

Practical No. 7: Implement a program to demonstrate the use of For, For-each Loops in VB.NET.

Practical No 07

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/for-next-statement>
- <https://docs.microsoft.com/en-us/dotnet/visual-basic/language-reference/statements/for-each-next-statement>

XI. Program Code

Write a program using For & For Each loop in VB.Net

Program – Program to calculate search the element in an array using linear search.

Module Module1

```
Sub Main()  
    Dim Array() As Integer = { 12, 34, 56, 37, 78, 53, _  
                                98, 22, 19, 68}  
  
    Dim Key As Integer  
    Dim IsKeyFoundFlag As Boolean = False  
  
    Console.WriteLine("Enter element to search: ")  
    Key = Console.ReadLine()  
  
    For i As Integer = 1 To Array.Length() - 1  
        If Array(i) = Key Then  
            IsKeyFoundFlag = True  
        End If  
    Next  
  
    If IsKeyFoundFlag = True Then  
        Console.WriteLine("Element present.")  
    Else  
        Console.WriteLine("Element absent.")  
    End If  
  
    Console.ReadKey()  
End Sub
```

End Module

XII. Results (output of the program)

Enter element to search:

53

Element present

XIII. Practical Related Questions

1. Write the output of the following code?

Module Module1

```
Sub Main()  
    For i As Integer = 0 To -10 Step -1  
        Console.WriteLine(i)  
    Next  
    Console.ReadKey()  
End Sub
```

End Module

Output :

0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10

2. Write the program to generate the following output –

Module Module1

```
Sub Main()  
    Dim i As Single  
  
    For i = 3.5F To 8.5F Step 0.5F  
        Console.WriteLine(i)  
    Next  
    Console.ReadKey()  
End Sub
```

End Module

XIV. Exercise

1. Write the situation where for each loop statements can be implemented.

- Use a For Each...Next loop when you want to repeat a set of statements for each element of a collection or array.

- 2. Write program using For Next loop statement tot find the Armstrong numbers between 1 to 500. (153 is Armstrong Number – $1^3 + 5^3 + 3^3 = 153$)**

➤ Module Module1

```
Sub Main()
    Dim i As Integer

    Console.Write("Armstrong Numbers between 1 to 500: ")
    For i = 1 To 500 Step 1
        Dim sum, num, digit As Integer
        sum = 0
        num = i

        While (num > 0)
            digit = num Mod 10
            sum += (digit * digit * digit)
            num = num \ 10
        End While

        If (sum = i) Then
            Console.WriteLine(i)
        End If
    Next
    Console.ReadLine()
End Sub

End Module
```

Output:

```
1
153
370
371
407
```