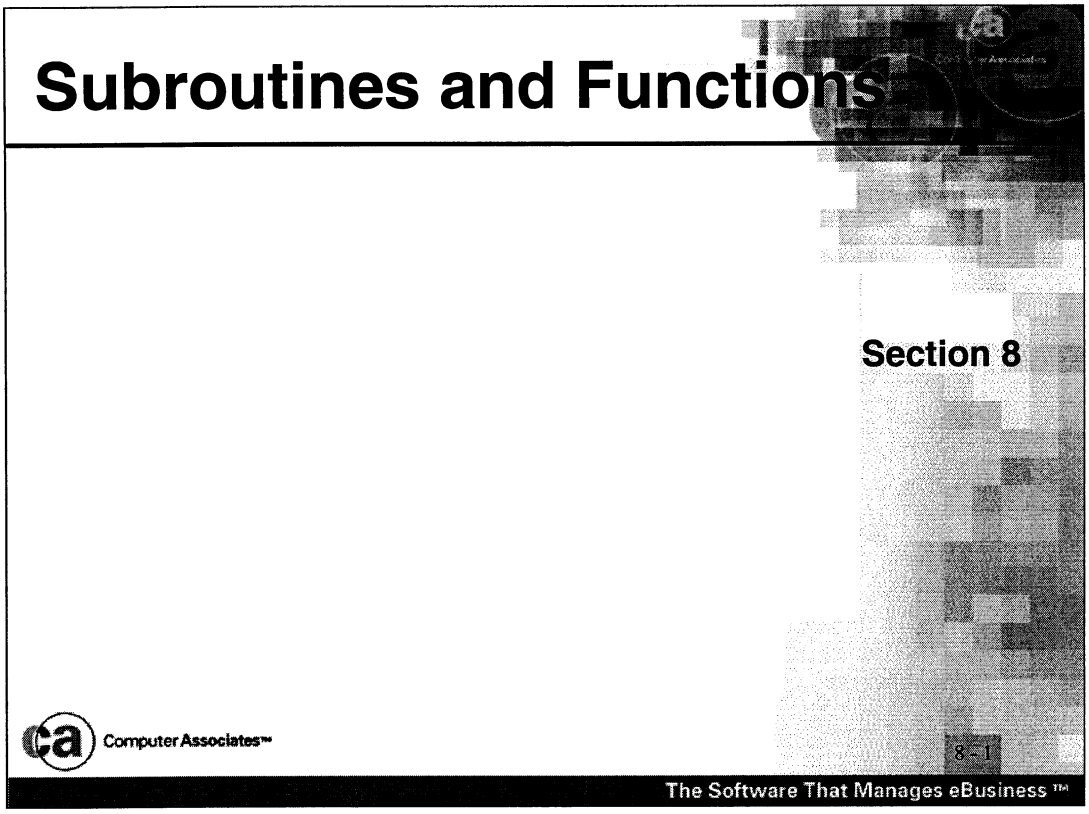
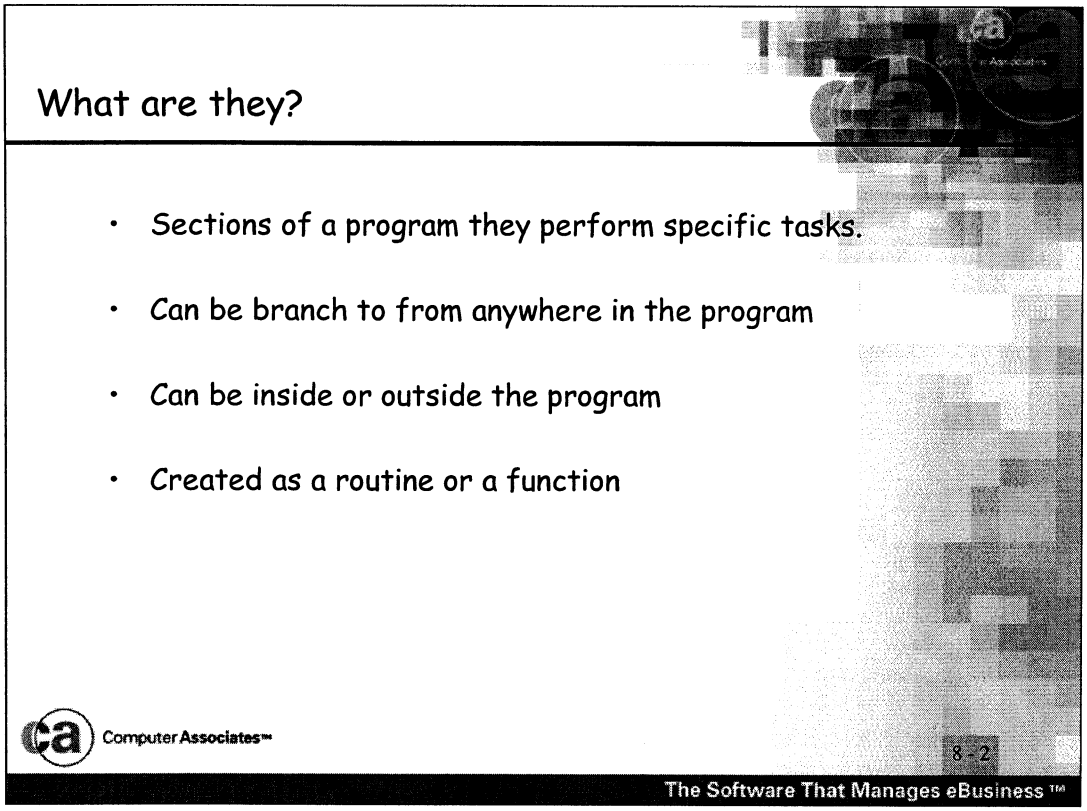
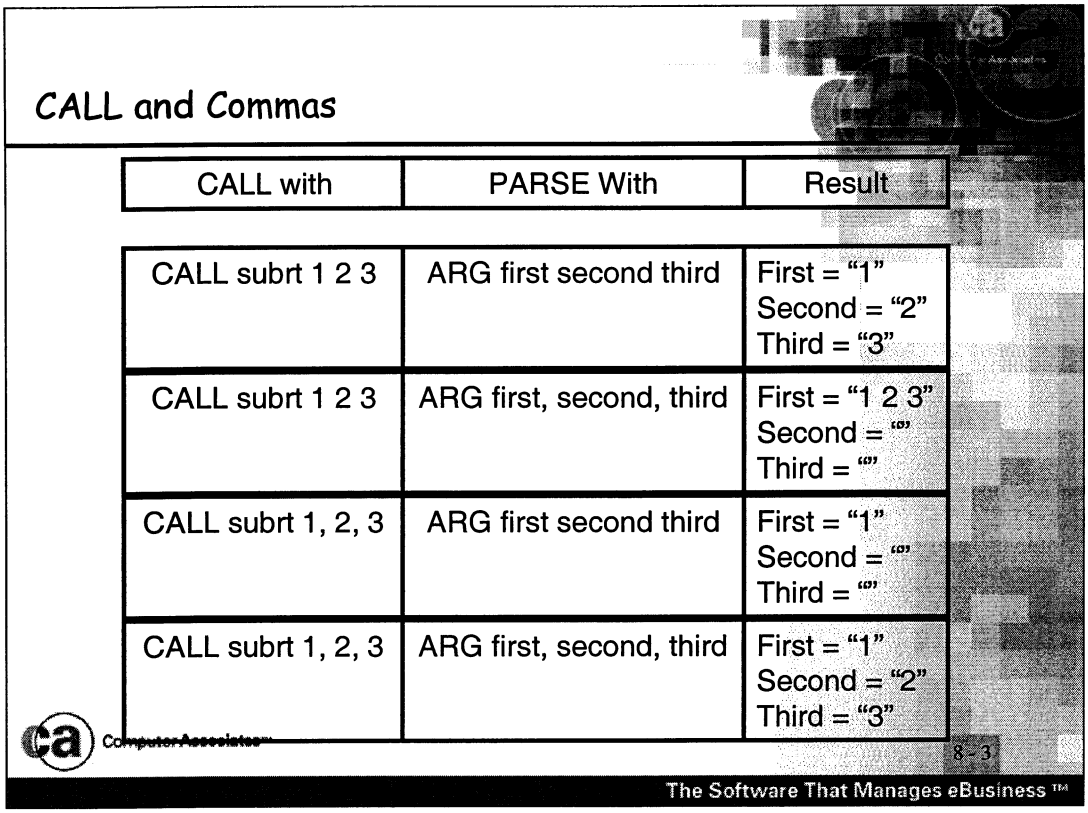
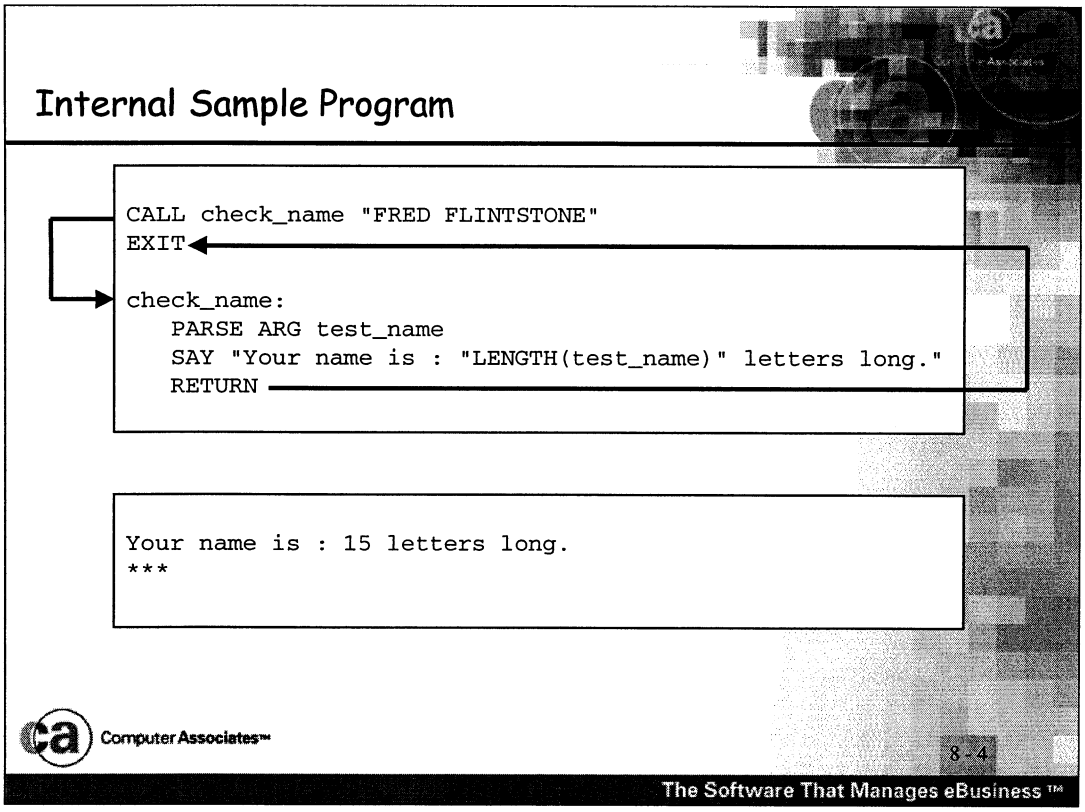

Subroutines and Functions
Section 8
Computer Associates™
8-1
The Software That Manages eBusiness ™

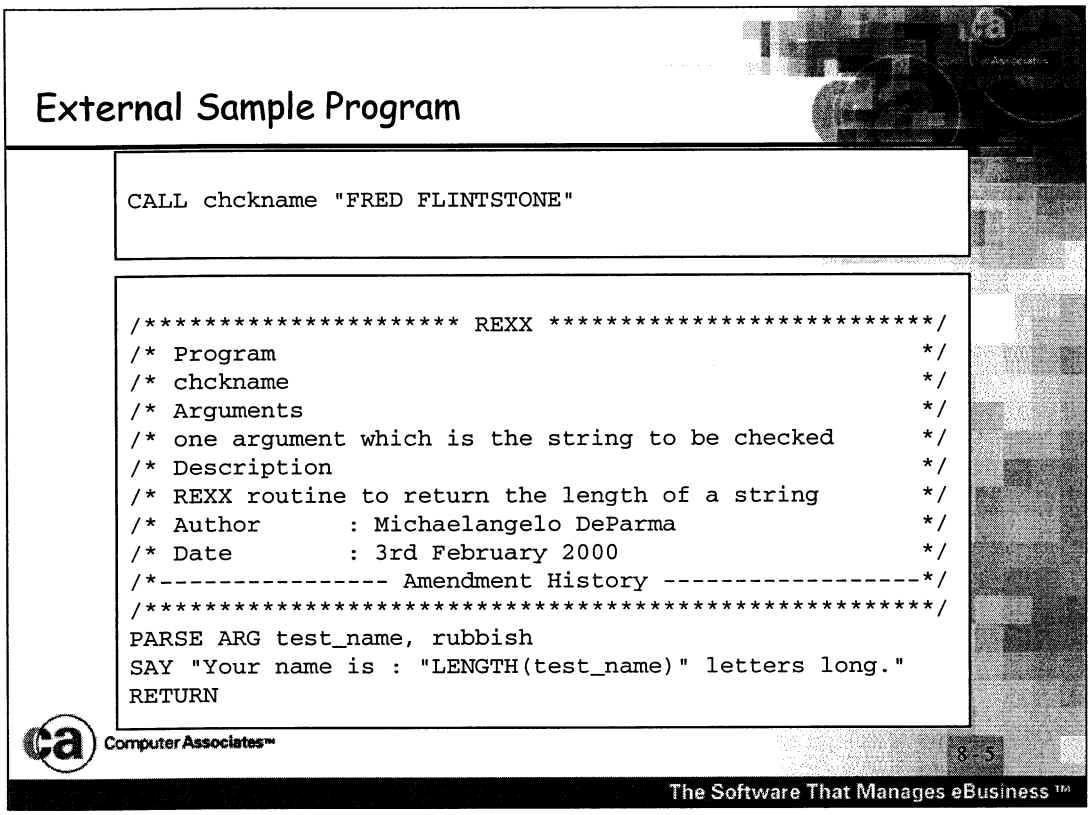


N.B.

