

10) Work with Data - EXECIO

- Instruction: EXECIO read/write instruction.

Resources:

TSO/E REXX User's Guide

Appendix A. Allocating Data Sets

TSO/E Command Reference

Chapter 1. TSO/E Commands and Subcommands

This course has been prepared by Milos Forman for MCoE needs only!

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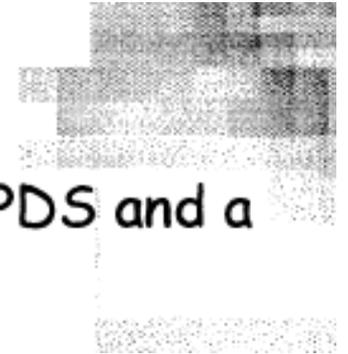
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QSAM File Access

- TSO REXX has Access to QSAM files.
- Using EXECIO you can read and write to both a PDS and a Sequential dataset.



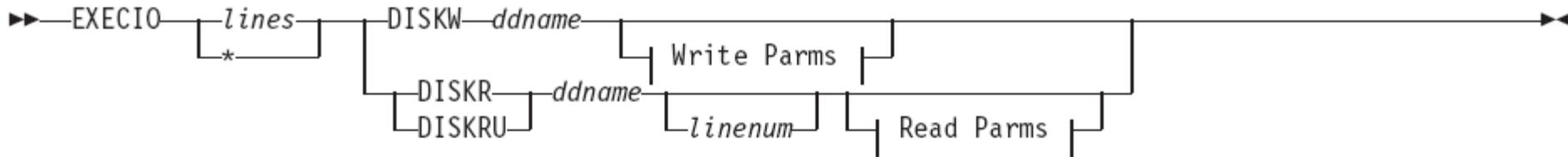
Checking a DSN

```
ADDRESS "TSO"  
"CLEAR"  
dsn_name = "crone90.crone.rexx(rubbish)"  
dsn_check = SYSDSN("'"dsn_name'"")  
SAY dsn_check
```

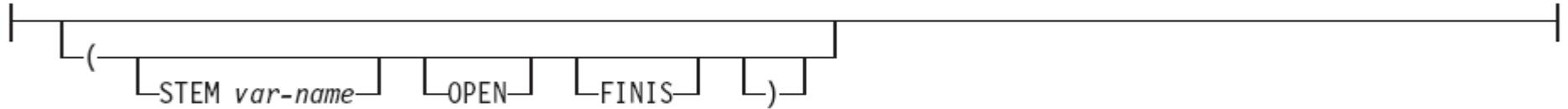
```
MEMBER NOT FOUND  
***
```

```
OK  
***
```

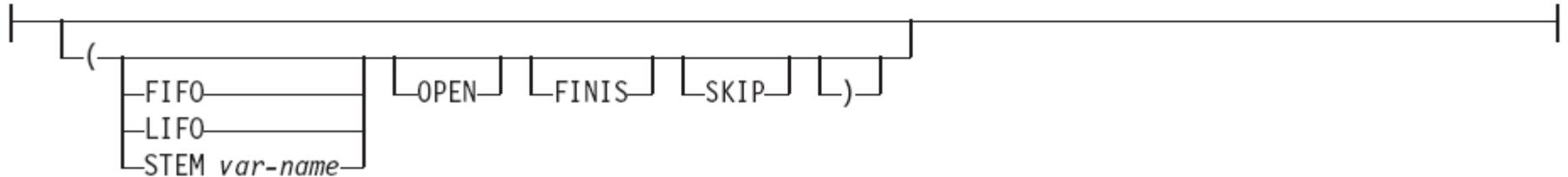
EXECIO



Write Params:



Read Params:



EXECIO read

```
dsn_name = "crone90.crone.rexx(test)"
dsn_check = SYSDSN("'"dsn_name"'")
IF dsn_check = "OK" THEN DO
    "ALLOC DD(ddname) DSN('"dsn_name"') SHR REU"
    "EXECIO 1 DISKR ddname (STEM row. FINIS)"
    SAY "The first line of the dataset is : "
    SAY row.1
END
ELSE DO
    SAY dsn_check
END
```

```
The first line of the dataset is :
WRITE "Enter a name"
***
```

