

IBC233 - System i Business Computing

Week 7: System Configuration
& More on RPG Programming

Agenda

- ▶ Logical File Review
- ▶ CL Notation
- ▶ System Configuration
- ▶ RPG programming with Database files



Logical File Review

- ▶ LF example: create a logical file that sorts Item file by Name and Stocking Size (for PF file in last lecture)

R ITEMSR	PFILE(ITEMS)
K ITEMNAME	
K STOCKSIZE	
S STOCKQNTY	COMP(GT 0)

- ▶ Level of entries

- R: record format
- K: key field
- S/O: select / omit
 - ▶ may have more select/omit entries
 - ▶ functions: e.g.
 - **COMP(GT 0), COMP(EQ 'JSMITH'), COMP(NE 'NY')**
 - **RANGE(10 59), VALUES (301542 306902 382101 486592 502356), ...**

MONMSG – Keyword Notation

- Show keyword in green screen:
 - F4 the F11

```
MONMSG MSGID(CPF0000) EXEC(CHGVAR &IN33 '1')
```

MONMSG – Positional Notation

- ▶ The order of parameter values cannot be altered.
- ▶ *N notation: instead of giving the predefined/default value we can use this notation.

MONMSG CPF0000 *N (CHGVAR &IN33 '1')

MONMSG – mixed notation

- Positional value cannot follow keyword parameter.

```
MONMSG CPF0000 EXEC (CHGVAR &IN33 '1')
```

Work Management Concepts

► Subsystems

- What is it?

- Where work is processed

- Operating environment
 - independent

- Why?

- To better manage the **work/job** on the system

- The increases of users and works on the system require split the work into multiple subsystems.
 - Divide users into multiple subsystems

- System i built-in subsystems

- QINTER, QBATCH, QBASE, QCMN, QSERVER, QSYSWRK and QUSERWRK.

Work Management Concepts

► Jobs

- Interactive

- run in subsystem of _____

- Batch

- run in subsystem of _____

- command to start batch job: _____

- e.g. compile a source code, command log

Work Management Concepts

► Job Desc

- Object with the type of *JOB
- Attributes
 - Describes/determines how jobs run
 - Includes:
 - Job queue
 - Scheduling priority
 - Message queue severity
 - ...
- Command:
DSPJOB, ...

Resourceful links

(useful for your Lab 6)

- ▶ **IBM i** documentations on IBM Knowledge Center

http://www-01.ibm.com/support/knowledgecenter/ssw_ibm_i/welcome?lang=en

- ▶ **Subsystem configuration:** http://www-01.ibm.com/support/knowledgecenter/api/content/ssw_ibm_i_61/experience_web/sbsconfig.pdf

Object Types



RPG Programming with Database Objects



F-SPEC Review

- ▶ File name – name of file
- ▶ File Type - **C** for a Display file
I, **U**, or **O** for Database Objects
O, for Printer Files (reports)
- ▶ File Designation – **F** for Full procedural file
- ▶ File Format - **E** for Externally Described
- ▶ Record Address Type - **K** if the object has a sort
- ▶ Device - **Disk** for Database Object
Workstn for display files
Printer for reports

RPG Verbs and Functions

- ▶ Read filename;
 - reads a record from a database object
- ▶ %EOF(filename)
 - Checks for End of File

Programming tasks

- ▶ Create a display file that uses all of the fields from the Item file. All of the fields should be output only. In Stock Quantity should have the attribute Reverse Image (RI) conditioned by an indicator
- ▶ Write an RPG program that displays each record in the Item file using the above display file. In Stock Quantity should be displayed in Reverse Image if the value is less than 10.

Pseudo Code

Initialize variables

Receive information

Do while not end of file

 Display the screen

 Receive information

End of file:

 exit program

Sample Code

- ▶ ITEMS.DF
 -
- ▶ ITEMSDSP.DSPF

```
... ..
A          STOCKSIZE      6   0   8 37
A          STOCKQNTY      7   2 0 10 37EDTCDE(1)
A  50                                DSPATR(RI)
A          ITEMNUM        6Y 00   4 37
A          ITEMNAME       30   0   6 37
A          LASTUPD        L   0  12 37
A                                14 54'Items Viewed:'
A          TLTVIEWED      3   0 0 14 68EDTCDE(1)
```

- ▶ The field names should be matched in the 2 files.

Sample Code

► ITEMSRPG.RPGLE

```
FITEMSDSP CF E WORKSTN  
FITEMS IF E DISK  
/FREE
```

```
READ ITEMS;  
DOW (NOT %EOF) and (*IN03 = *Off);  
    TLTVIEWED = TLTVIEWED + 1;  
    If STOCKQNTY < 10;  
        *In50 = *On;  
    Else;  
        *In50 = *Off;  
    EndIf;  
    EXFMT RECORD1;  
    READ ITEMS;  
ENDDO;  
*INLR = *ON;  
RETURN;
```

```
/END-FREE
```

Homework

- ▶ Work on Lab 5
 - 3 Print-outs are due in this week
- ▶ Lab 6 and Lab 7
 - Due at the beginning of the lab hours after study week

Thank You!