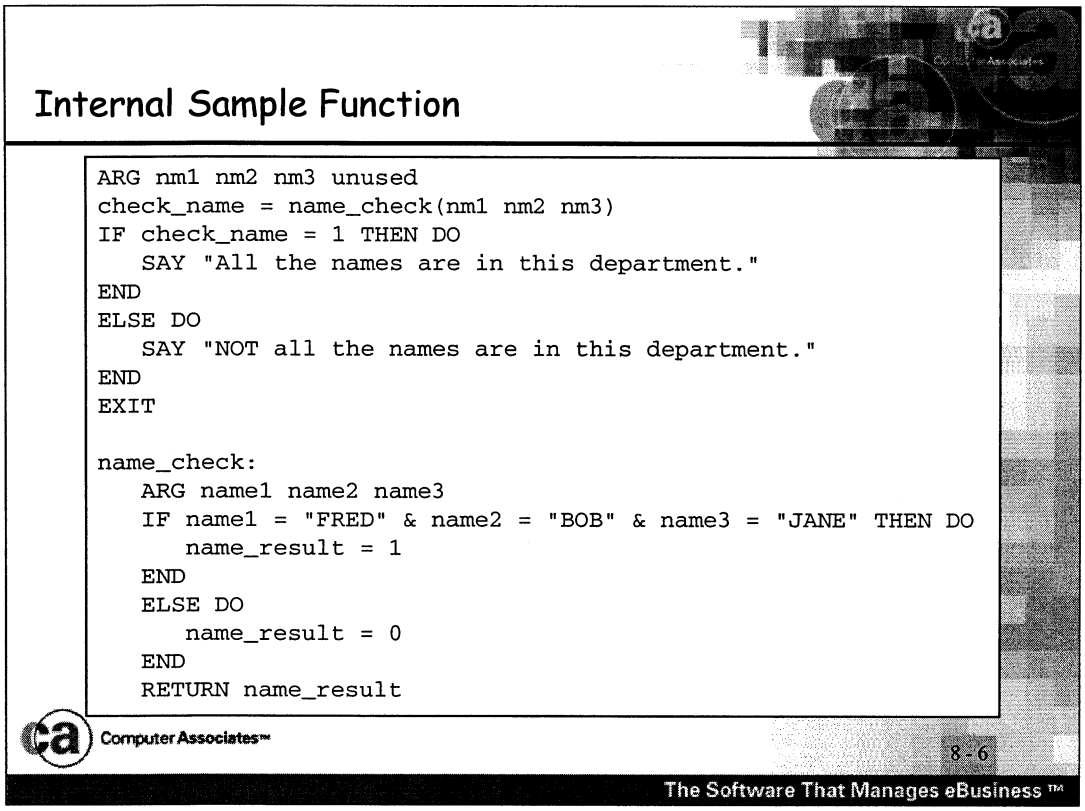
Functions should always return a value.

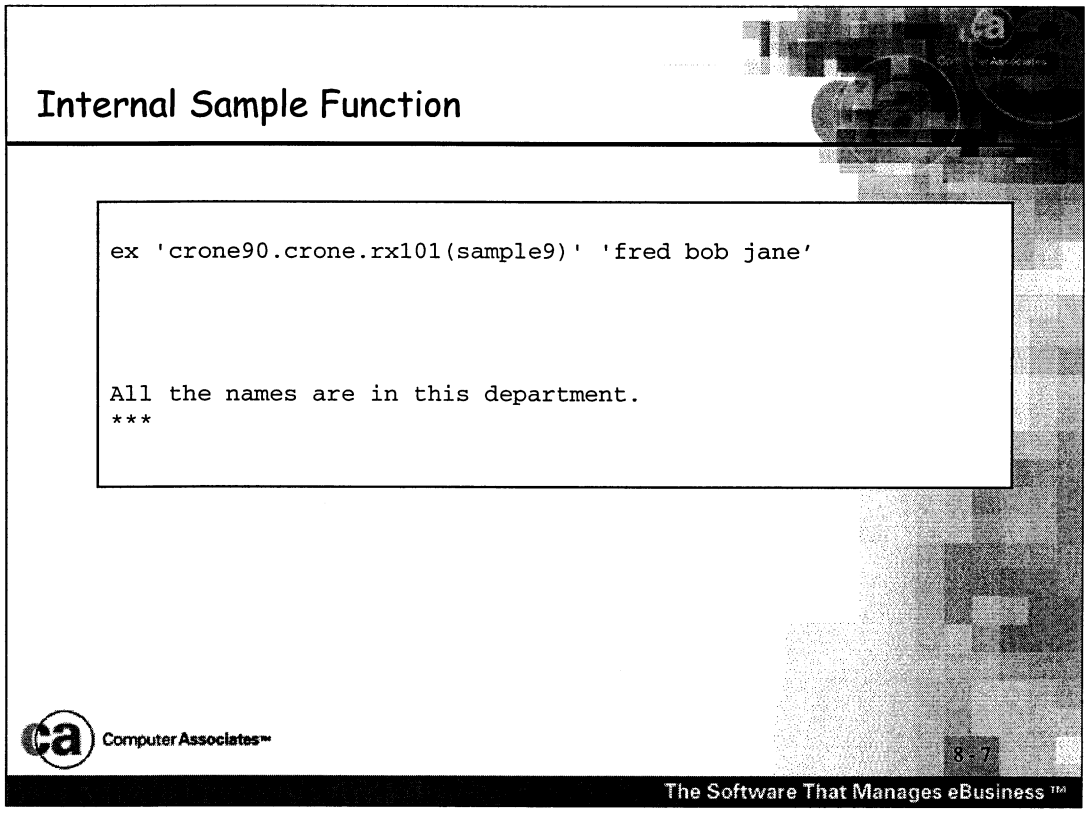

CALL and Commas
CALL with
PARSE With
Result
CALL subrt 1 2 3
ARG first second third
First = "1"
Second = "2"
Third = "3"
CALL subrt 1 2 3
ARG first, second, third
First = "1 2 3"
Second = ""
Third = ""
CALL subrt 1, 2, 3
ARG first second third
First = "1"
Second = ""
Third = ""
CALL subrt 1, 2, 3
ARG first, second, third
First = "1"
Second = "2"
Third = "3"
Computer Associates
8-3
The Software That Manages eBusiness ™

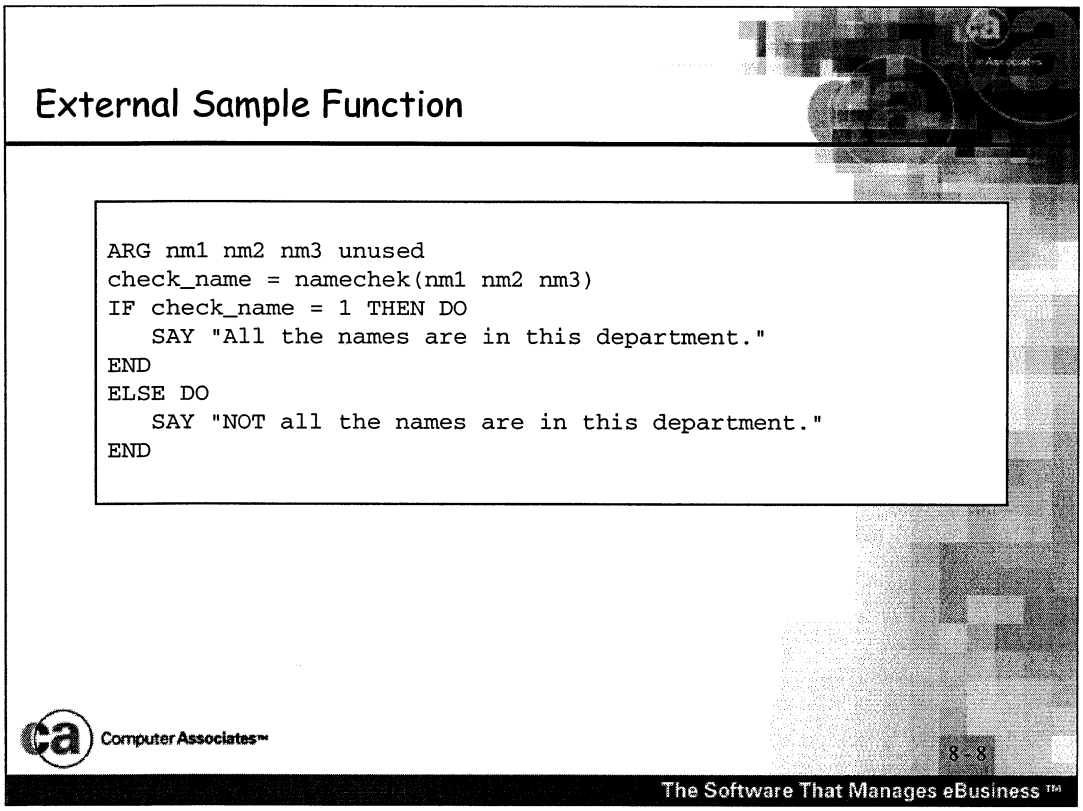

Internal Sample Program
CALL check_name "FRED FLINTSTONE"
EXIT
check_name:
PARSE ARG test_name
SAY "Your name is : "LENGTH(test_name)" letters long."
RETURN
Your name is : 15 letters long.
***
Computer Associates™
8-4
The Software That Manages eBusiness ™

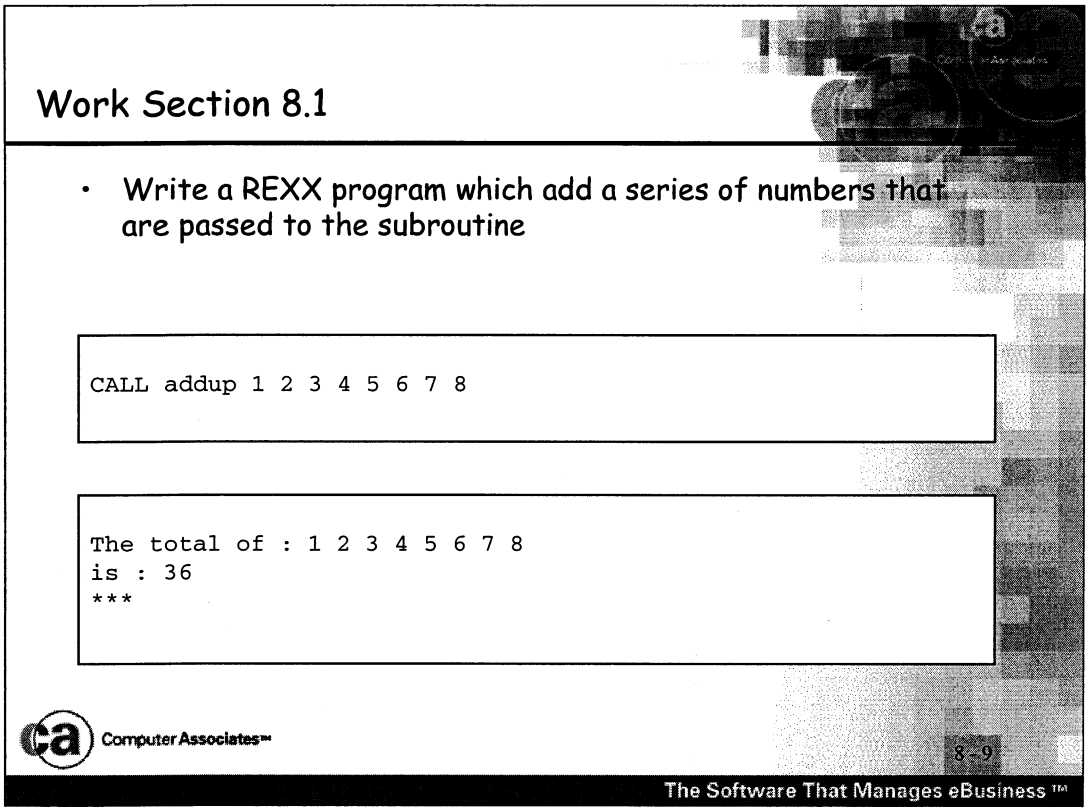


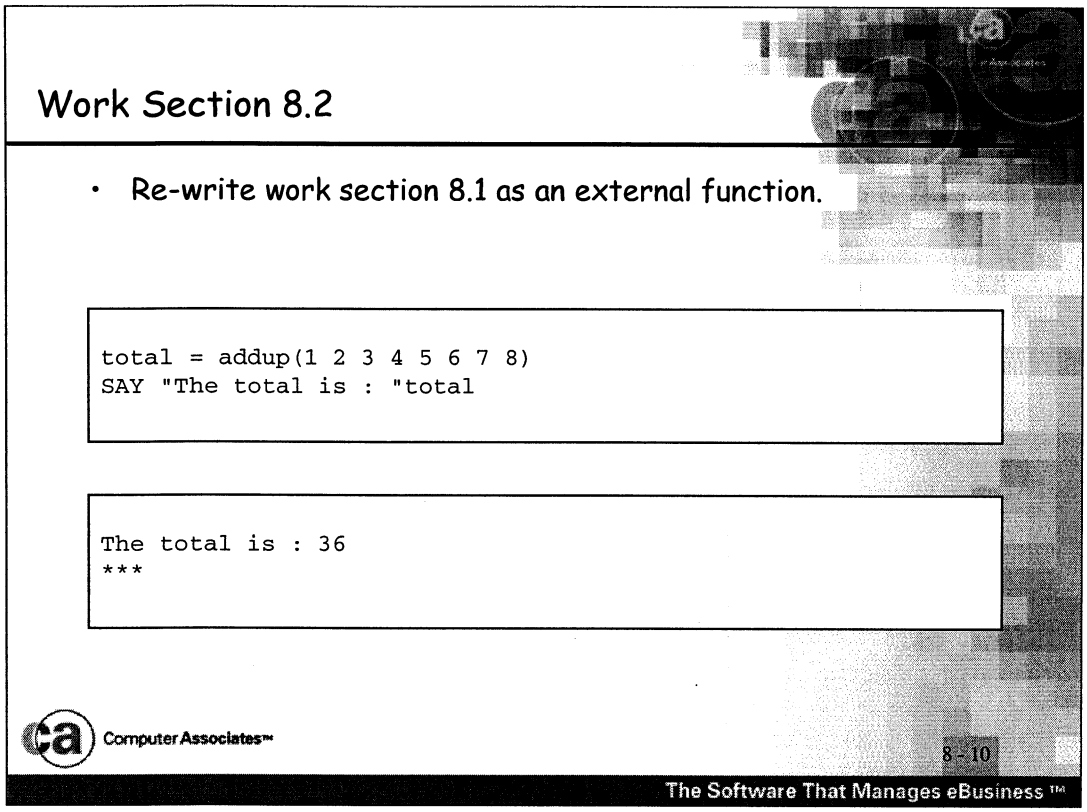
The executing program calls the member (in this example) in the same dataset called chckname.