EXECIO read

```
dsn_name = "crone90.crone.rexx(test)"
dsn_check = SYSDSN("'"dsn_name"'")
IF dsn_check = "OK" THEN DO
    "ALLOC DD(ddname) DSN("'"dsn_name"'') SHR REU"
    "EXECIO * DISKR ddname (STEM row. FINIS)"
END
ELSE DO
    SAY dsn_check
END
DO line_counter = 1 TO row.0
    SAY row.line_counter
END
```

```
WRITE "Enter a name"
READ &name
WRITE &name
***
```

EXECIO write

```
dsn_name = "crone90.crone.rexx(test)"
dsn_check = SYSDSN("'"dsn_name"'")
IF dsn_check = "OK" THEN DO
    row.1 = "/* REXX */"
    "ALLOC DD(ddname) DSN("'"dsn_name"') SHR REU"
    "EXECIO 1 DISKW ddname (STEM row. FINIS)"
END
ELSE DO
    SAY dsn_check
END
```

Work section 10.1

- Write a REXX program to check that work section 9 member is a valid REXX program

```
/*-----REXX-----*/  
SAY "Hello"
```

Work section 10.2

- Write a REXX program to create a new member called "generate".
- This new member will be a new executable REXX program.

```
/* REXX */  
SAY 'Enter your name'  
PARSE PULL name  
SAY 'Hello ' || name
```

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Chapter 1. TSO/E Commands and Subcommands

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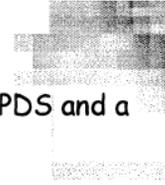
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QSAM File Access

- TSO REXX has Access to QSAM files.
- Using EXECIO you can read and write to both a PDS and a Sequential dataset.



We will work with QSAM (Queued Sequential Access Method), which is an extended version of the BSAM (Basic Sequential Access Method). When this method is used, a queue is formed of input data blocks that are awaiting processing or of output data blocks that have been processed and are awaiting transfer to auxiliary storage or to an output device.

Checking a DSN

```
ADDRESS "TSO"  
"CLEAR"  
dsn_name = "crone90.crone.rexx(rubbish)"  
dsn_check = SYSDSN("'"dsn_name"'")  
SAY dsn_check
```

```
MEMBER NOT FOUND  
***
```

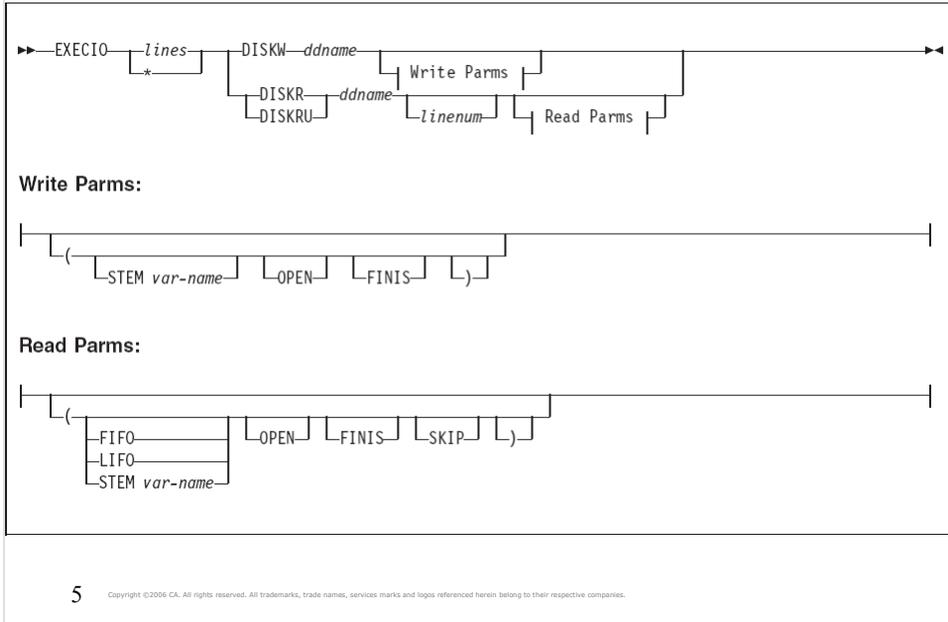
```
OK  
***
```

Write it and test it.

