

COBOL

Dr. J. Hodgson
Summary

- The Programming Process
- The Structure of a COBOL program
- Files and the Environment
- Data
- Control
- Verbs in COBOL

The Programming process

- Describe the problem;
- Write the pseudo-code of structure chart
- Write the code, and get the syntax errors out.
- **R**un **U**nderstand **D**ebug **E**dit
- Deliver *and maintain* the product.

The Structure of a COBOL program

1. The **IDENTIFICATION DIVISION.**
2. The **ENVIRONMENT DIVISION.**
3. The **DATA DIVISION.**
4. The **PROCEDURE DIVISION.**

Files and the Environment

- Each file used by the program has to be identified in the **INPUT-OUTPUT SECTION** of the ENVIRONMENT DIVISION under the heading **FILE-CONTROL**.

```
SELECT filename ASSIGN TO external-name  
      ORGANIZATION IS LINE-SEQUENTIAL.
```

- **SPECIAL-NAMES**. appear in the ENVIRONMENT DIVISION in the **CONFIGURATION SECTION**.

Data

- **FILE-SECTION.**

FD filename

RECORD CONTAINS xx CHARACTERS

DATA RECORD IS FILE-RECORD.

01 FILE-RECORD PIX X(xx).

- **WORKING-STORAGE SECTION.**

- Level numbers.

- Level 88.

```
01 DATA-REMAINS-SWITCH  PIC X(2) VALUE SPACES  
   88 NO-MORE-DATA      VALUE 'NO'.
```

- Editing fields. Z, \$, -, B etc.

Control

- `PERFORM paraname`
- `PERFORM`
 `.....`
 `END-PERFORM.`

Control

- IF condition

...

ELSE

...

END-IF

Be careful with periods here!

Control

- EVALUATE fieldname_or_expression
 WHEN condition imperative-statement
 ...
 WHEN OTHER imperative-statement
END-EVALUATE

Verbs in COBOL 1.

- OPEN
- READ filename [INTO recordname]
 [AT END imperative-statement]
END-READ
- WRITE outputfilerecord [FROM recordname]
 [AFTER ADVANCING]
 [END-WRITE]
- CLOSE

Verbs in COBOL 2.

- ACCEPT
- DISPLAY
- INITIALIZE
- INSPECT
- MOVE
- MOVE CORRESPONDING
- STRING
- UNSTRING

Verbs in COBOL: Arithmetic.

- ADD
- SUBTRACT
- MULTIPLY
- DIVIDE
- COMPUTE
- ON SIZE ERROR

STOP RUN.