

Data Definition

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WHEN DECLARING DATA TYPES, IT DEPENDS ON THE SYSTEM ARCHITECTURE, SO IF A SYSTEM IS 8 BITS THE DATA DIRECTIVE WOULD BE SBYTE

BYTE SBYTE - 8 bits

WORD WORD - 16

DWORD DWORD - 32

QWORD QWORD - 64

Syntax for data definition:

(NAME) (DATATYPE DIRECTIVES) (INITIALISATION)

```
VAL BYTE 10
```

if one wants to leave the variable *undefined* a "?" is left in the initialization section

```
val byte ?
```

Name can be any user-defined name

Storing arrays of constants of the same data types.

VAL BYTE 1, 2, 3, 4

Defining a string:

VAL BYTE "I am a girl"

≡ Example

A program that will declare four variables for a 32-bit system, it will add two of the values together and subtract the third from the addition, then store the answer in the fourth variable

```
.DATA
VAR1 DWORD 100b
VAR2 DWORD 111b
VAR3 DWORD 010b
VAR4 DWORD ?

.START
ADD VAR1, VAR2
SUB VAR1, VAR3
MOVE VAR4, VAR1
or
ADD Ax, VAR1, VAR2
SUB Ax, VAR3
MOV VAR4, Ax
```