Operator **DEFI_LIST_ENTI**

1 Goal

To create a list of strictly increasing entireties.

The list can be given “in extenso” by the user, or, it can be formed from under lists defined in “constant step”.

The list can be made up by extraction of the sequence numbers of a structure of data result.

Product a structure of data of the type `listis`.
2 Syntax

Li [listis] = DEFI_LIST_ENTI

{ ♦ APERTURATION= / 'CHALLENGE',
  [DEFECT]
   / 'NUMÉRIQUE_ORDRE',

  ◊ INFORMATION = / 1 ,
  [DEFECT]
   / 2 ,

  ◊ TITLE = title ,

  # If OPERATION = 'CHALLENGE':
  / ♦ VALLEY = read ,
  [l_I]

  / ♦ OFGOAL = deb. ,
  [I]

  / ◊ INTERVALLE = (_F ( ♦ JUSQU_A = yew, [I]
   ♦ / NAMEBRE = in , [I]
   / NOT = ipas, [I]
  ),),),

  # If OPERATION = 'NUMÉRIQUE_ORDRE':
  ♦ RESULT = resu,
  [result]

  ♦ PARAMETER = resu,
  [KN]

  ♦ INTERVALLE = (_F ( ♦ VALE = (val1, val2),
     [R]
  ),),),

)

3 Operands

3.1 Definition of a list of entireties

3.1.1 Operand VALE

◊ VALE = lily

List of the entireties which will form the structure of data listis result, one can provide any list Python.

3.1.2 Operand BEGINNING

♦ BEGINNING =
  deb. : first entirety of the list to be built.

3.1.3 Keyword INTERVAL
Keyword factor whose each occurrence makes it possible to define an interval at constant step.

3.1.3.1 Operand **JUSQU_A**

◊ **JUSQU_A** = yew

`yew` is the whole end of the interval to be cut out with a constant step.

3.1.3.2 Operand **NOT**

◊ **/ NOT** = ipas

Pas de division interval.

3.1.3.3 Operand **NUMBER**

◊ **/ NUMBER** = in

Many steps which one wants in the interval.

3.2 Extraction of sequence numbers

This operation makes it possible to recover in a structure of data `result` (e.g., `evol_noli` exit of `STAT/DYNA_NON_LINE` for example) sequence numbers corresponding to certain criteria. The list of the sequence numbers thus obtained can then be used in all the orders having the keyword `LIST_ORDRE`.

For the moment, the only programmed criterion is the extraction of a parameter in a given interval.

3.2.1.1 Operand **PARAMETER**

Name of the structural parameter of data `result` which one wants to extract the value.

3.2.1.2 Keyword factor **INTERVALE**

One defines as many occurrences of the keyword factor `INTERVAL` that one wishes intervals of research. Research is made on the union of these intervals.

**VALE** = `(val1, val2)`

Definition of `S` terminals of each interval to which of which to belong the parameter to be extracted (terminals understood).

3.3 Operand **INFORMATION**

◊ **INFORMATION** = 1

Indicate the level of impression of the results of the operator:

1: no impression,
2: impression of the list of entireties created.

3.4 Operand **TITLE**

◊ **TITLE** = title

Title attached to the concept produced by this operator [U4.03.01].
4 Remarks

- it is checked that the list is increasing.
- caution: the structure of data of the type list is cannot be used behind a keyword expecting one l_{I} (continuation of entireties written between brackets).

5 Examples

5.1 Case OPERATION = ‘CHALLENGE’

To build the list of entireties to constant step:

\[
\begin{array}{cccccc}
1 & 4 & 7 & 10 & 13 & 16 \\
\end{array}
\]

\[\text{listi} = \text{DEFI\_LIST\_ENTI} \left( \begin{array}{c}
\text{BEGINNING} = 1, \\
\text{INTERVAL} = \left( \begin{array}{c}
\text{JUSQU\_A} = 16, \\
\text{NOT} = 3 \\
\end{array} \right), \\
\end{array} \right)\]

To build the list of entireties with two values different from the step:

\[
\begin{array}{cccccccc}
1 & 2 & 3 & 4 & 5 & 10 & 15 \\
\end{array}
\]

\[\text{listi} = \text{DEFI\_LIST\_ENTI} \left( \begin{array}{c}
\text{BEGINNING} = 1, \\
\text{INTERVAL} = \left( \begin{array}{c}
\text{JUSQU\_A} = 5, \\
\text{NOT} = 1, \\
\text{JUSQU\_A} = 15, \\
\text{NOT} = 5, \\
\end{array} \right), \\
\end{array} \right)\]

or

\[\text{listi} = \text{DEFI\_LIST\_ENTI} \left( \begin{array}{c}
\text{BEGINNING} = 1, \\
\text{INTERVAL} = \left( \begin{array}{c}
\text{JUSQU\_A} = 5, \\
\text{NUMBER} = 4, \\
\text{JUSQU\_A} = 15, \\
\text{NUMBER} = 2, \\
\end{array} \right), \\
\end{array} \right)\]

or, from object does not import lists Python:

\[\text{listi} = \text{DEFI\_LIST\_ENTI} \left( \begin{array}{c}
\text{VALE} = \text{arranges} \left( 10 \right), \\
\end{array} \right)\]

5.2 Case OPERATION = ‘NUMÉRIQUE_ORDRE’

\[
\text{lnuor} = \text{DEFI\_LIST\_ENTI} \left( \begin{array}{c}
\text{OPERATION} = '\text{NUMÉRIQUE\_ORDRE}', \\
\text{RESULTAT} = \text{DEPLTRAN}, \\
\text{PARAMETRE} = '\text{INST}', \\
\text{INTERVALLE} = \left( \begin{array}{c}
\text{VALE} = (1.36, 1.37), \\
\text{VALE} = (1.45, 1.46), \\
\end{array} \right), \\
\end{array} \right)\]
The list of the sequence numbers will contain those for which the value of the moment (parameter \( \text{INST} \)) is in the intervals given.