This example is just to remind SYSDSN TSO/E external function.

See 'MCOE.REXA.REXX(RX201103)'

EXECIO



EXECIO command controls the input and output of information to and from a data set. Information can be read from a data set to the data stack for serialized processing or to a list of variables for random processing. Information from the data stack or a list of variables can be written to a data set.

You can use the EXECIO command to do various types of I/O tasks, such as copy information to and from a data set to add, delete, or update the information.

An I/O data set must be either sequential or a single member of a PDS.

DISKR opens a data set for input and reads the specified number of lines from the data set and places them on the data stack.

DISKRU opens a data set for update and reads the specified number of lines from the data set and places them on the data stack.

DISKW opens a data set for output and writes the specified number of lines to the data set. The lines can be written from the data stack or, if the STEM operand is specified, from a list of variables.

EXECIO read

```
dsn_name = "crone90.crone.rexx(test)"
dsn_check = SYSDSN("'"dsn_name"'")
IF dsn_check = "OK" THEN DO
  "ALLOC DD(ddname) DSN("'"dsn_name"'') SHR REU"
  "EXECIO 1 DISKR ddname (STEM row. FINIS)"
  SAY "The first line of the dataset is : "
  SAY row.1
END
ELSE DO
  SAY dsn_check
END
```

```
The first line of the dataset is :
WRITE "Enter a name"
***
```

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EXECIO always reads from DDNAME – see the ALLOCATE command. SYSDSN('dsname') returns whether the specified dsname exists and is available for use.

TSO ALLOCATE command allocates a DDNAME.

Explanation of the EXECIO command: "execio 1 diskr DDNAME (stem ROW. finis)"

execio - TSO REXX command

1 - number of lines to read

diskr - read

DDNAME – the DD name

stem – to indicate that a stem will be used

ROW. – the stem

finis – close the dataset

See 'MCOE.REXA.REXX(RX201105)'

EXECIO read

```
dsn_name = "crone90.crone.rexx(test)"
dsn_check = SYSDSN("'"dsn_name"'")
IF dsn_check = "OK" THEN DO
  "ALLOC DD(ddname) DSN("'"dsn_name"'") SHR REU"
  "EXECIO * DISKR ddname (STEM row. FINIS)"
END
ELSE DO
  SAY dsn_check
END
DO line_counter = 1 TO row.0
  SAY row.line_counter
END
```

```
WRITE "Enter a name"
READ &name
WRITE &name
***
```

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Explanation of the EXECIO command: "execio * diskr DDNAME (stem ROW. finis)"

execio - TSO REXX command

* - number of lines to read (this case means all lines)

diskr - read

DDNAME – the DD name

stem – to indicate that a stem will be used

ROW. – the stem

finis – close the dataset

ROW.0 – contains the total number of lines read into the array.

See 'MCOE.REXA.REXX(RX201106)'

EXECIO write

```
dsn_name = "crone90.crone.rexx(test)"
dsn_check = SYSDSN("'"dsn_name"'")
IF dsn_check = "OK" THEN DO
  row.1 = /* REXX */
  "ALLOC DD(ddname) DSN("'"dsn_name"') SHR REU"
  "EXECIO 1 DISKW ddname (STEM row. FINIS)"
END
ELSE DO
  SAY dsn_check
END
```

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Explanation of the EXECIO command: "execio 1 diskw DDNAME (stem ROW. finis)"

execio - TSO REXX command

1 - number of lines to write (this case means all lines)

diskw - write

DDNAME – the DD name

stem – to indicate that a stem will be used

ROW. – the stem

finis – close the dataset

DISKW – This will write the rows to the member. This will overwrite the current member. The member now contains string /* REXX */

See 'MCOE.REXA.REXX(RX201107)'

Work section 10.1

- Write a REXX program to check that work section 9 member is a valid REXX program

```
/*-----REXX-----*/  
SAY "Hello"
```

Write it and test it. You have to test string REXX in the first comment line of the member.

Work section 10.2

- Write a REXX program to create a new member called "generate".
- This new member will be a new executable REXX program.

```
/* REXX */  
SAY 'Enter your name'  
PARSE PULL name  
SAY 'Hello '||name
```

Write it and test it.