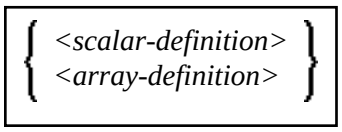
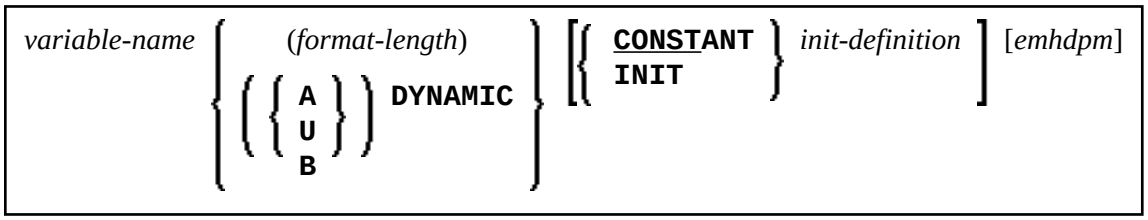
# Variable Definition

The *variable-definition* option is used with DEFINE DATA LOCAL, DEFINE DATA INDEPENDENT, DEFINE DATA CONTEXT and DEFINE DATA OBJECT.

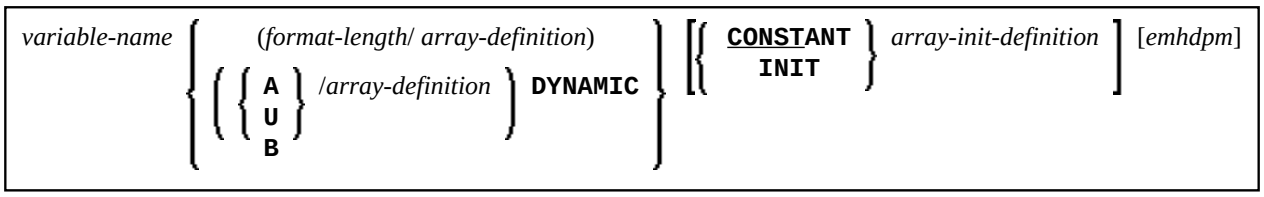
In the *variable-definition* option, you may specify either a *scalar-definition* or an *array-definition*:




*<scalar-definition>*




*<array-definition>*




This chapter covers the following topics:

- Function
- Syntax Description

For an explanation of the symbols used in the syntax diagram, see *Syntax Symbols*.

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## Function

A *variable-definition* is used to define a single field/variable that may be single-valued (scalar) or multi-valued (array).

## Syntax Description

| Syntax Element | Description |
|---|---|
| *variable-name* | **Variable Name:**<br><br>The name to be assigned to the variable. Rules for Natural variable names apply. With DEFINE DATA INDEPENDENT, the variable name must begin with a plus character (+).<br><br>For information on naming conventions for user-defined variables, see *Naming Conventions for User-Defined Variables* in *Using Natural*. |
| *format-length* | **Format/Length Definition:**<br><br>For information on format/length definition of user-defined variables, see *Format and Length of User-Defined Variables* in the *Programming Guide*. |
| A, U or B | **Data Type:**<br><br>Alphanumeric (A), Unicode (U) or binary (B) for dynamic variables. |
| *array-definition* | **Array Dimension Definition:**<br><br>With an *array-definition*, you define the lower and upper bounds of dimensions in an array-definition.<br><br>For further information, see *Array Dimension Definition*. |
| DYNAMIC | **DYNAMIC Option:**<br><br>A field may be defined as DYNAMIC.<br><br>For more information on processing dynamic variables, see *Introduction to Dynamic Variables and Fields*. |
| CONSTANT | **CONSTANT Option:**<br><br>The variable/array is to be treated as a named constant. The constant value(s) assigned will be used each time the variable/array is referenced. The value(s) assigned cannot be modified during program execution.<br><br>See also *Defining Fields*, *User-Defined Constants*, *Defining Named Constants* in the *Programming Guide*.<br><br>**Note:**<br>For reasons of internal handling, it is not allowed to mix variable definitions and constant definitions within one group definition; that is, a group may contain either variables only or constants only. The CONSTANT clause must not be used with DEFINE DATA INDEPENDENT and DEFINE DATA CONTEXT. The CONST clause cannot be used with X-arrays. |

| Syntax Element | Description |
|---|---|
| `INIT` | **INIT Option:**<br><br>The variable/array is to be assigned an initial value. This value will also be used when this variable/array is referenced in a `RESET INITIAL` statement.<br><br>If no `INIT` specification is supplied, a field will be initialized with a default initial value depending on its format (see table *Default Initial Values* below).<br><br>For further information, see *Defining Fields, Initial Values* in the *Programming Guide*.<br><br>**Note:**<br>With `DEFINE DATA INDEPENDENT` and `DEFINE DATA CONTEXT`, the `INIT` clause is evaluated in each executed programming object that contains this clause (not only in the programming object that allocates the variable). This is different to the way the `INIT` works for global variables. The `INIT` clause cannot be used with X-arrays. |
| *`init-definition`* | **Initial-Value Definition:**<br><br>With the *`init-definition`* option, you define the initial/constant values for a variable. See *Initial-Value Definition*. |
| *`array-init-definition`* | **Initial/Constant Values for an Array:**<br><br>With an *`array-init-definition`*, you define the initial/constant values for an array.<br><br>For further information, see *Initial/Constant Values for an Array*. |
| *`emhdpm`* | **EM, HD, PM Parameters for Field/Variable:**<br><br>With this option, additional parameters to be in effect for a field/variable may be defined.<br><br>For further information, see *EM, HD, PM Parameters for Field/Variable*. |

## Default Initial Values

The following table shows the default initial values that are provided with the various formats:

| Format | Default Initial Value |
|---|---|
| B, F, I, N, P | 0 |
| A, U | (blank) |
| L | FALSE |
| D | D’ ’ |
| T | T’00:00:00’ |
| C | (AD=D) |
| Object Handle | NULL-HANDLE |

Fields declared as DYNAMIC do not have any initial value because their field length is zero by default.