Practical No 06

VIII. Resources required (Additional)

- If any web references are required.

X. Resources used (Additional)

- https://docs.microsoft.com/en-us/dotnet/visual-basic/language-reference/statements/while-end-while-statement
- https://docs.microsoft.com/en-us/dotnet/visual-basic/language-reference/statements/do-loop-statement

XI. Program Code

Write a program using While & Do loop in VB.Net

- **For while loop.**

```
Module  Module1

    Sub  Main()
        Dim a As Integer = 1
        While (a < 10)
            Console.WriteLine(a)
            a = a + 1
        End While
        Console.ReadLine()
    End  Sub

End  Module
```

Output:

```
1
2
3
4
5
6
7
8
9
```

- **For Do loop.**

```
Module  Module1

    Sub  Main()
        Dim a As Integer =  1
        Do
            Console.WriteLine(a)
            a = a + 1
        Loop  While  (a<10)
        Console.ReadLine()
    End Sub

End  Module
```

Output:

```
1
2
3
4
5
6
7
8
9
```

XIII. Practical Related Questions

1. Differentiate between Do & While Loop statements in VB.Net

No	Do Loop	No	While Loop
1	In Do loop, the condition can be tested at starting or ending as per requirement.	1	In While loop, the condition can be tested at starting only.
2	For Do Loop two variation available Do While Loop & Do Until Loop	2	For While loop no such variations are available.
3	Do While Loop statement can execute for finite number of iterations as long as condition of loop is true while Do Until Loop statement can execute for finite number of iterations as long as condition of loop is false.	3	While loop can execute for finite number of iterations as long as condition of loop is true.
4	Loop keyword is used as termination statement for Do loops.	4	End keyword is used as termination statement for While loop.
5	Dim index As Integer = 0 Do Debug.Write(index & " ") index += 1 Loop Until index > 10 Debug.WriteLine("") ' Output: 0 1 2 3 4 5 6 7 8 9 10	5	Dim index As Integer = 0 While index <= 10 Debug.Write(index & " ") index += 1 End While Debug.WriteLine("") ' Output: 0 1 2 3 4 5 6 7 8 9 10

2. Give the syntax of While & Do loop statements in VB.NET.

- **While Loop:**

It executes a series of statements as long as a given condition is True.

Syntax:

```
While condition
   [ statements ]
   [ Continue While ]
   [ statements ]
   [ Exit While ]
   [ statements ]
End While
```

Do Loop:

It repeats the enclosed block of statements while a Boolean condition is True or until the condition becomes True. It could be terminated at any time with the Exit Do statement.

Syntax:

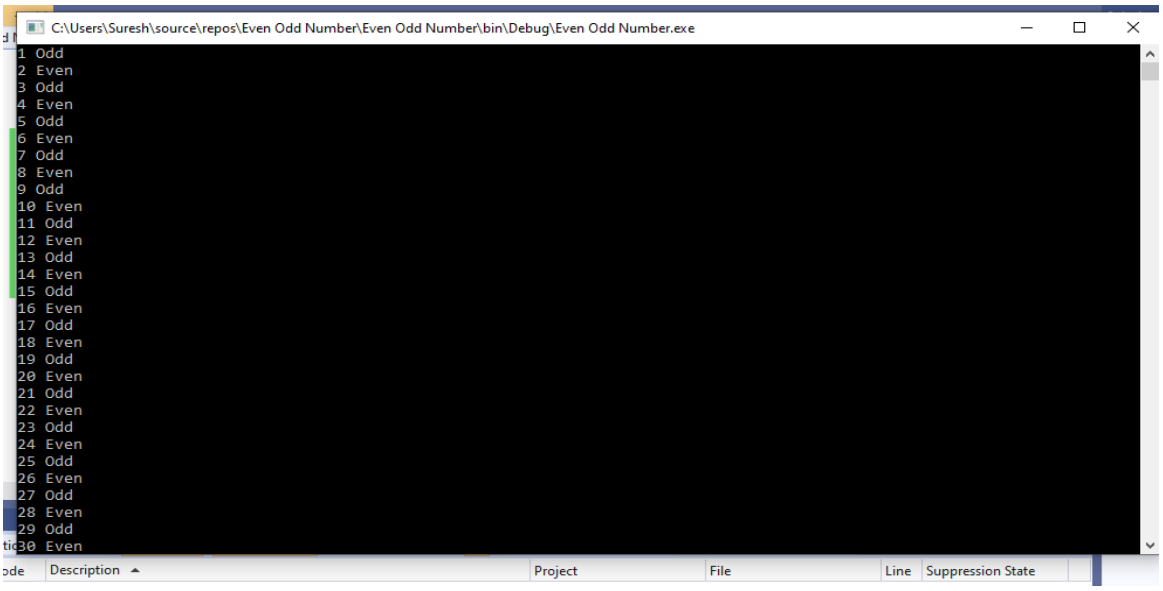
```
Do
  [ statements ]
  [ Continue Do ]
  [ statements ]
  [ Exit Do ]
  [ statements ]
Loop { While | Until } condition
```

XIV. Exercise

1. **Write a program using While statement to print the prime numbers between 1 to 100.**

```
Module Module1
  Sub Main()
    Dim i, j, c As Integer
    c = 0
    i = 2
    While (i <= 100)
      j = 2
      While (j < i)
        If (i Mod j = 0) Then
          Exit While
        ElseIf (i = j + 1) Then
          Console.WriteLine(i)
        End If
        j = j + 1
      End While
      i = i + 1
    End          While
    Console.ReadLine()
  End Sub
End Module
```

OUTPUT:



2. Write a program using While statement to print even-odd numbers between 1 to 50.

```
Module Module1

    Sub Main()
        Dim i As Integer = 1
        While (i <= 50)
            If ((i Mod 2) = 0) Then
                Console.WriteLine(i & " Even")
            Else
                Console.WriteLine(i & " Odd")
            End If
            i = i + 1
        End While
        Console.ReadLine()
    End Sub

End Module
```

Output: