



# Approved notation for developing pseudocode

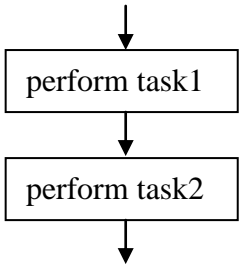
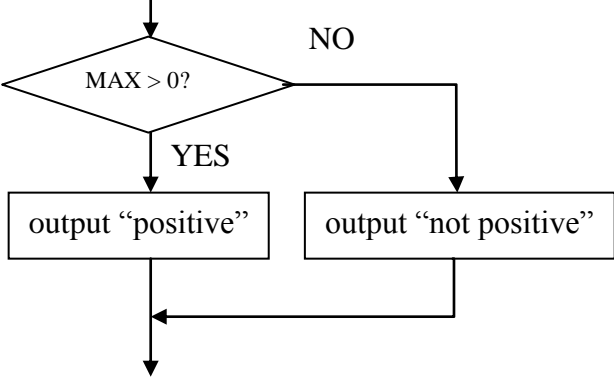
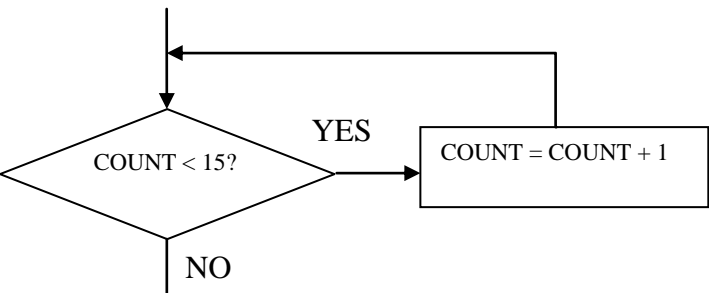
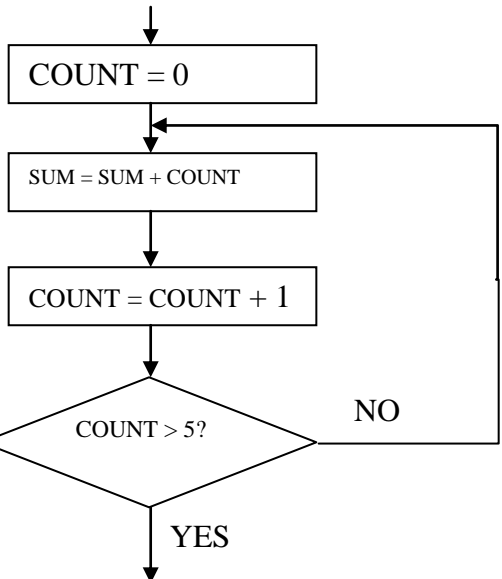
## Approved notation for developing pseudocode

When developing pseudocode teachers must use the symbols below, which are those used in mathematics.

This information should be distributed to candidates as close as possible to the commencement of teaching of the course. This notation sheet will be available to candidates during the external examinations.

|                                 |  |
|---------------------------------|--|
| Conventions                     | <p>Variable names are all capitals, for example, CITY</p> <p>Pseudocode keywords are lower case, for example, loop, if ...</p> <p>Method names are mixed case, for example, getRecord</p> <p>Methods are invoked using the “dot notation” used in Java, C++, C#, and similar languages, for example, BIGARRAY.binarySearch( 27 )</p> |
| Variable names                  | <p>These will be provided and comments // used, for example:</p> <p>N = 5 // the number of items in the array</p> <p>SCOREHISTORY.getExam( NUM ) // get the student’s score on exam NUM</p>  |
| Assigning a value to a variable | <p>Values will be assigned using = , for example:</p> <p>N = 5 // indicates the array has 5 data items</p> <p>VALUE[0] = 7 // assigns the first data item in the array a value of 7</p>  |
| Output of information           | <p>Output—this term is sufficient to indicate the data is output to a printer, screen, for example:</p> <p>output COUNT // display the count on the screen</p>   |

| Symbol | Definition                  | Examples     |                            |
|--------|-----------------------------|--------------|----------------------------|
| =      | is equal to                 | X = 4, X = K | if X = 4                   |
| >      | is greater than             | X > 4        | if X > 4 then              |
| >=     | is greater than or equal to | X >= 6       | loop while X >= 6          |
| <      | is less than                | VALUE[Y] < 7 | loop until VALUE[Y] < 7    |
| <=     | is less than or equal to    | VALUE[] <=12 | if VALUE[Y] <= 12 then     |
| ≠      | not equal to                | X ≠ 4, X ≠ K |                            |
| AND    | logical AND                 | A AND B      | if X < 7 AND Y > 2 then    |
| OR     | logical OR                  | A OR B       | if X < 7 OR Y > 2 then     |
| NOT    | logical NOT                 | NOT A        | if NOT X = 7 then          |
| mod    | modulo                      | 15 mod 7 = 1 | if VALUE[Y] mod 7 = 0 then |
| div    | integer part of quotient    | 15 div 7 = 2 | if VALUE[Y] div 7 = 2 then |

| Operation                     | Flowchart example  | Pseudocode example  |
|-------------------------------|--|---|
| <b>sequential operations</b>  |     | <pre>perform task1 perform task2</pre>  |
| <b>conditional operations</b> |    | <pre>if MAX &gt; 0 then     output "positive" else     output "not positive" end if</pre> |
| <b>while-loop</b>             |  | <pre>loop while COUNT &lt; 15     COUNT = COUNT + 1 end loop</pre>                        |
| <b>from/to-loop</b>           |   | <pre>loop COUNT from 0 to 5     SUM = SUM + COUNT end loop</pre>                          |