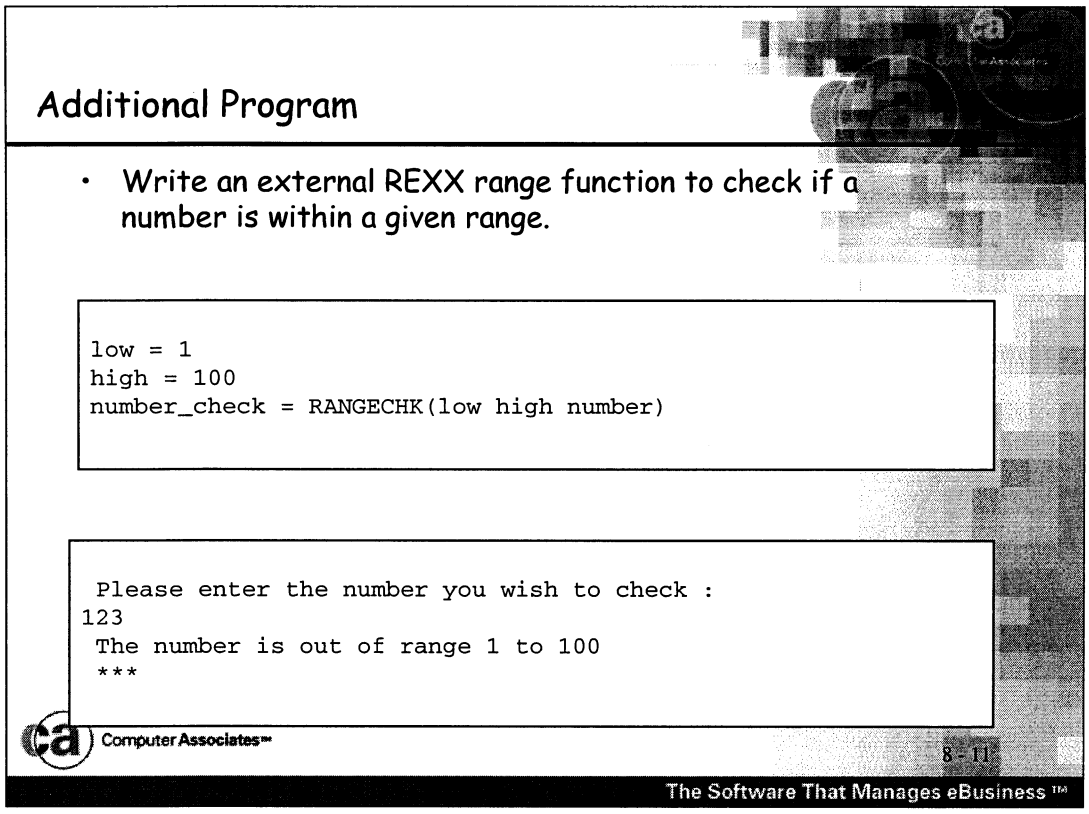

Internal Sample Function
ARG nm1 nm2 nm3 unused
check_name = name_check(nm1 nm2 nm3)
IF check_name = 1 THEN DO
SAY "All the names are in this department."
END
ELSE DO
SAY "NOT all the names are in this department."
END
EXIT
name_check:
ARG name1 name2 name3
IF name1 = "FRED" & name2 = "BOB" & name3 = "JANE" THEN DO
name_result = 1
END
ELSE DO
name_result = 0
END
RETURN name_result
Computer Associates™
8-6
The Software That Manages eBusiness ™


Internal Sample Function
ex 'crone90.crone.rx101(sample9)' 'fred bob jane'
All the names are in this department.
***
Computer Associates™
8 - 7
The Software That Manages eBusiness ™


External Sample Function
ARG nm1 nm2 nm3 unused
check_name = namechek(nm1 nm2 nm3)
IF check_name = 1 THEN DO
SAY "All the names are in this department."
END
ELSE DO
SAY "NOT all the names are in this department."
END
Computer Associates
8-8
The Software That Manages eBusiness ™


Work Section 8.1
• Write a REXX program which add a series of numbers that are passed to the subroutine
CALL addup 1 2 3 4 5 6 7 8
The total of : 1 2 3 4 5 6 7 8
is : 36
***
Computer Associates™
8-9
The Software That Manages eBusiness ™


Work Section 8.2
• Re-write work section 8.1 as an external function.
total = addup(1 2 3 4 5 6 7 8)
SAY "The total is : "total
The total is : 36
***
Computer Associates™
8-10
The Software That Manages eBusiness ™


Additional Program
• Write an external REXX range function to check if a number is within a given range.
low = 1
high = 100
number_check = RANGECHK(low high number)
Please enter the number you wish to check :
123
The number is out of range 1 to 100
***
Computer Associates
8 - 11
The Software That Manages eBusiness ™

Additional Program

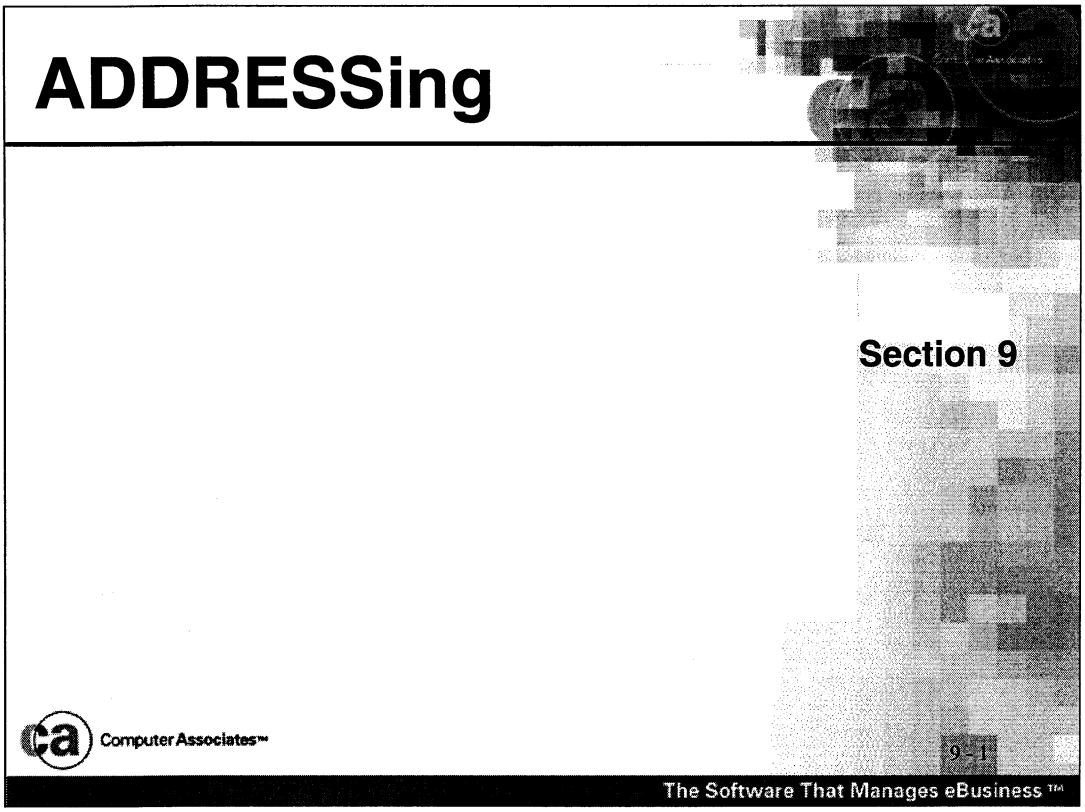
- Create a reverse word function which will reverse the order of words passed to it.

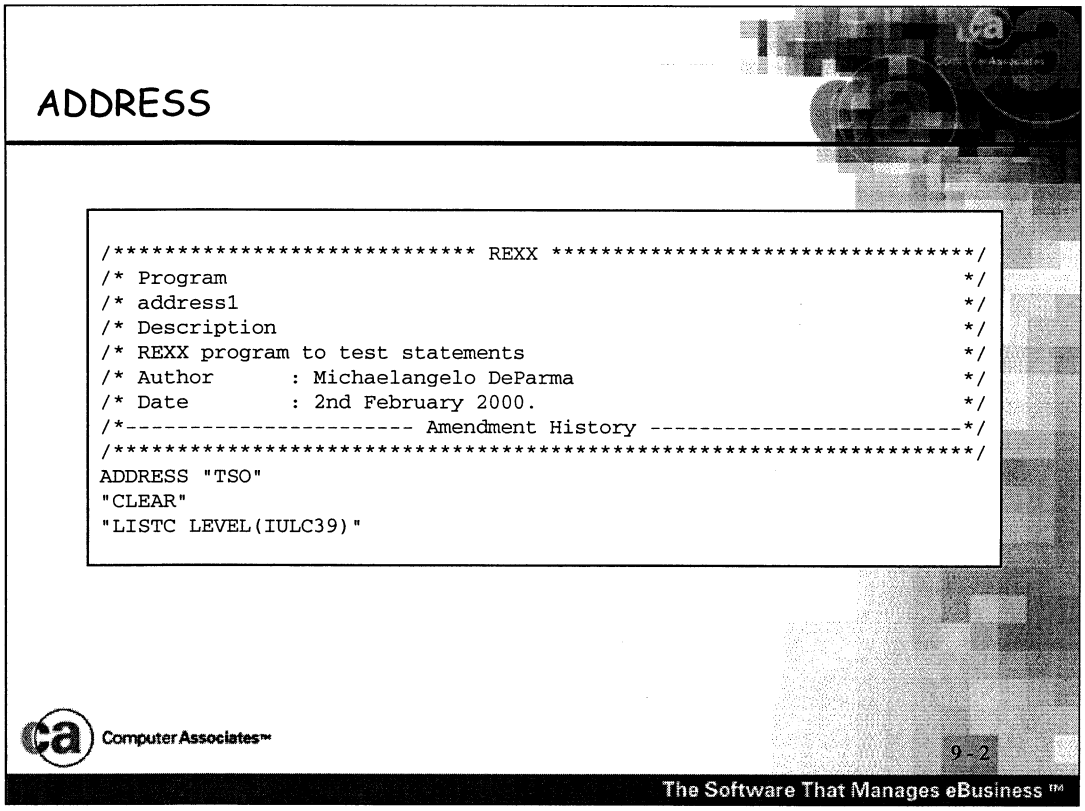
```
SAY "Please enter your list of words : "
PARSE PULL list_of_words
list_of_words = STRIP(list_of_words)
SAY "The list is : "||REVWORD(list_of_words)
```

```
  Please enter your list of words :
one two three
 The list is :  THREE TWO ONE
 ***
```

8 - 12

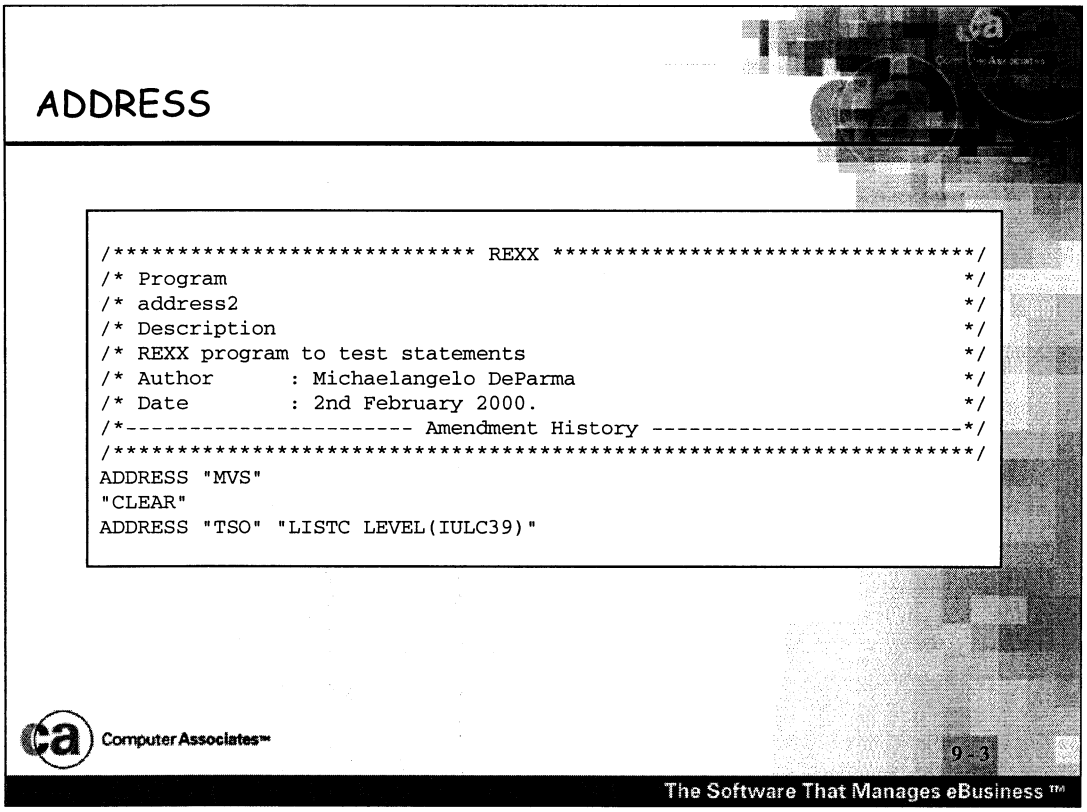
The Software That Manages eBusiness ™


ADDRESSing
Section 9
Computer Associates™
9 - 1
The Software That Manages eBusiness ™



