

Technical Document

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Document Description:

If you've ever processed database files within CL, you have probably been disappointed by the fact that IBM only ever provided the means for processing the files sequentially – all very well if you have a list of items to work on, but not very helpful if you need a particular record from a keyed database file.

Well, there are a couple of ways you can do it, depending on what suits you best:

- a) Use an RPG routine that you call passing the key values in as parameters. The RPG routine would do the actual work and then pass back the data you want for the CL program as parameters also.

Using this technique you should remember that if you want to perform multiple reads, then you must not set on the *INLR indicator when you exit the program. Instead, set on the *INRT indicator and issue a RETRN statement. This will exit the program, but not close the files or remove it from memory. That way further calls to the program will be quicker. If you do this, you should code a RCLRSC command at the end of the calling CL program.

Example CL and RPG source are shown below:

CL Program TSTC020

```
PGM          PARM( )

DCL          VAR(&ORGN) TYPE(*CHAR) LEN(4)
DCL          VAR(&DESC) TYPE(*CHAR) LEN(40)

MONMSG      MSGID(CPF0000)

/* Retrieve a record from the File for a particular key value... */
CHGVAR      VAR(&ORGN) VALUE('1013')
CALL        PGM(TSTR020) PARM(&ORGN &DESC)

/* Do whatever you want with the record... */
SNDPGMMSG   MSG(&DESC)

/* Retrieve a different record... */
CHGVAR      VAR(&ORGN) VALUE('1010')
```

```

CALL          PGM(TSTR020) PARM(&ORGN &DESC)

/* Do whatever you want with the record...                               */
                                                                */

        SNDPGMMSG  MSG(&DESC)

/* Important - you must do a RCLRSC before exiting the program so      */
/* that the file and RPG program are closed and removed from the job */
/* PAG...                                                                */
                                                                */

        RCLRSC

        ENDPGM

```

RPG Program TSTR020

```

FMBRP901AIF  E          K          DISK
**
** Entry Parameters...
**
C             *ENTRY    PLIST
C             PARM      ORGN
C             PARM      DESC
**
** Define Key List
**
C             KEY       KLIST
C             KFLD      ORGN
**
** Define Work Fields, etc,
**
C             *LIKE     DEFN OCORGN  ORGN
C             *LIKE     DEFN OCDESC  DESC
** Read the record,
**
C             MOVE *BLANKS  DESC
C             KEY         CHAINMBRP901A      91
C             *IN91      IFEQ *ON
C             MOVEL '*ERROR'  DESC
C             ELSE
C             MOVELOCDESC  DESC
C             ENDIF
**
** Exit the program
**
C             MOVE *ON      *INRT
C             RETRN

```

- b) If you want to do it all within CL then you need to make use of the OPNQRYF command. I've listed a sample program below that will take a key value as a parameter and do an OPNQRYF to chain to the record.

Using this method you would need to build the &QRYSLT string based on the parameters and/or values needed, and then once the OPNQRYF command has run you would read the record from the file. Before reading another keyed record, and before exiting the program you would have to make sure that you closed the file opened by OPNQRYF using the CLOF command:

CL Program TSTC030

```

PGM          PARM(&KEY)

DCL          VAR(&KEY) TYPE(*CHAR) LEN(4)
DCL          VAR(&QRYSLT) TYPE(*CHAR) LEN(255)
DCLF        FILE(MBRP901A)

```

```

MONMSG      MSGID(CPF0000)

/* First, use the QRYSLT parameter for building the 'Key' list...  */
      CHGVAR      VAR(&QRYSLT) VALUE('OCORGN = '' *CAT &KEY +
      *CAT ''')

/* Use standard OPNQRYF to open the file and then use RCVF to read  */
/* the actual record...                                           */

      OVRDBF      FILE(MBRP901A) SHARE(*YES)
      OPNQRYF      FILE((MBRP901A)) QRYSLT(&QRYSLT) KEYFLD(*NONE)

      RCVF

/* Do whatever you want with the record...                          */

      SNDPGMMSG   MSG(&OCDESC)

/* Important - you must close the file before you attempt to read  */
/* another record from it and when you exit the program...         */

      CLOF        OPNID(MBRP901A)

      ENDPGM

```

Each of these sample programs are provided as skeletons/examples and should be developed further for your own needs.