Iteração de um conjunto de valores

Lets you iterate over a set of values within the range [ex1, ex2 [ where values are separated by ex3. The starting iterator limit is included and the ending limit is not. The instruction allows you to define na iteration variable or use and existing numeric variable.

|  |  |
| --- | --- |
| **Fluxograma** | **Algorithmi** |
|  | **ITERATE [<Type>] <var> FROM <ex1> TO <ex2> STEP <ex3>**  **<instructions>**  END |

* **[<Type>]** – numeric variable type( **INTEGER | REAL**) - Opcional
* **<var>** - iteration variable name
* **<ex1>** – computational expression to determine the initial value
* **<ex2>** – computational expression to determine the final value
* **<ex3>** – computational expression to determine the separation between the range values

Exemple – Count in ascending order

Algorithm that prints in the console the integers between 1 and 10

|  |  |
| --- | --- |
| **Algorithmi** | |
| BEGIN MainProgram  ITERATE INTEGER i FROM 0 TO 10 STEP 1  WRITE i SUM " "  END ITERATE  END MainProgram | |
| **Fluxograma GB** | **Pseudocódigo GB** |
|  | begin MainProgram  for intege i from 0 to 10 step 1  write i + " "  end for  end MainProgram |

**Result:**

Uma imagem com relógio

Descrição gerada automaticamente

NOTE:

There is no variable defined at the end of the cycle because the iterator i is internal to the cycle

Repetition with initial control – While …doing

Allows you to repeat a set of intructions based on a condition that is evaluated at the beginning of the repetition.

|  |  |
| --- | --- |
| **Fluxograma** | **Pseudocódigo** |
|  | **WHILE <logic expression>**  **<instructions>**  END |

* **<logic expression>** – logic expression
* **<instructions>** – instructions

Example – count in ascending order

Algorithm that prints in the console the integers between 1 and 10

|  |  |
| --- | --- |
| **Algorithmi** | |
| BEGIN MainProgram  DEFINE INTEGER i SET 0  WHILE i less than 10  WRITE i SUM " "  EXECUTE i SET i SUB 1  END WHILE  END MainProgram | |
| **Fluxogram GB** | **Pseudocode GB** |
|  | begin MainProgram  define integer i = 0  while i < 10 do  write i + ““  execute i = i + 1  end while  end MainProgram |

Result:

Uma imagem com relógio

Descrição gerada automaticamente