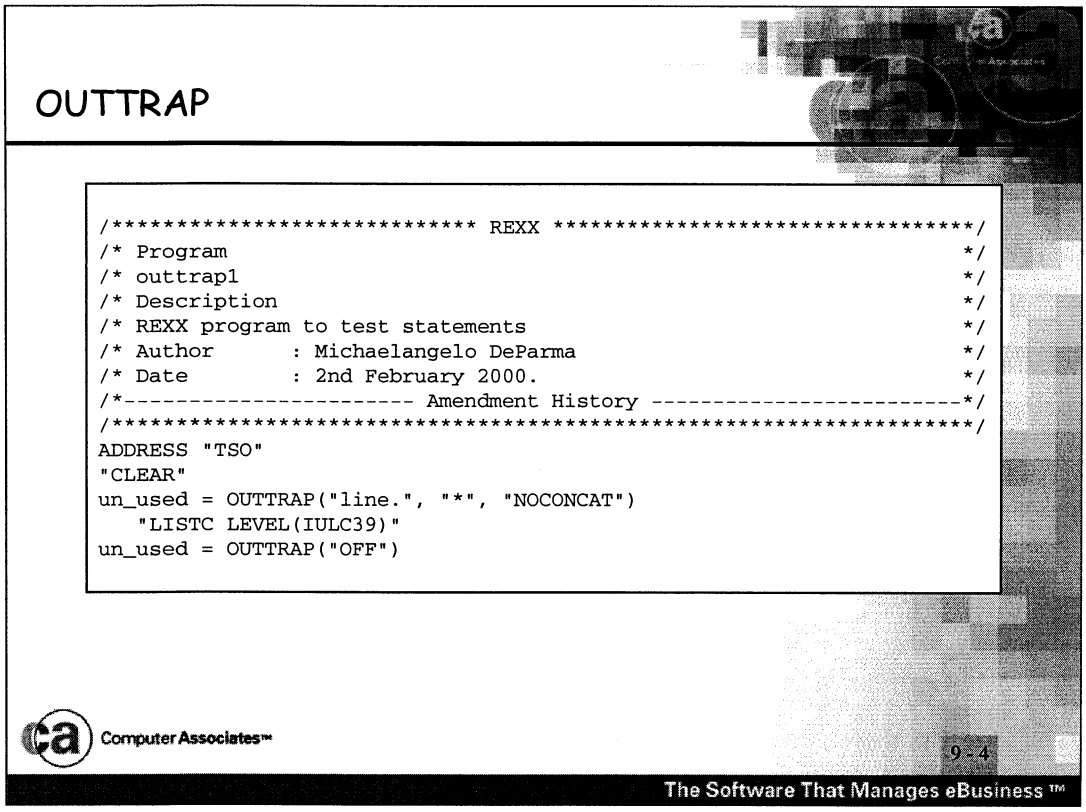
ADDRESS temporarily or permanently changes the destination of commands.

Here the destination for commands is set to TSO.



ADDRESS "MVS" - Makes the change permanent from the program or until another ADDRESS "ENV" is detected.

ADDRESS "TSO" "COMMAND" will change the environment for the one command only.



OUTTRAP is used to retrieve the output from the TSO commands.

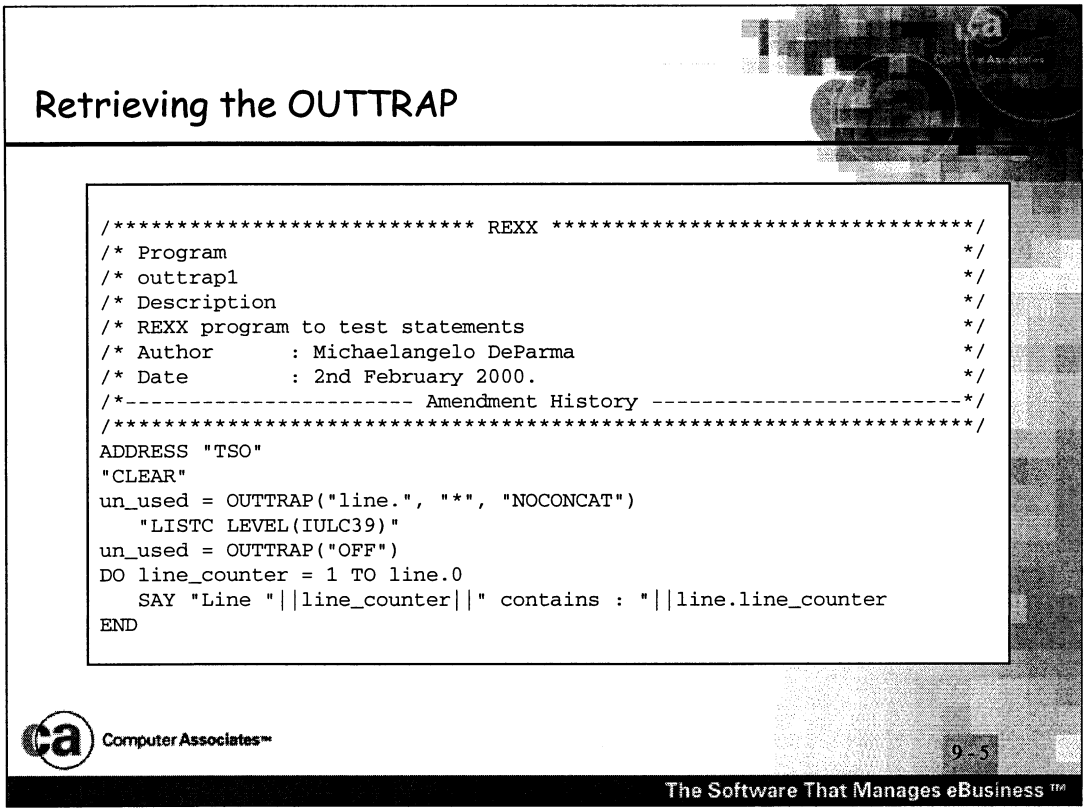
As a function a value is returned and is set to a variable (un_used).

The data from the command (LISTC) is stored in an array with a stem variable.

"*" indicates how many lines of data to be retrieved.

"NOCONCAT" ensures that anything in an OUTTRAP before the command is over written.

"OFF" switches off the trap and ensures that no more commands will go to it.



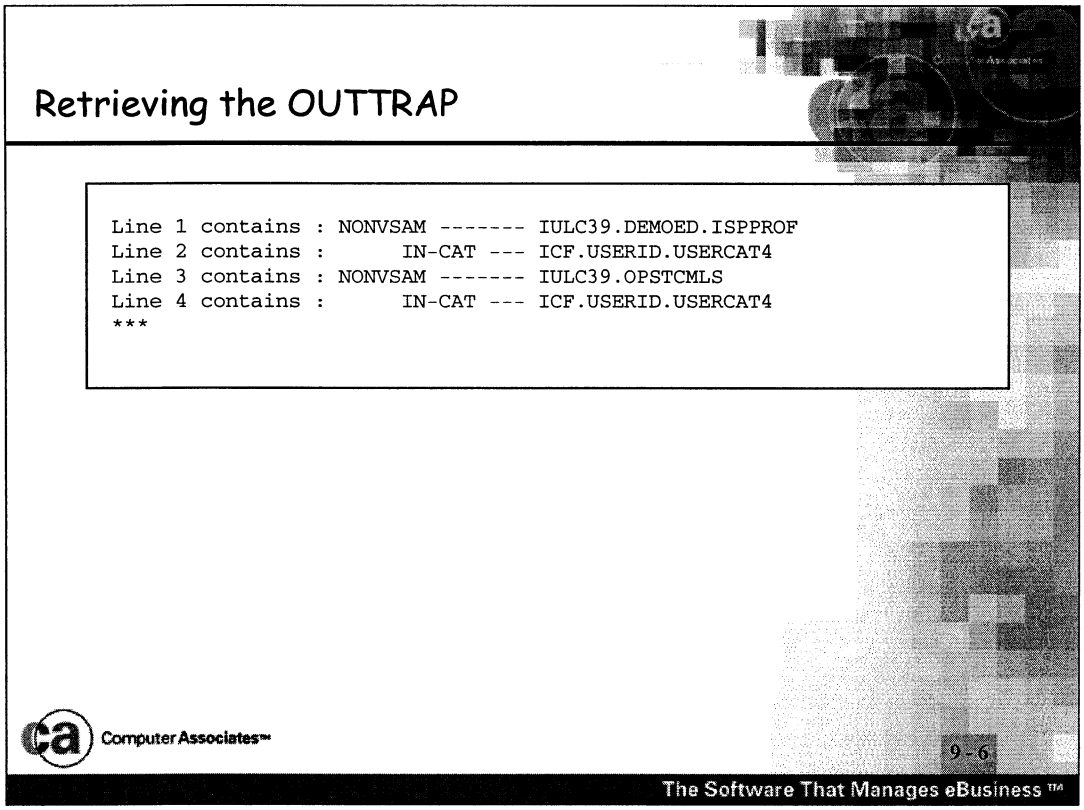
One of the features of the array is that STEM.0 contains the number of elements.

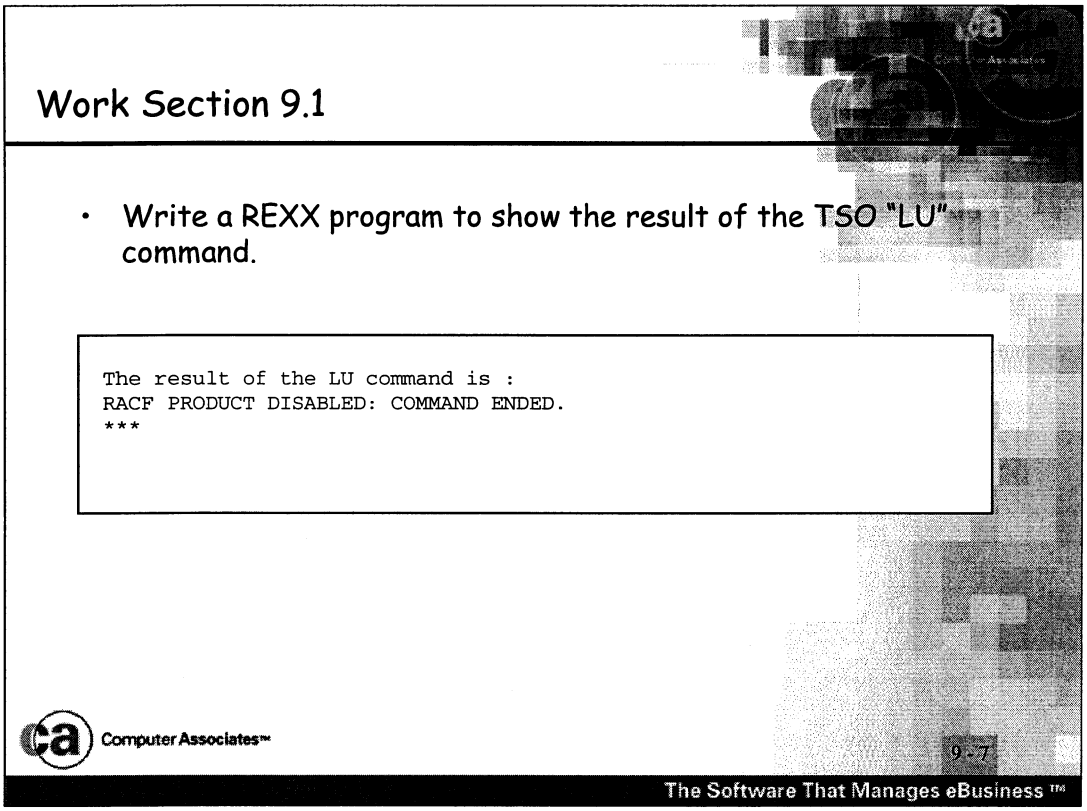
e.g.

line.0 contains how lines are return from the "LISTC" command.

The DO loop is used to retrieve the result.

The output is shown on the next page.


Retrieving the OUTTRAP
Line 1 contains : NONVSAM ------- IULC39.DEMOED.ISPPROF
Line 2 contains :   IN-CAT --- ICF.USERID.USERCAT4
Line 3 contains : NONVSAM ------- IULC39.OPSTCMLS
Line 4 contains :   IN-CAT --- ICF.USERID.USERCAT4
***
Computer Associates™
9-6
The Software That Manages eBusiness ™



Do not use outtrap for this.

