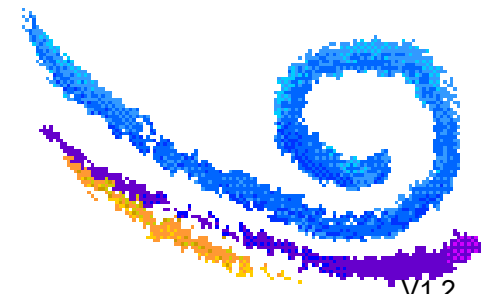


COBOL Changes

The Environment Division- Structure

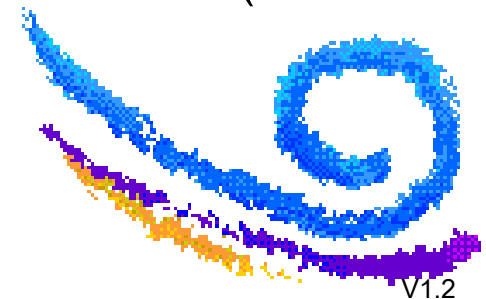
Declaring the Environment

- ▶ The Environment Division has 2 possible sections
 - The Configuration section, which in turn has four possible paragraphs
 - The Input-Output section, which in turn has two possible paragraphs



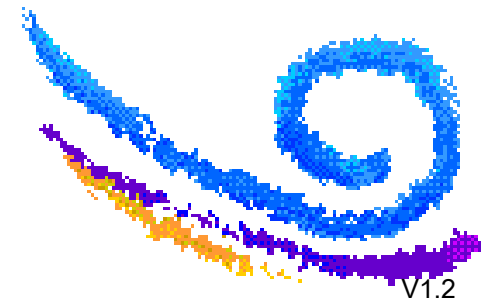
The Configuration Section

- ▶ The Configuration section has four possible paragraphs - only include those you need, specified in any order:
 - Source-computer - names the computer type the program is compiled on (ignored) and if DEBUGGING MODE should be turned on (significant)
 - Object-computer - names the computer type the program is intended to be run on (ignored) and the collating sequence of that computer (significant)
 - Special-names - specifies mnemonics for environment-names, specifies user-defined character classes, specifies currency symbol(s) to use
 - Repository - specifies where to find class definitions for OO COBOL (not discussed here)



The Input-Output Section

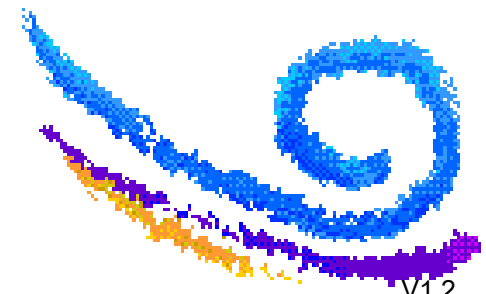
- ▶ The Input-Output section has two possible paragraphs - only include those you need, be specified in any order:
 - File-control - identifies every external file your program will be using (in addition to the implicitly available SYSIN and SYSOUT)
 - I-O-Control - specifies special handling required for one or more files



Environment Division - Summary

- ▶ Only code an environment division if:
 - You need to identify special processing (collating sequence, currency symbol, special names, etc. - details in a later paper
or
 - You will be handling external files
- ▶ If you do not need an environment division, you may omit it or code just the division header:

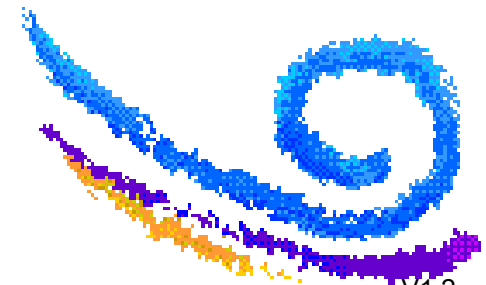
```
Environment division.
```



Environment Division - Context

► Keeping perspective:

```
Identification Division.  
Program-id. program_name.  
Environment Division.  
Configuration section.  
Source-computer. entry.  
Object-computer. entry.  
Special-names. entry.  
Repository. entry.  
Input-output section.  
File-control.  
    file-entries.  
I-O-control.  
    i-o-control entries.  
Data Division.  
File section.  
    file entries.  
Working-storage section.  
    data-item entries.  
Local-storage section.  
    data-item entries.  
Linkage section.  
    data-item entries.  
Procedure Division.  
    logic.
```



Environment Division - Example

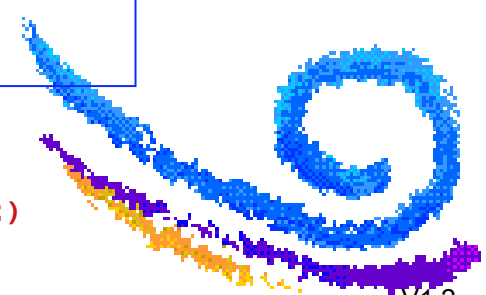
► Somewhat excessive, but you get the idea:

```
Environment division.

Configuration section.
Source-computer. ibm-zseries with debugging mode.
Special-names.
    Sysin is keyboard-in.
    Class valid-stuff is '1', '3', '9', 'A' thru 'D', x'4A', 'MPX'.
    Class non-blank is '0' thru '9', 'a' thru 'z', 'A' thru 'Z', '!@#%&*()-+='.
    Currency 'Eur' picture symbol '%'.
    Currency x'9f' picture symbol '$'.

Input-output section.
File-control.
    Select Transact assign to TRANS.
    Select master assign to MASTER
        organization indexed
        access random
        record-key is partno
        file status is m-status.
    Select errors assign to ERRS.
    Select log assign to log.
```

NOTES: * user-defined classes introduced in **COBOL II**
* enhanced currency support introduced in **COBOL for MVS & VM (V1R2)**





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