ConvertValues converter = new ConvertValues();
-
-            Console.Write("Enter a value in kilometers (km): ");
-            if (float.TryParse(Console.ReadLine(), out float km))
-            {
-                float metersResult = converter.kilometersToMetersWithParameterAndReturn(km);
-                Console.WriteLine("The equivalent distance in meters is: " + metersResult);
-            }
-            else
-            {
-                Console.WriteLine("Invalid input. Please enter a valid numeric value.");
-            }
-        }
-    }
- }
```

Question 02

01) Create a C# Console application to find the area and the circumference of a circle.
02) • User should insert the radius value to the program. Program should contain a separate class call “FindValues” inside the separate class add two methods call findArea and findCircumference Both these methods are methods which takes parameters. As the parameter you should pass the radius value. By using above two methods find the area and circumference of the circle and return the answer from both methods. Create a class object in main class and call both methods and display the answers.

❖ Find Values

```
- namespace CircumferenceOfACircle
- {
-     internal class FindValues
-     {
-         public double findArea(double r)
-         {
-             double Area = Math.PI * r * r;
-             return Area;
-         }
-
-         public double findCircumference(double r)
-         {
-             double circ = Math.PI * r * 2;
```

```
            return circ;
        }
    }
}
```

❖ Program

```
namespace lab4Q2
{
    internal class Program
    {
        static void Main(string[] args)
        {
            FindValues newobj2 = new FindValues();
            Console.WriteLine("Enter radius: ");
            double radius =double.Parse(Console.ReadLine());
            double area = newobj2.findArea(radius);
            double circum = newobj2.findCircumference(radius);
            Console.WriteLine("The Area:" + area );
            Console.WriteLine("The Circumference:" + circum);
        }
    }
}
```