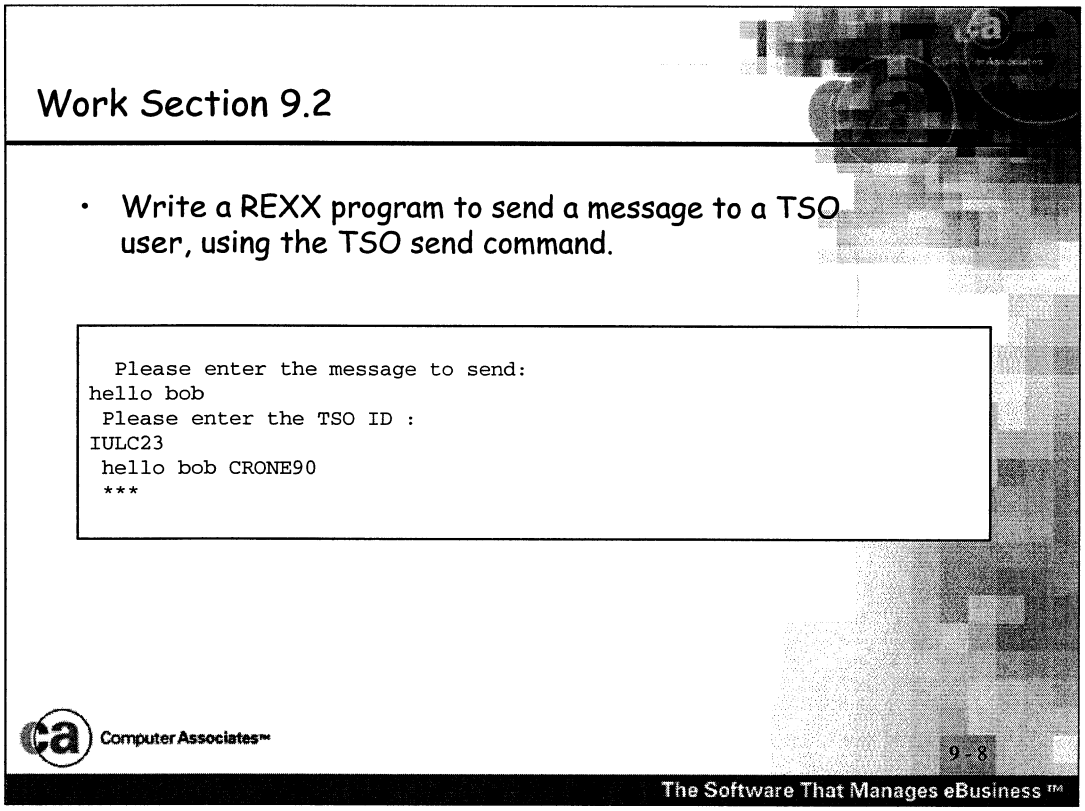
Use your dataset for all the REXX programs.

CLCS.IULCnn.REXX

Replace nn with your user number.

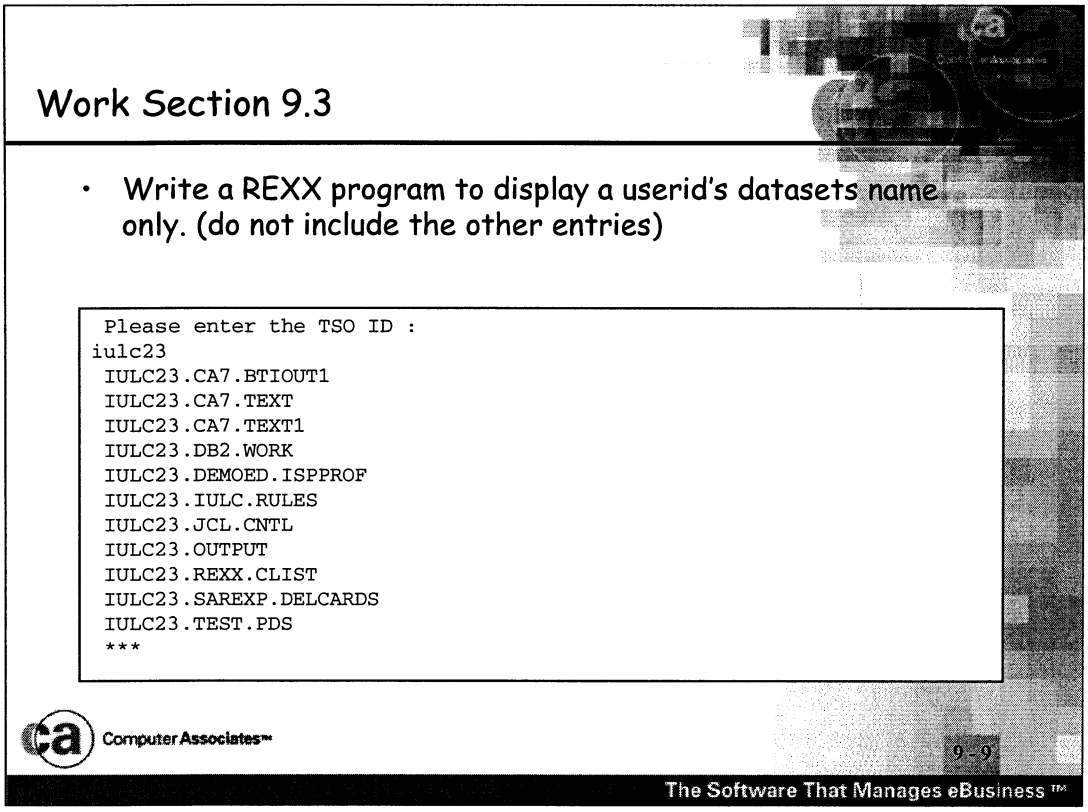
E.g. for id IULC35

CLCS.IULC35.REXX



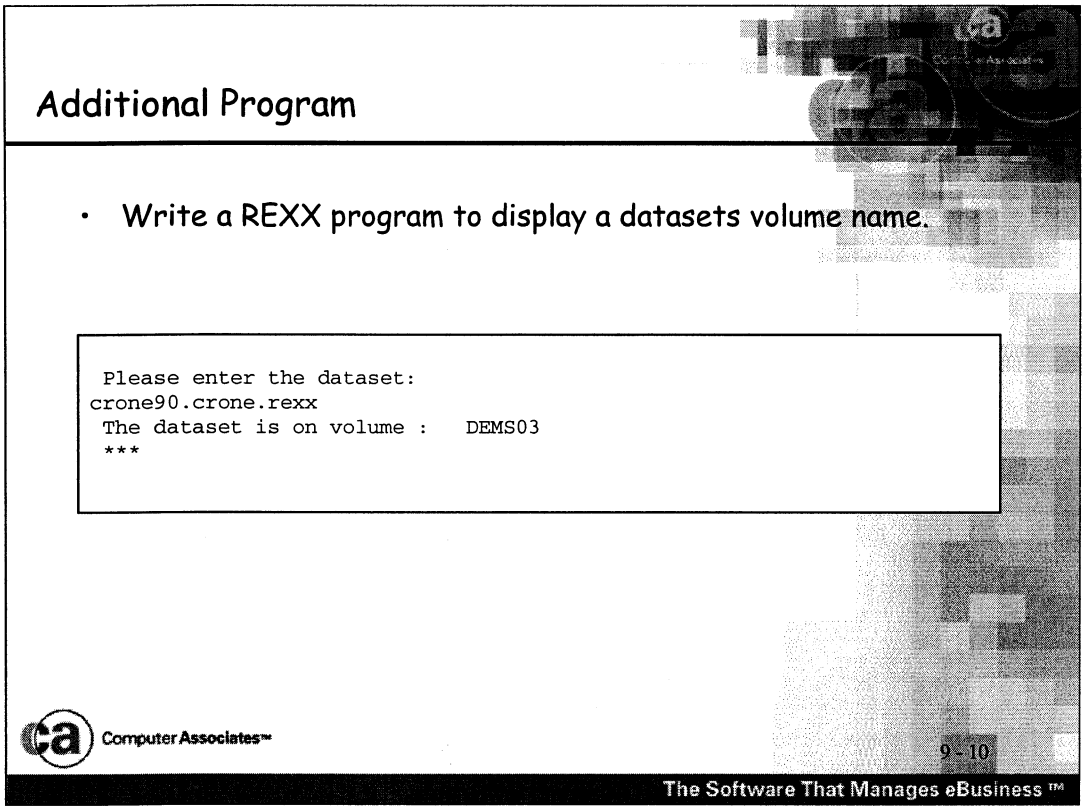
TSO Command

```
SE 'message' USER(userid) LOGON
```



