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SE-B
Web Engineering
Lab#04

Task 1:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace task1
{
    class Program
    {
        static double area_of_circle(double radius)
        {
            return Math.PI * (Math.Pow(radius, 2));
        }
        static double area_of_triangle(double height, double baseOfTri)
        {
            return (height * baseOfTri) / 2;
        }
        static void Main(string[] args)
        {
            Console.WriteLine("Enter Radius: ");
            double radius = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("Area of Circle: {0}", area_of_circle(radius));
            Console.WriteLine("Enter Height: ");
            double height = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("Enter Base: ");
            double baseOfTri = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("Area of Triangle: {0}",
            area_of_triangle(height, baseOfTri));
            Console.ReadKey();
        }
    }
}
```

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```
PS C:\Users\ADMIN\Desktop\WE\Labs\Lab#04\tasks\task1> dotnet run
Enter Radius:
25
Area of Circle: 1963.4954084936207
Enter Height:
14
Enter Base:
5
Area of Triangle: 35
```

Task 2:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ConsoleApplication1
{
    class Program
    {
        static double calculator(double a, String op, double b)
        {
            if (op == "+")
            {
                return a + b;
            }
            else if (op == "-")
            {
                return a - b;
            }
            else if (op == "*")
            {
                return a * b;
            }
            else if (op == "/")
            {
                return a / b;
            }
```

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```
            else
            {
                return 0;
            }
        }
        static void Main(string[] args)
        {
            Console.WriteLine("Enter a: ");
            double a = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("Enter op: ");
            String op = Console.ReadLine();
            Console.WriteLine("Enter b: ");
            double b = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("Result : {0}", calculator(a, op, b));
            Console.ReadKey();
        }
    }
}
```

```
Enter a:
2
Enter op:
+
Enter b:
2
Result : 4
```

Task 3:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace task3
{
    class Program    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter start: ");
```

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```
            int start = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("Enter end: ");
            int end = Convert.ToInt32(Console.ReadLine());
            while (start <= end)
            {
                if (start % 2 == 1)
                {
                      Console.WriteLine("Odd: {0}",start);
                 }
                else{
                     Console.WriteLine("Even: {0}",start);
                 }
                start++;
            }
            Console.ReadKey();
        }
    }
}
```

```
Enter start:
1
Enter end:
15
Odd: 1
Even: 2
Odd: 3
Even: 4
Odd: 5
Even: 6
Odd: 7
Even: 8
Odd: 9
Even: 10
Odd: 11
Even: 12
Odd: 13
Even: 14
Odd: 15
```

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Task 4:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace task4
{
    class Program
    {
        static void Main(string[] args)
        {
           Console.WriteLine("Enter String: ");
            string str = Convert.ToString(Console.ReadLine());

            string reverse = "";

            for (int i = str.Length - 1; i >= 0; i--)
            {
                reverse += str[i];
            }
            Console.WriteLine("Orignal String: {0}", str);
            Console.WriteLine("Reverse String: {0}", reverse);

            Console.ReadKey();
        }
    }
}
```

```
Enter String:
waleed
Orignal String: waleed
Reverse String: deelaw
```

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Task 5:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace task5
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter target: ");
            int target = Convert.ToInt32(Console.ReadLine());
            int[] arr = { 1, 3, 5, 6 };
            for (int i = 0; i < arr.Length; i++)
            {
                if (arr[i] == target)
                {
                    Console.WriteLine("Found");
                    break;
                }
            }
            Console.WriteLine("Not Found");
            Console.ReadKey();
        }
    }
}
```

```
Enter target:
5
Found
```

Task 6:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
```

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```
namespace task6
{
    class Program
    {
        static void Main(string[] args)
        {
            int i, j, k;
            for (i = 1; i <= 5; i++)
            {
                for (j = 1; j <= 5; j++)
                {
                    if (j >= i)
                    {
                        k = j - i + 1;
                        Console.Write(k);
                    }
                    else
                    {
                        k = i - j + 1;
                        Console.Write(k);
                    }
                }
                Console.WriteLine();
            }
            Console.ReadLine();
        }
    }
}
```

```
PS C:\Us
12345
21234
32123
43212
54321
```

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Task 7:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace task7
{
    class Program
    {
        static void Main(string[] args)
        {
            int[,] arr = new int[4, 4];
            int sum = 0;
            for (int i = 0; i < 4; i++)
            {
                for (int j = 0; j < 4; j++)
                {
                    arr[i, j] = i + j;
                }
            }
            for (int i = 0; i < 4; i++)
            {
                for (int j = 0; j < 4; j++)
                {
                    Console.Write(arr[i, j] + " ");
                }
                Console.WriteLine();
            }
            for (int i = 0; i < 4; i++)
            {
                for (int j = 0; j < 4; j++)
                {
                    if (i == j)
                    {
                        sum = sum + arr[i, j];
                    }
                }
            }
            Console.WriteLine("Sum of diagonals is " + sum);
```

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```
            Console.ReadLine();
        }
    }
}
```

```
0 1 2 3
1 2 3 4
2 3 4 5
3 4 5 6
Sum of diagonals is 12
```

Task9:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace task8
{
    class Circle
    {
        public double radius;
        public double area;
        public Circle(double radius)
        {
            this.radius = radius;
        }
        public double Area()
        {
            area = 3.14 * radius * radius;
            return area;
        }
    }
    class Triangle
    {
        public double base1;
        public double height;
        public double area;
        public Triangle(double base1, double height)
        {
            this.base1 = base1;
```

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```
            this.height = height;
        }
        public double Area()
        {
            area = 0.5 * base1 * height;
            return area;
        }
    }
    class Program
    {

        static void Main(string[] args)
        {
            Circle c = new Circle(5);
            Console.WriteLine("The area of the circle is: " + c.Area());
            Triangle t = new Triangle(5, 6);
            Console.WriteLine("The area of the triangle is: " + t.Area());
            Console.ReadLine();
        }
    }
}
```

```
PS C:\Users\ADMIN\Desktop\WE\Labs\Lab#04\tasks\task8> dotnet run
The area of the circle is: 78.5
The area of the triangle is: 15
```