Data Class

* Alphabetic / Alphanumeric / DBCS / National / Numeric

Data Category

* Alphabetic / Alphanumeric / Alphanumeric-edited / Numeric-edited / DBCS / National / National-edited / Numeric / Internal floating-point / External floating-point

NB : The standard alignment rules for positioning data in an elementary item depend

on the category of a receiving item (p 187).

Data Usage

* DISPLAY / DISPLAY-1 /NATIONAL / BINARY / COMP / COMP-1 / COMP-2 / COMP-3 / PACKED-DECIMAL / COMP-4 / COMP-5

Numeric Data type

* zoned decimal / national decimal / internal decimal

(table p 183 : Category = numeric, Usage => numeric type)

PICTURE character-string

* [array of] PICTURE character
* number of character positions
* category (except for internal floating point : deduced from usage COMP-1 or COMP-2)

PICTURE character

* A / B / E / G / N / P / S / V / X / Z / 9 / 0 / ‘/’ / , / . / + - CR DB / \* / CurrencySymbol
* Type of character position (depending on category and usage)
* Number of character positions (depending on the SIGN clause)
* Type of editing (page 231)

Type of character position

* alphanumeric / DBCS / national / conceptual

NB : PICTURE clause is prohibited for

* Index data items
* The subject of the RENAMES clause
* Items described with USAGE POINTER, USAGE FUNCTION-POINTER, USAGE PROCEDURE-POINTER, or USAGE OBJECT REFERENCE
* Internal floating-point data items

NB : sequences of characters allowed in PICTURE character strings is described in a table p 222

NB : Rules to compute category from PICTURE

* Only the symbol A => alphabetic
* Only the symbols 9, P, S, and V (and not BLANK WHEN ZERO) => numeric
* Only the symbols B P V Z 9 0 / , . + - CR DB \* cs => numeric-edited
* Combinations of the symbols A, X, and 9 => alphanumeric
* Symbols : A X 9 B 0 /. => alphanumeric-edited
* Symbols : G, G and B, or N => DBCS (depending on NSYMBOL)
* One or more occurrences of the picture symbol N => National
* At least one symbol N, and at least one instance of one of these symbols: B 0 (zero) or / (slash) => national-edited
* +|-mantissa(9 . V)E+|-exponent(99) => external floating-point

Value

* Size : number of character positions described in the PICTURE character-string and a SIGN clause
* Storage size : actual number of bytes the item occupies as determined by the combination of its PICTURE character-string, SIGN IS SEPARATE clause (if specified), and USAGE clause (p 187)

Literal : Value

* Alphanumeric (incl. hex) / DBCS / National (incl. hex) / Numeric (fixed and floating point)
* Class
* Category

(table p 183 : literal type => Class and Category)

FIGURATIVE CONSTANT : Literal

* literal or value represented by the figurative constant in the context of its use

(except NULL)

Data Item : Value

* Elementary / Group
* Usage

Group Item : Data Item

* Alphanumeric / National
* Class
* Category

NB : Group item type defined by

. GROUP-USAGE clause on group definition  
. or GROUP-USAGE clause on parent group definition

*Alphanumeric Group Item*

* *Class = alphanumeric*
* *Category = alphanumeric*
* *Usage = display*

*National Group Item*

* *Class = national*
* *Category = national*
* *Usage = national*

Elementary Item : Data Item

* Data / Index / Pointer / Function

Data Elementary Item : Elementary Item

* Class
* Category

(table p183 : class + category => one usage)

* Numeric data type : Binary / Packed decimal (internal decimal) / Zoned decimal (external decimal) / National decimal (external decimal)
* Operational sign : depends on the item's USAGE clause, its SIGN clause (if present), and the operating environment

NB : Category = alphabetic => “alphabetic data item”

NB : Data Elementary Item type defined by :

. PICTURE clause  
. USAGE clause (DISPLAY-1 => DBCS, COMP-1 or COMP-2 => Internal floating-point, NATIONAL => NATIONAL, BINARY COMP COMP-3 PACKED-DECIMAL COMP-4 COMP-5 => numeric)

. BLANK WHEN ZERO clause (not numeric => numeric-edited)

. NSYMBOL(DBCS| NATIONAL) compiler option

Index Elementary Item : Elementary Item

* ?

Pointer Elementary Item : Elementary Item

* *Usage = pointer*
* *Usage = function-pointer*
* *Usage = procedure-pointer*
* *Usage = pointer reference*

Function Elementary Item : Elementary Item

* Function type : Alphanumeric / National / Integer / Numeric
* Class and Category : Alphanumeric / National / Numeric / Numeric

SPECIAL REGISTER : Data Elementary Item

* Predefined category, class, usage