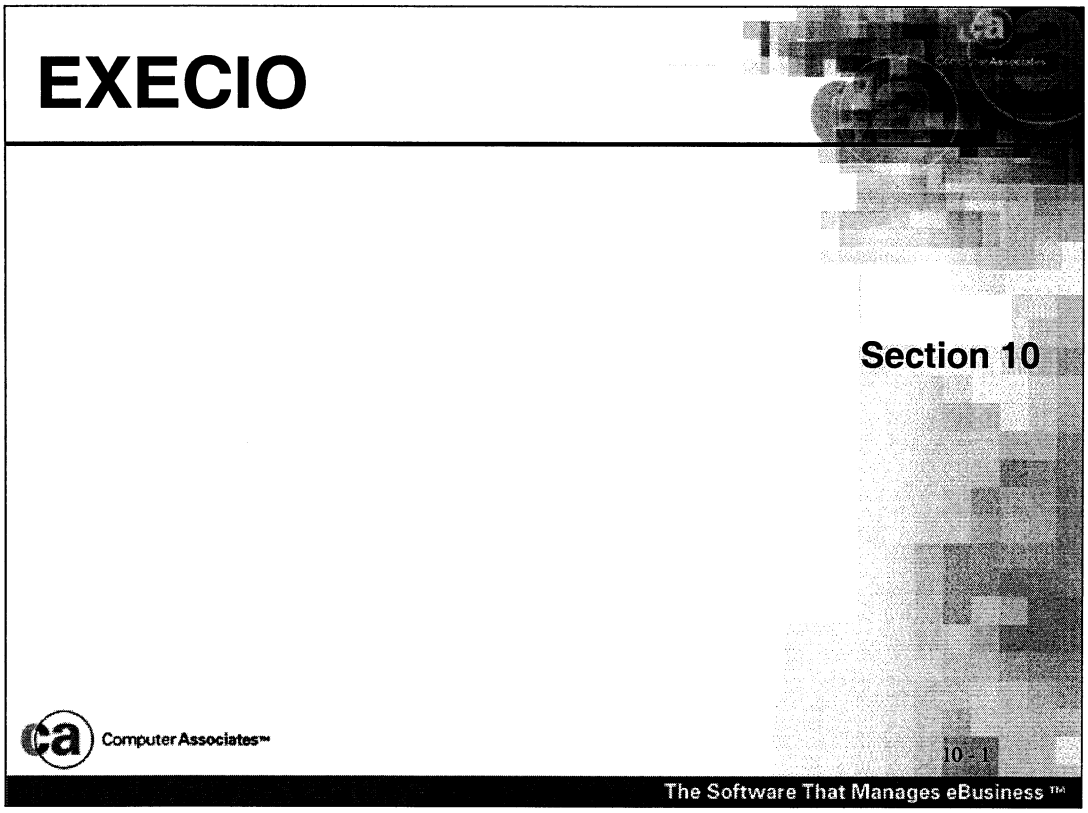
TSO Command

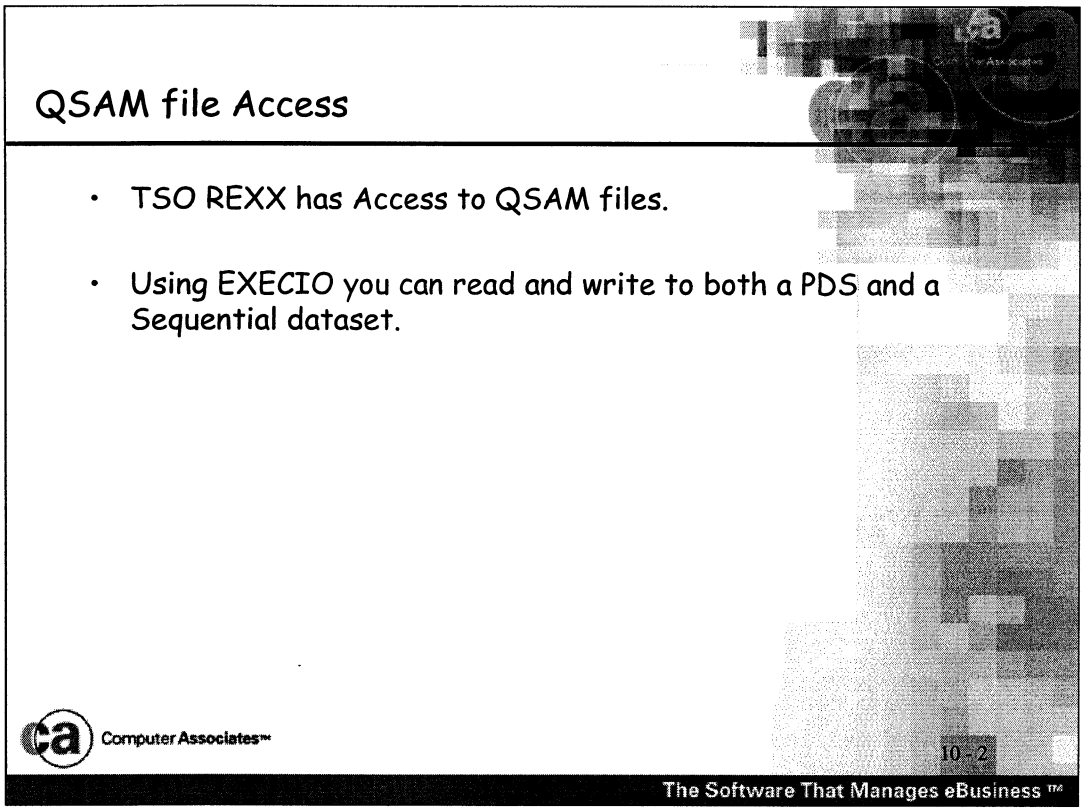
```
LISTC LEVEL(userid)
```

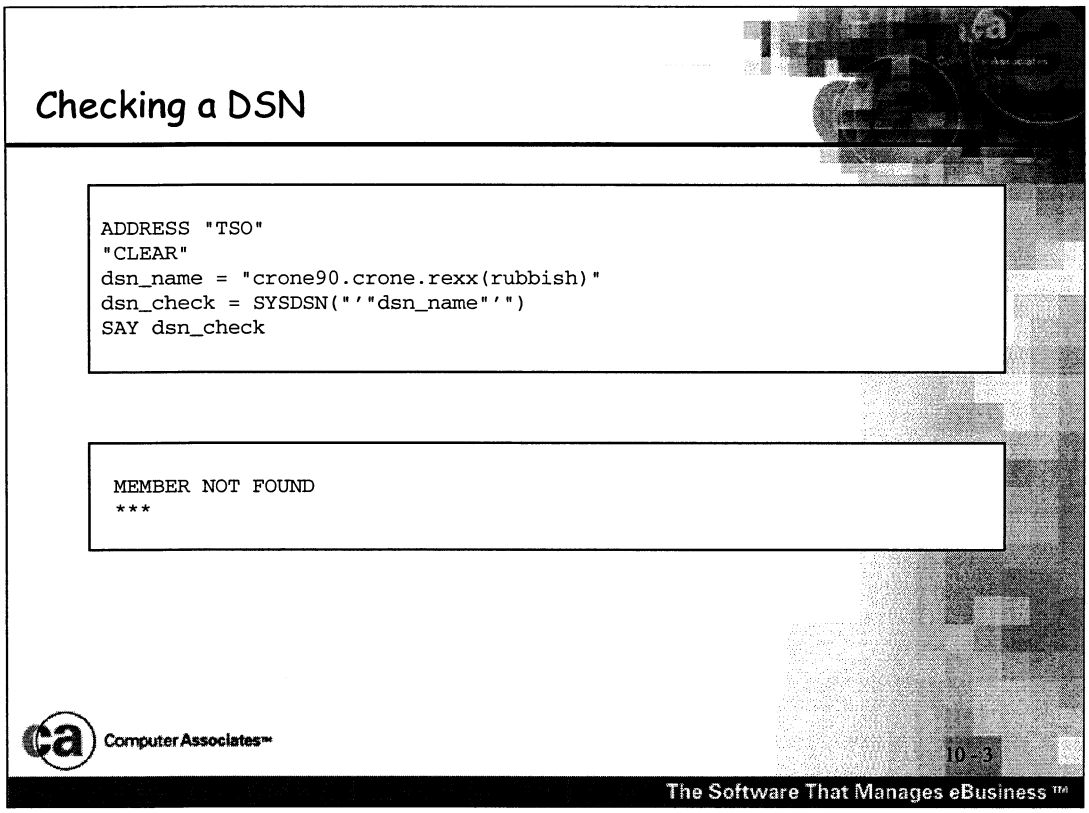


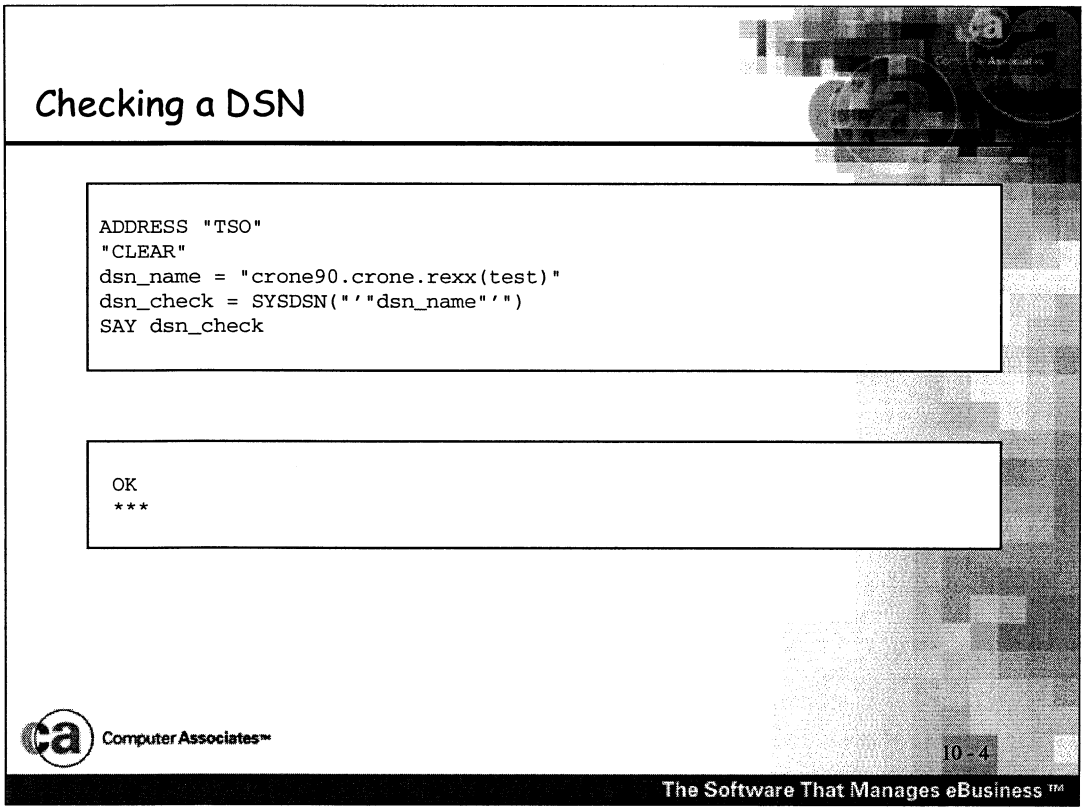
TSO Command

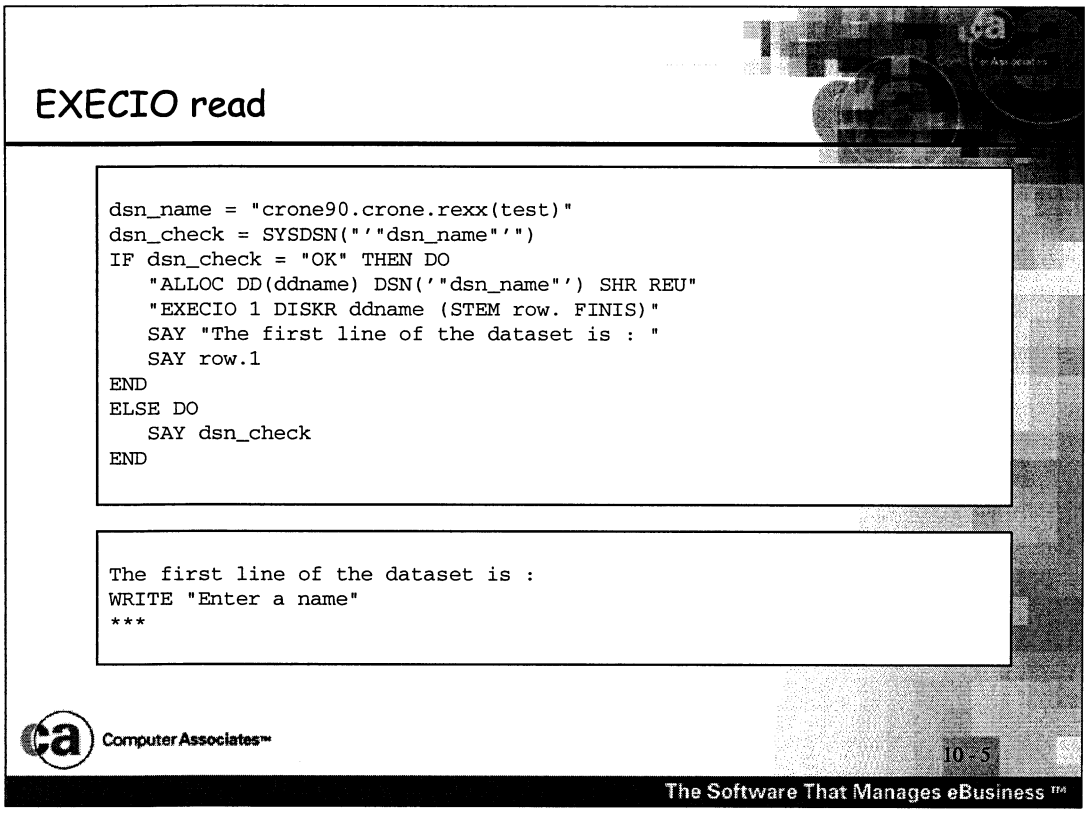
```
LISTDS
```


EXECIO
Section 10
Computer Associates™
10 - 1
The Software That Manages eBusiness ™


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.
Computer Associates™
10-2
The Software That Manages eBusiness ™


Checking a DSN
ADDRESS "TSO"
"CLEAR"
dsn_name = "crone90.crone.rexx(rubbish)"
dsn_check = SYSDSN("'"dsn_name"'")
SAY dsn_check
MEMBER NOT FOUND
***
Computer Associates
10 - 3
The Software That Manages eBusiness ™


Checking a DSN
ADDRESS "TSO"
"CLEAR"
dsn_name = "crone90.crone.rexx(test)"
dsn_check = SYSDSN("'"dsn_name"'")
SAY dsn_check
OK
***
Computer Associates™
10 - 4
The Software That Manages eBusiness ™



EXECIO always reads from DDNAME.

The TSO ALLOC command allocates a ddname.

EXECIO - Command

1 - Number of lines to read

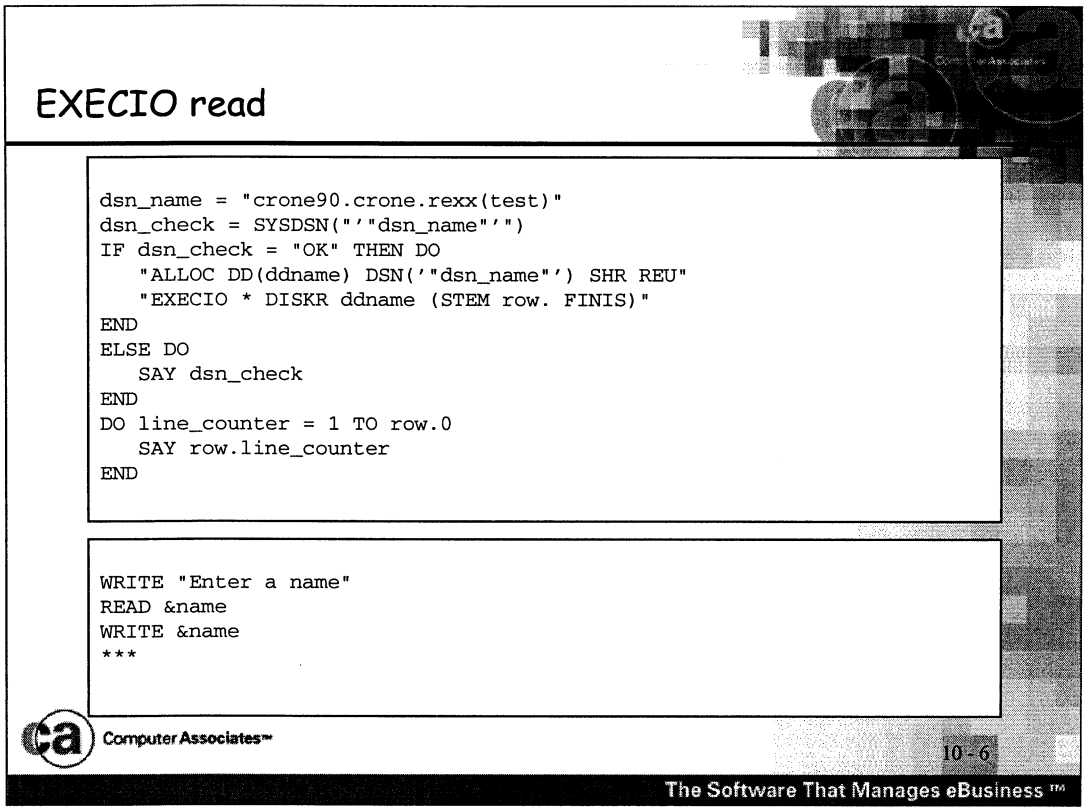
DISKR - Read

ddname - The DD-Name

STEM - to indicate that a stem will be used.

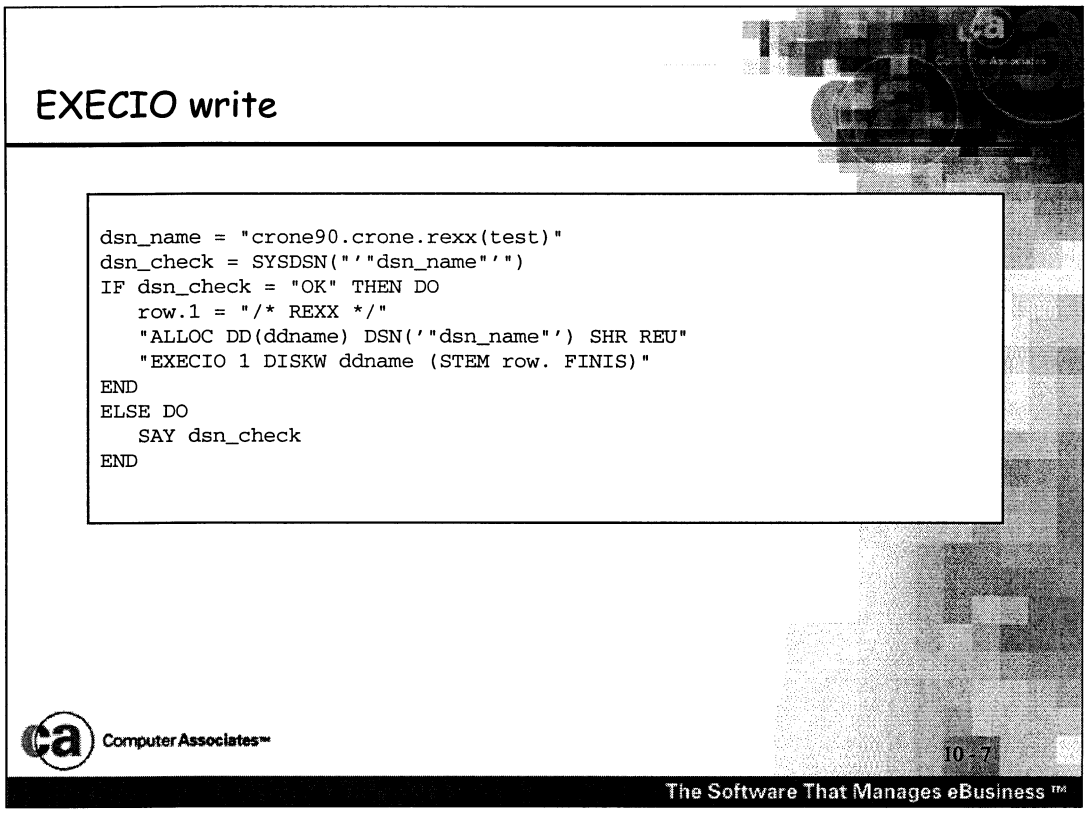
row. - The STEM

FINIS - close the dataset.



