

COBOL Changes

The IDENTIFICATION DIVISION

The Big Picture

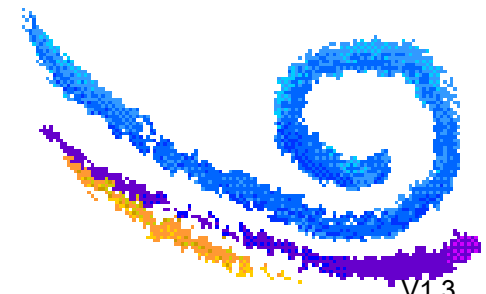
- ▶ Every COBOL program must begin with an IDENTIFICATION DIVISION (which may be abbreviated ID DIVISION)
 - For Object Oriented COBOL (OO COBOL) programs, the first paragraph must indicate if this is for a class, factory, object, or method - not discussed further
 - For all other COBOL programs, the first paragraph must specify the name of the program, using a PROGRAM-ID paragraph
 - Additional paragraphs are optional and may follow in any order: AUTHOR, INSTALLATION, DATE-WRITTEN, DATE-COMPILED, all contain just comments that are ignored

ID DIVISION SYNTAX

▶ {IDENTIFICATION | ID} DIVISION.

PROGRAM-ID[.] *program_name* [RECURSIVE] [INITIAL].

- *program_name* is an external name
 - 1-8 alphanumeric characters
 - Must not contain any dashes (hyphens) nor underscores
 - Must not begin with a numeric digit
 - Will usually be forced to upper case
[But alternatives shortly]

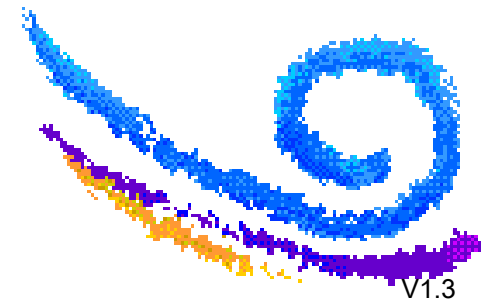


ID DIVISION SYNTAX, 2

▶ {IDENTIFICATION | ID} DIVISION.

PROGRAM-ID[.] *program_name* [RECURSIVE] [INITIAL].

- RECURSIVE means the program is allowed to call itself, or to call a program that calls this program, *etc.* (introduced in COBOL for MVS & VM (V1R2))
- INITIAL means every time the program is entered, all storage items declared with initial values will have those values restored (introduced in COBOL II)

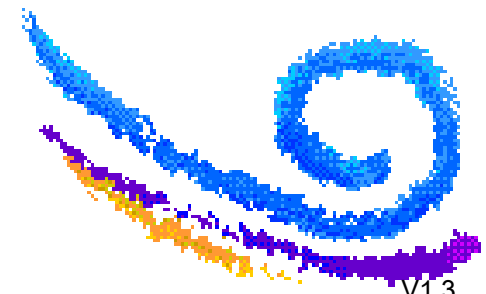


Program names

- ▶ Actually, the way program names are handled depends on a compiler option, the PGMNAME option:
 - PGMNAME(COMPAT) - the classic; *name* is 1-30 characters (alpha, numeric, dash, or underscore), but:
 - * dash cannot be first nor last character, underscore cannot be first; must be at least one alpha
 - * may be literal or COBOL word (if literal, may contain \$, #, @ also)
 - * compiler forces all alpha characters to uppercase
 - * if first character is numeric, convert to a corresponding letter
 - * change any dashes to zeros
 - * then truncate to 8 characters
 - PGMNAME(LONGUPPER) - all of the above, but the truncation to 8 characters is not done; only one dash allowed; name may be a COBOL word (max 30 characters) or a non-numeric literal (max 160 characters); \$, #, @ not allowed
 - PGMNAME(LONGMIXED) - same as longupper, but alpha characters are not forced to upper case; must be specified as a literal, may be up to 160 characters, and \$, #, @ not allowed

Program names, 2

- ▶ PGMNAME(LONGUPPER) and PGMNAME(LONGMIXED) are used in the contexts of DLLs (Dynamic Link Libraries) and programs stored in the z/OS UNIX HFS (Hierarchical File System)
 - We don't discuss these situations in this part of the sessions, we just focus on the classic COBOL programs
 - Note that PGMNAME was introduced in COBOL for MVS & VM (V1R2)



Program names, 3

► Here are some typical ID DIVISIONs:

<u>CODE</u>	<u>Known externally as:</u>
Identification division. program-id. exer01.	EXER01

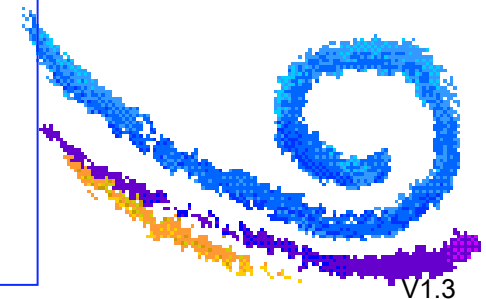
ID DIVISION. PROGRAM-ID. QRZ02.	QRZ02

IDENTIFICATION DIVISION. Program-id. "Four\$ab".	FOUR\$AB

Id Division. program-id inter01 recursive.	INTER01

ID division. program-id calc-w3 initial.	CALC0W3

Id division. program-id anything-goes.	ANYTHING





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