Documentation for VB.NET: Control Flow Statements

If-Then Statement

The `If-Then` statement allows you to execute certain code based on a condition.

The syntax is:

```
If condition Then
    ' Statements A
End If
' Statements B
```

Behavior:

- **Statements A** will be executed if the condition is `True`.
- **Statements B** will be executed regardless of whether the condition is `True` or `False`.

Example:

```
Dim age As Integer = 20

If age >= 18 Then
    Console.WriteLine("You are an adult.")
End If

Console.WriteLine("This statement is always executed.")
```

In this example:

- The message "You are an adult." is displayed only if `age` is 18 or older.
- The message "This statement is always executed." is displayed regardless of the age.

If-Then-Else Statement

The `If-Then-Else` statement provides an alternative path of execution if the condition is `False`.

The syntax is:

```
If condition Then
    ' Statements A
Else
    ' Statements B
End If
```

Behavior:

- **Statements A** will be executed if the condition is `True`.
- **Statements B** will be executed if the condition is `False`.

Example:

```
Dim temperature As Integer = 30

If temperature >= 25 Then
    Console.WriteLine("It's warm outside.")
Else
    Console.WriteLine("It's cool outside.")

End If
```

In this example:

- The message "It's warm outside." is displayed if the `temperature` is 25 or above.
- Otherwise, "It's cool outside." is displayed.

Nested If Statements

Nested `If` statements are used when you need to check multiple conditions within an `If` block.

The syntax is:

```
If condition1 Then
    If condition2 Then
        ' Statements A
    End If
End If
```

Example:

```
Dim score As Integer = 85

If score >= 60 Then
    If score >= 80 Then
        Console.WriteLine("Excellent")
    Else
        Console.WriteLine("Good")
    End If
Else
    Console.WriteLine("Needs Improvement")
End If
```

In this example:

- If the `score` is 60 or more, it further checks if the score is 80 or more to display "Excellent" or "Good".
- If the score is less than 60, it displays "Needs Improvement".

If-Then-ElseIf-Else Statement

The `If-Then-ElseIf-Else` statement allows for multiple conditions to be checked in sequence.

The syntax is:

```
If condition1 Then
    ' Statements A
ElseIf condition2 Then
    ' Statements B
ElseIf condition3 Then
    ' Statements C
Else
    ' Statements D
End If
```

Behavior:

- **Statements A** are executed if `condition1` is `True`.
- **Statements B** are executed if `condition1` is `False` and `condition2` is `True`.
- **Statements C** are executed if both `condition1` and `condition2` are `False`, and `condition3` is `True`.
- **Statements D** are executed if none of the conditions are `True`.

Example:

```
If day = 1 Then
    Console.WriteLine("Monday")
ElseIf day = 2 Then
    Console.WriteLine("Tuesday")
ElseIf day = 3 Then
    Console.WriteLine("Wednesday")
ElseIf day = 4 Then
    Console.WriteLine("Thursday")
ElseIf day = 5 Then
    Console.WriteLine("Friday")
ElseIf day = 6 Then
    Console.WriteLine("Saturday")
ElseIf day = 7 Then
    Console.WriteLine("Sunday")
Else
    Console.WriteLine("Invalid day")
End If
```

In this example:

- It prints the name of the day based on the value of `day`.

Funny Part: Console ACS-II Art Example

To add a bit of humor, here's a sample console art that you can use to lighten up your VB.NET program:.

Example:

```
Console.WriteLine("$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$$$$$$**$$$$$$$$$**$$$$$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$$$$""   ^$$$$$$F    *$$$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$$$     z$$$$$$L    ^$$$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$$$    e$$$$$$$$$e  J$$$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$$$eee$$$$$$$$$$$$$e$$$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$$b$$$$$$$$$$$$$$$$*$$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$)$$$$P""e^$$$F$r*$$$$F""$$$$$$$$$$$$$$$$")
Console.WriteLine("$$$$$$$$$d$$$$  ""z$$$$""  $$$$%  $3$$$$$$$$$$$$")
Console.WriteLine("$$$$$$*""""""*$$$  .$$$$$$ z$$$*   ^$e*$$$$$$$$$$")
Console.WriteLine("$$$$$""     *$$ee$$$$$$$$$$*""     $$$C$$$$$$$$$")
Console.WriteLine("$$$$$.      ""***$$""*""$$""        $$$$e*$$$$$$$")
Console.WriteLine("$$$$$b          ""$b.$$""          $$$$$b""$$$$$$")
Console.WriteLine("$$$$$$$c.         """""           $$$$$$$^$$$$$")
Console.WriteLine("$$$$$$$$$e..                     $$$$$$$$^$$$$")
Console.WriteLine("$$$$$$$$$$$$$eeee..            J$$$$$$$$b""$$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$$r          z$$$$$$$$$r$$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$$$""        z$$$$$**$$$$$^$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$*""         z$$$P""   ^*$$$ $$")
Console.WriteLine("$$$$$$$$$$$$$*""           .d$$$$      $$$ $$")
Console.WriteLine("$$$$$$$$$$$$""           .e$$$$$F      3$$ $$")
Console.WriteLine("$$$$$$$$$$$$.         .d$$$$$$        $PJ$$")
Console.WriteLine("$$$$$$$$$$$$$$eeeeeeed$*""""""""**""""         $\$$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$$$$$$$                    $d$$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$$$$$$$.                   $$$$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$$$$$$$e.                d$$$$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$eeeeeee$$$$$$")
Console.WriteLine("$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$Gilo94'$$$$")
```

Conclusion

his documentation covers basic control flow statements in VB.NET including **`If-Then`**, **`If-Then-Else`**, nested **`If`** statements, and **`If-Then-ElseIf-Else`**. Additionally, it includes a playful console art example to add some humor to your programming.