* - Number of lines to read

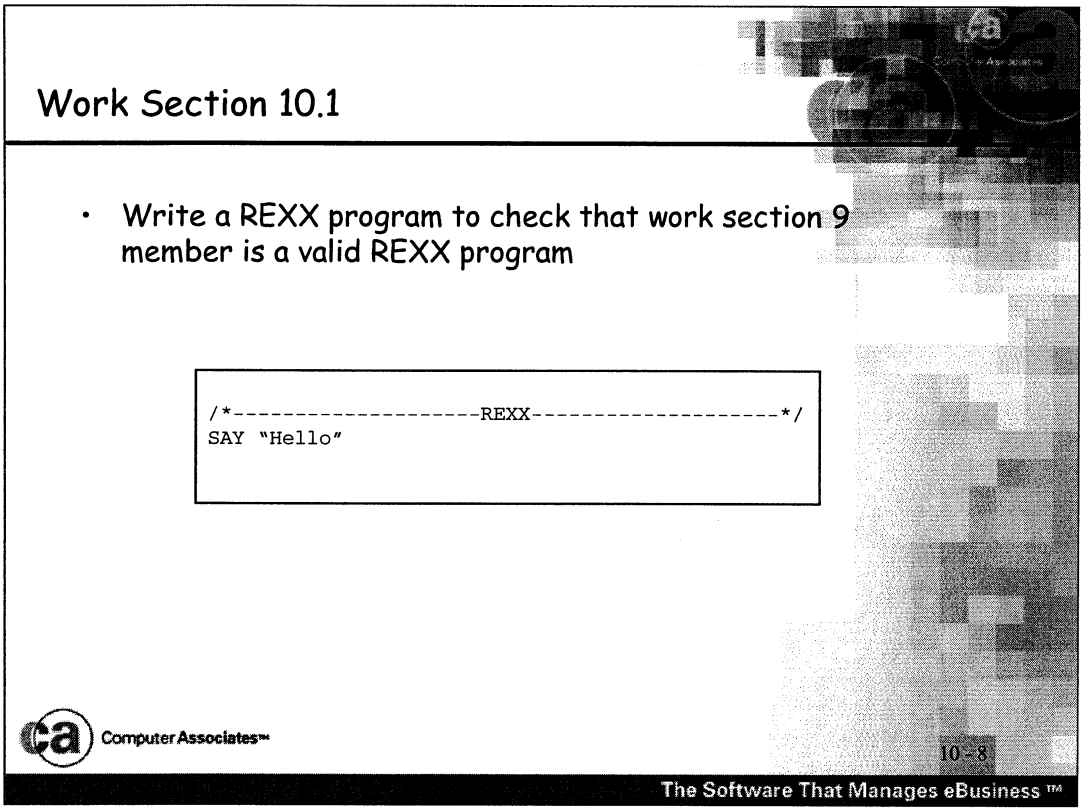
row.0 - the total number of lines read into the array. (the same as OUTTRAP)



DISKW - This will write the rows to the member. This will overwrite the current member.

The member now contains

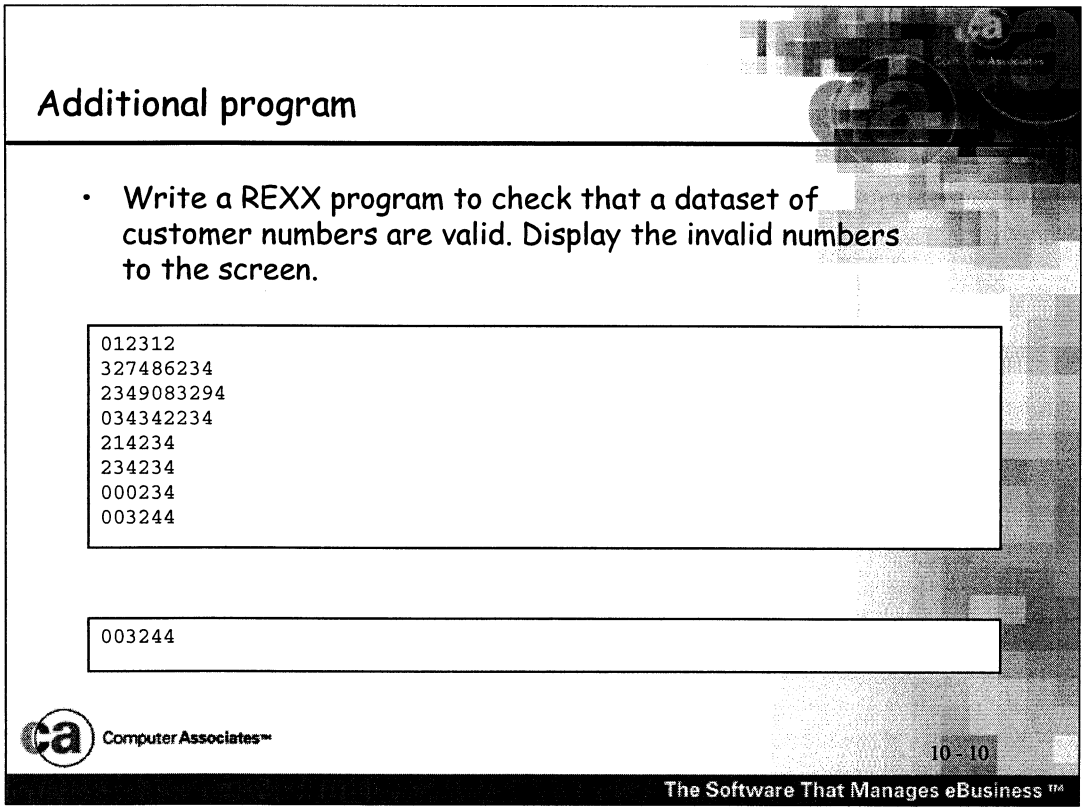
/* REXX */


Work Section 10.1
• Write a REXX program to check that work section 9 member is a valid REXX program
/*--------------------REXX--------------------*/
SAY "Hello"
Computer Associates™
10-8
The Software That Manages eBusiness ™

Work Section 10.2

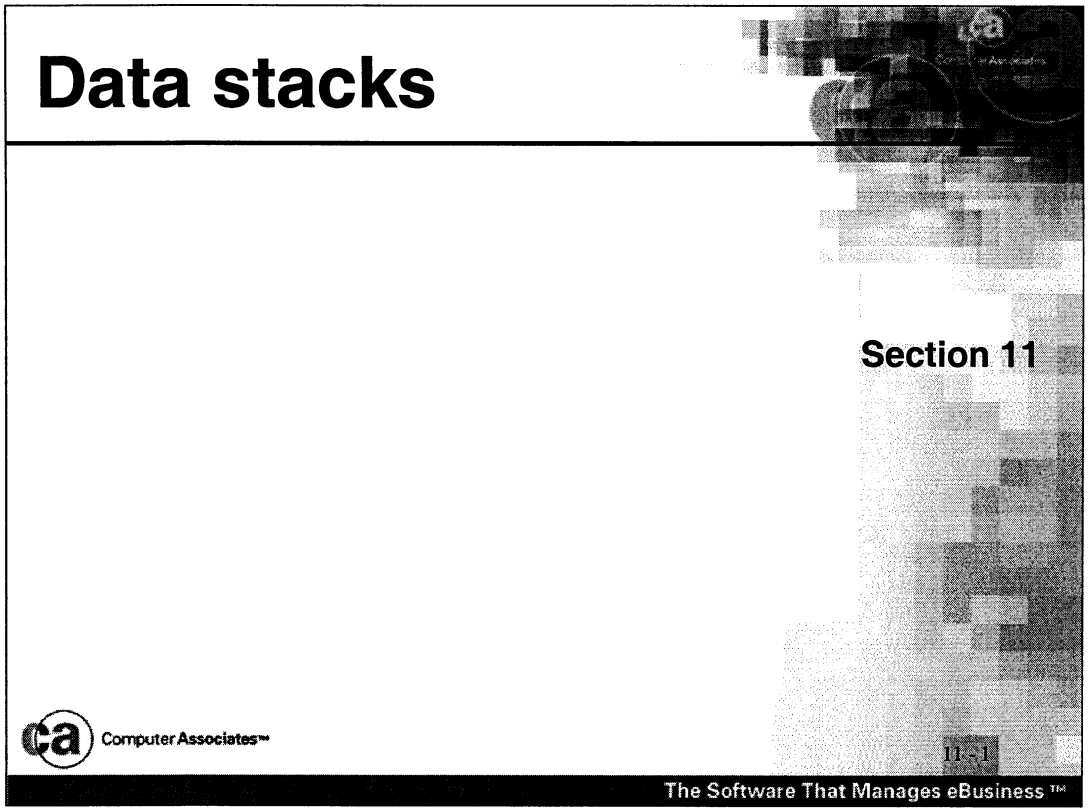
- Write a REXX program to create a new member called "generate".
- This new member will be a new executable REXX program.

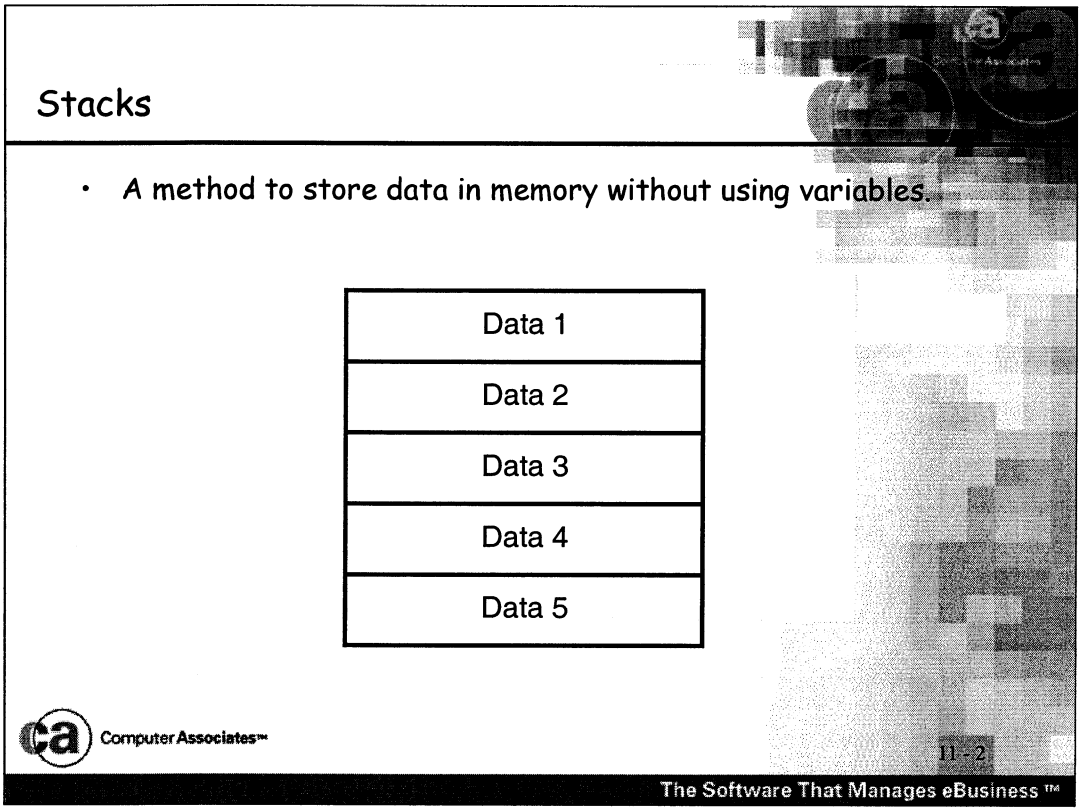
```
/* REXX */
SAY 'Enter your name'
PARSE PULL name
SAY 'Hello '||name
```

