* **[4.1 A logical design that controls the order in which a set of statements executes.](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP70010152380000000000000000019C1.xhtml" \l "P7001015238000000000000000001B1C)**
* [**4.2 It is a program structure that can execute a set of statements only under certain circumstances.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP70010152380000000000000000019C1.xhtml#P7001015238000000000000000001B1F)
* [**4.3 A decision structure that provides a single alternative path of execution. If the condition that is being tested is true, the program takes the alternative path.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP70010152380000000000000000019C1.xhtml#P7001015238000000000000000001B22)
* [**4.4 An expression that can be evaluated as either true or false.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP70010152380000000000000000019C1.xhtml#P7001015238000000000000000001B25)
* [**4.5 You can determine whether one value is greater than, less than, greater than or equal to, less than or equal to, equal to, or not equal to another value.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP70010152380000000000000000019C1.xhtml#P7001015238000000000000000001B28)
* [**4.6**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP70010152380000000000000000019C1.xhtml#P7001015238000000000000000001B2B)
* If y == 20 Then
* Set x = 0

End If

* [**4.7**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP70010152380000000000000000019C1.xhtml#P7001015238000000000000000001B31)
* If sales >= 10000 Then
* Set commission = 0.2

End If

* [**4.8 A dual alternative decision structure has two possible paths of execution—one path is taken if a condition is true, and the other path is taken if the condition is false.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001B36.xhtml#P7001015238000000000000000001BC0)
* [**4.9 If-Then-Else**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001B36.xhtml#P7001015238000000000000000001BC3)
* [**4.10 When the condition is false.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001B36.xhtml#P7001015238000000000000000001BC6)
* [**4.11**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001BCB.xhtml#P7001015238000000000000000001C51)

z is not less than a.

* [**4.12**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001BCB.xhtml#P7001015238000000000000000001C56)
* Boston

New York

* [**4.13 A dual alternative decision structure has two possible paths of execution—one path is taken if a condition is true, and the other path is taken if the condition is false.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001C5A.xhtml#P7001015238000000000000000001D25)
* [**4.14**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001C5A.xhtml#P7001015238000000000000000001D28)

If-Then-Else

* [**4.15 If the condition is false.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001C5A.xhtml#P7001015238000000000000000001D2B)
* [**4.16**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001C5A.xhtml#P7001015238000000000000000001D31)
* If number == 1 Then
* Display "One"
* Else If number == 2 Then
* Display "Two"
* Else If number == 3 Then
* Display "Three"
* Else
* Display "Unknown"

End If

* [**4.17 A structure that tests the value of a variable or an expression and then uses that value to determine which statement or set of statements to execute.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001D36.xhtml#P7001015238000000000000000001DB9)
* [**4.18 With a Select Case statement.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001D36.xhtml#P7001015238000000000000000001DBC)
* [**4.19 A variable or an expression.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001D36.xhtml#P7001015238000000000000000001DBF)
* [**4.20 In such an event, you can use the If-Then-Else If statement, or a nested decision structure.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001D36.xhtml#P7001015238000000000000000001DC2)
* [**4.21 It is an expression that is created by using a logical operator to combine two Boolean subexpressions.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001DC6.xhtml#P7001015238000000000000000001F14)
* [**4.22**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001DC6.xhtml#P7001015238000000000000000001F17)
  + F
  + T
  + F
  + F
  + T
  + T
  + T
  + F
  + F
  + T
* [**4.23**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001DC6.xhtml#P7001015238000000000000000001F65)
  + T
  + F
  + T
  + T
  + T
* [**4.24 The AND operator: If the expression on the left side of the AND operator is false, the expression on the right side will not be checked.  
  The OR operator: If the expression on the left side of the OR operator is true, the expression on the right side will not be checked.**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001DC6.xhtml#P7001015238000000000000000001F8F)
* [**4.25**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001DC6.xhtml#P7001015238000000000000000001F94)
* If speed >= 0 AND speed <= 200 Then
* Display "The number is valid"

End If

* [**4.26**](https://jigsaw.vitalsource.com/books/9780134801407/epub/OPS/xhtml/fileP7001015238000000000000000001DC6.xhtml#P7001015238000000000000000001F99)
* If speed < 0 OR speed > 200 Then
* Display "The number is not valid"

End If

* 4.27True or false
* 4.28A variable that signals when some condition exists in the program.