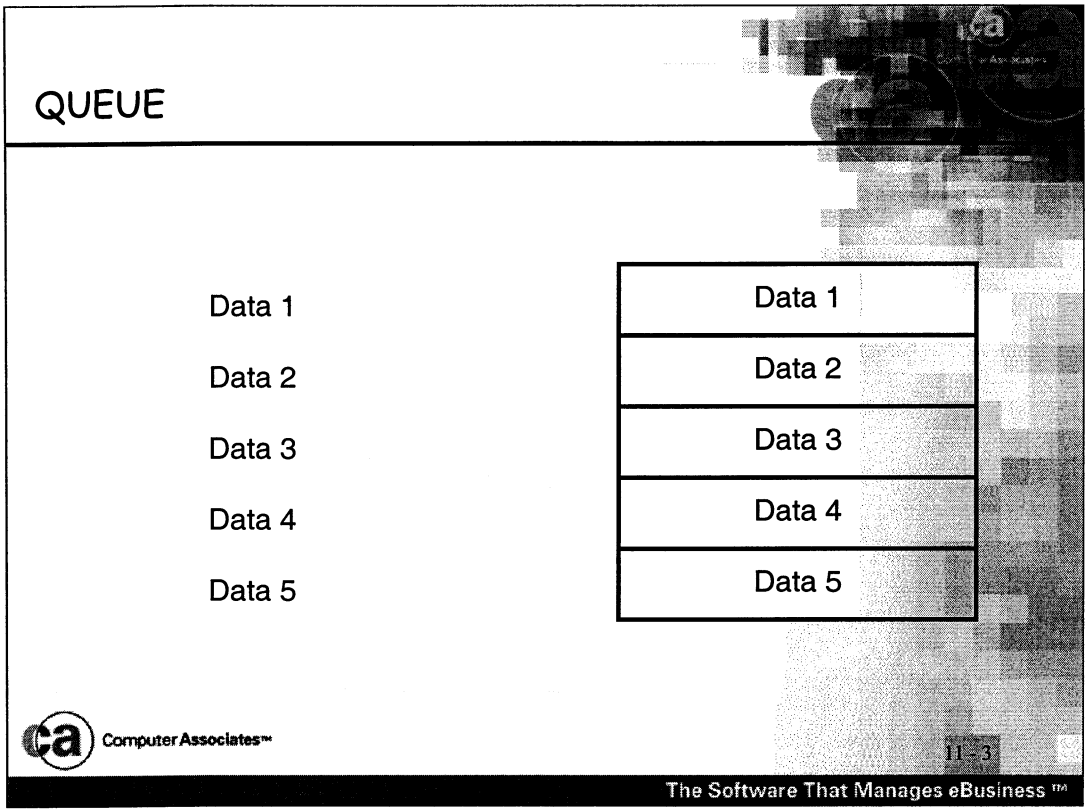


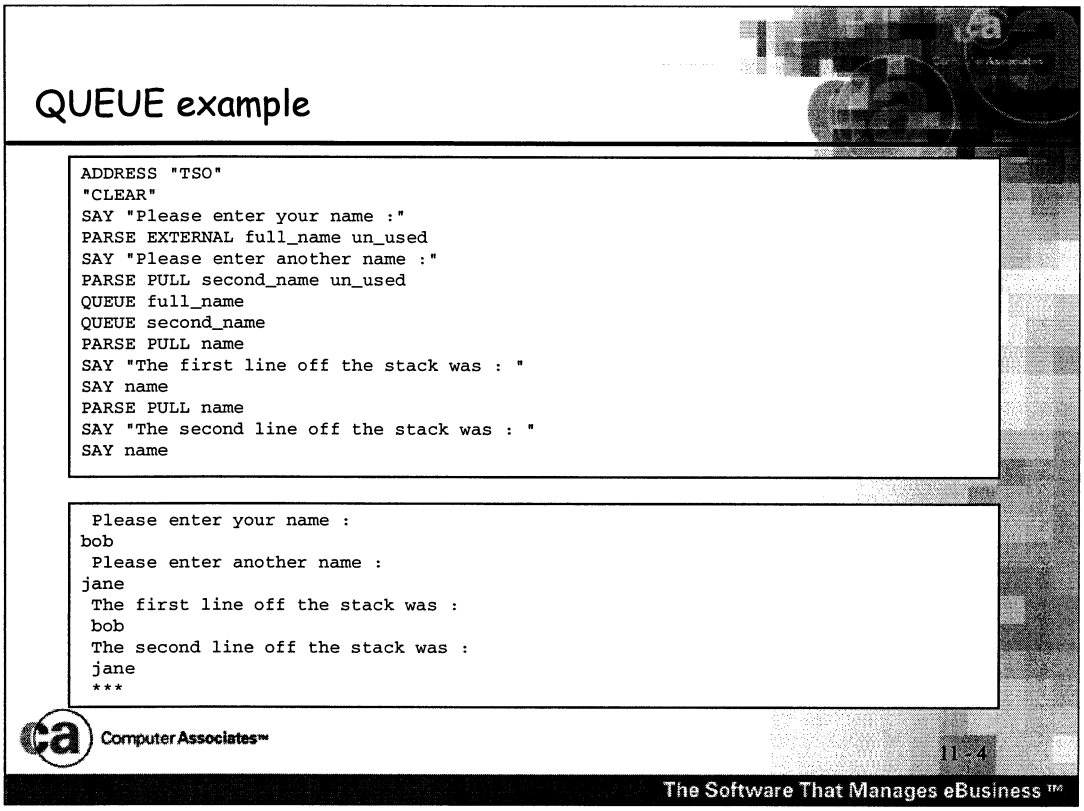
Valid Numbers are in the range 0 to 999999 and must be 6 characters long.

Create a test member called customer and manually put these customer numbers into that member.


Data stacks
Section 11
Computer Associates™
11-1
The Software That Manages eBusiness ™


Stacks
• A method to store data in memory without using variables.
Data 1
Data 2
Data 3
Data 4
Data 5
Computer Associates™
11 - 2
The Software That Manages eBusiness ™

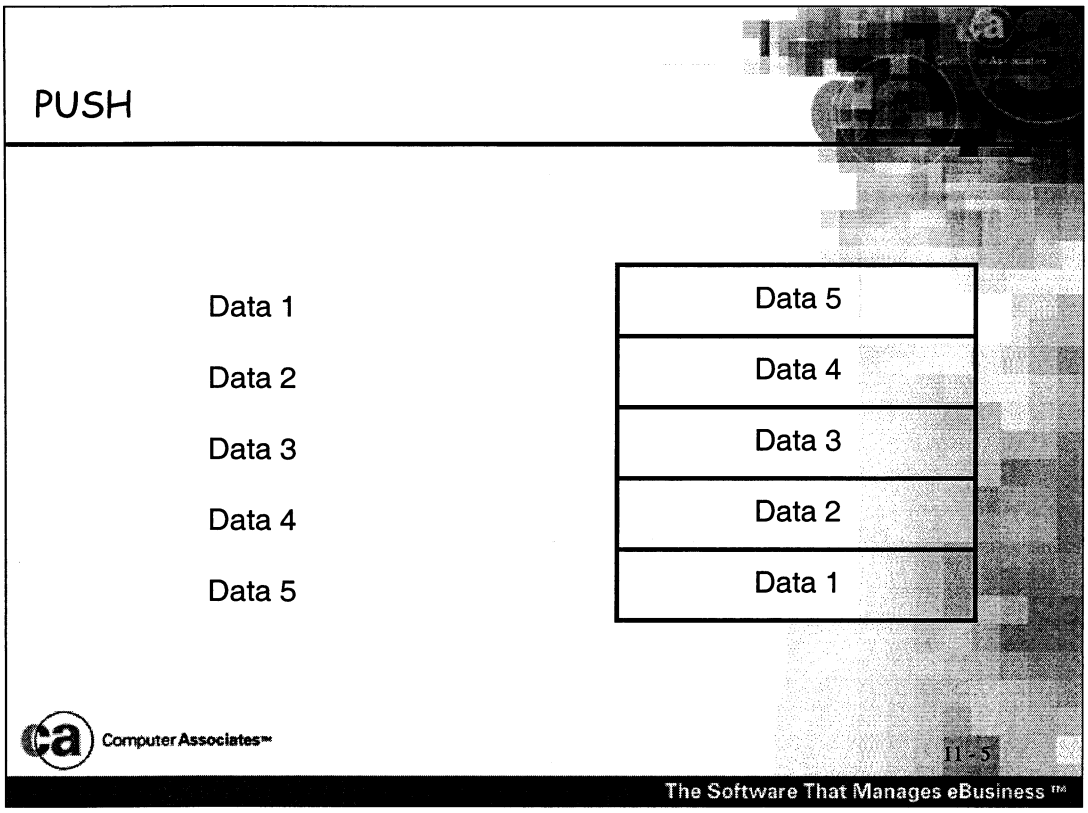

QUEUE
Data 1
Data 2
Data 3
Data 4
Data 5
Data 1
Data 2
Data 3
Data 4
Data 5
Computer Associates™
11-3
The Software That Manages eBusiness ™

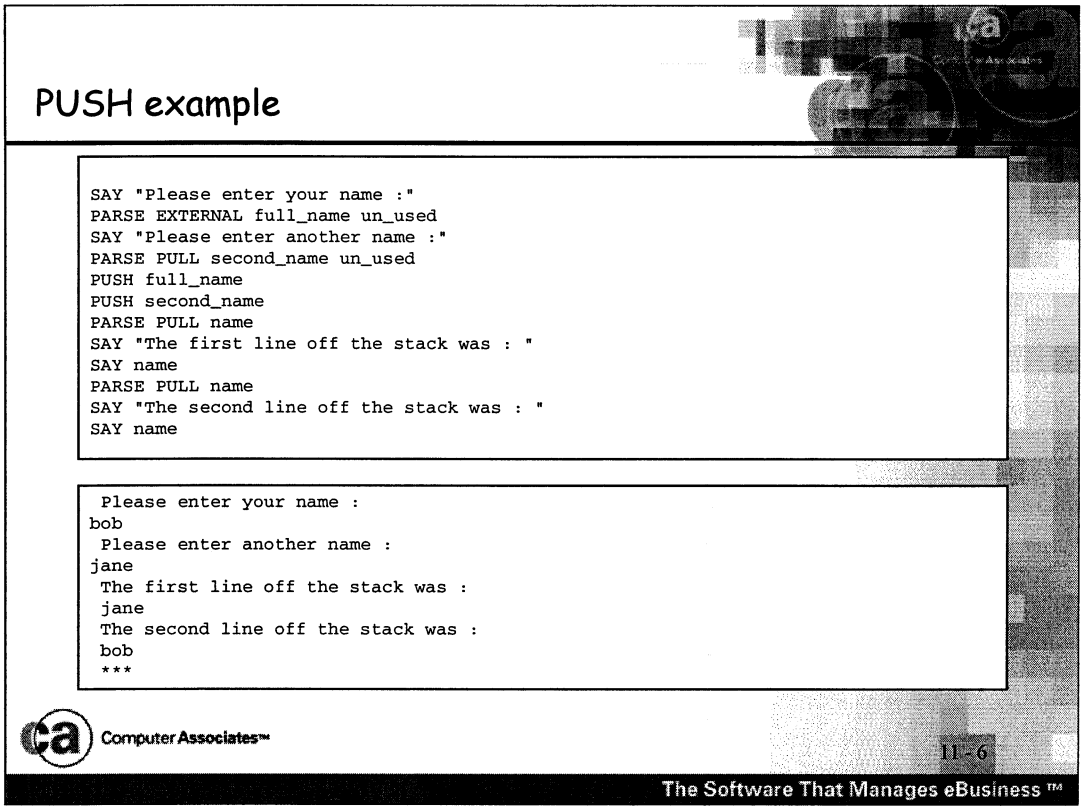


QUEUE will put the data in the stack in FIFO order.

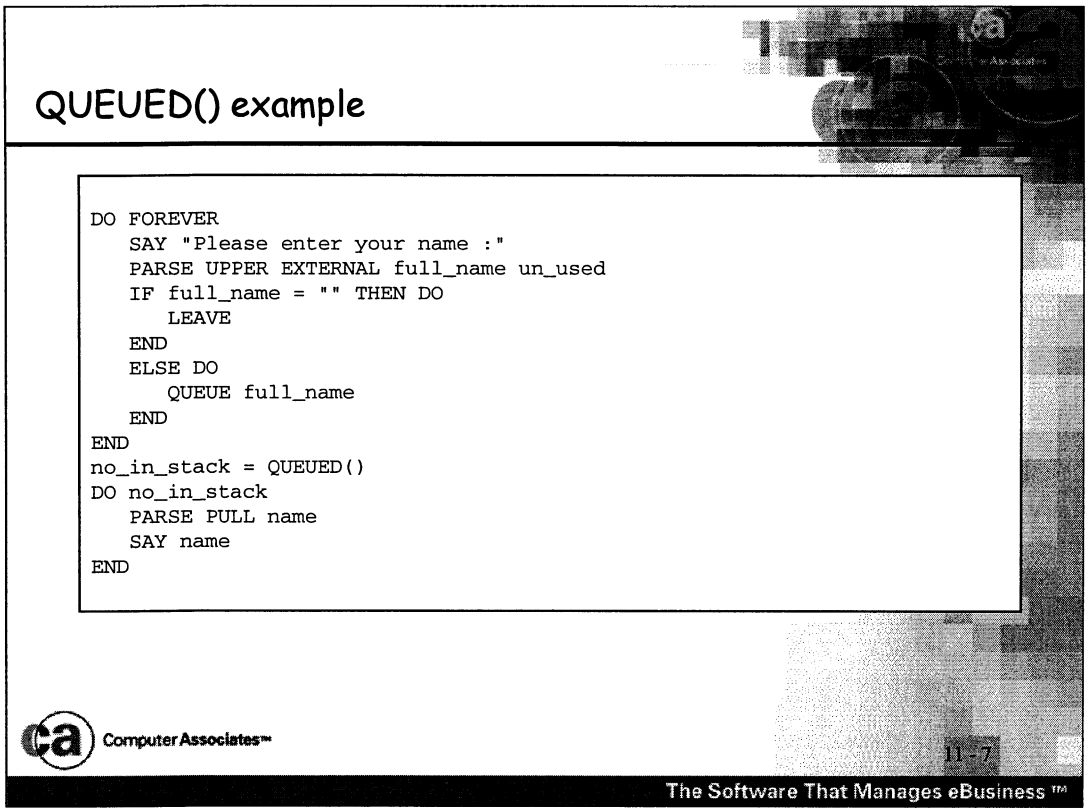
PARSE PULL will remove the data from the stack one line at a time. The data will be pulled into a variable. (any variable can be used.)

It can be useful under TSO to only use EXTERNAL instead of pull when working with stacks, PARSE PULL will go to a stack for data before the screen.

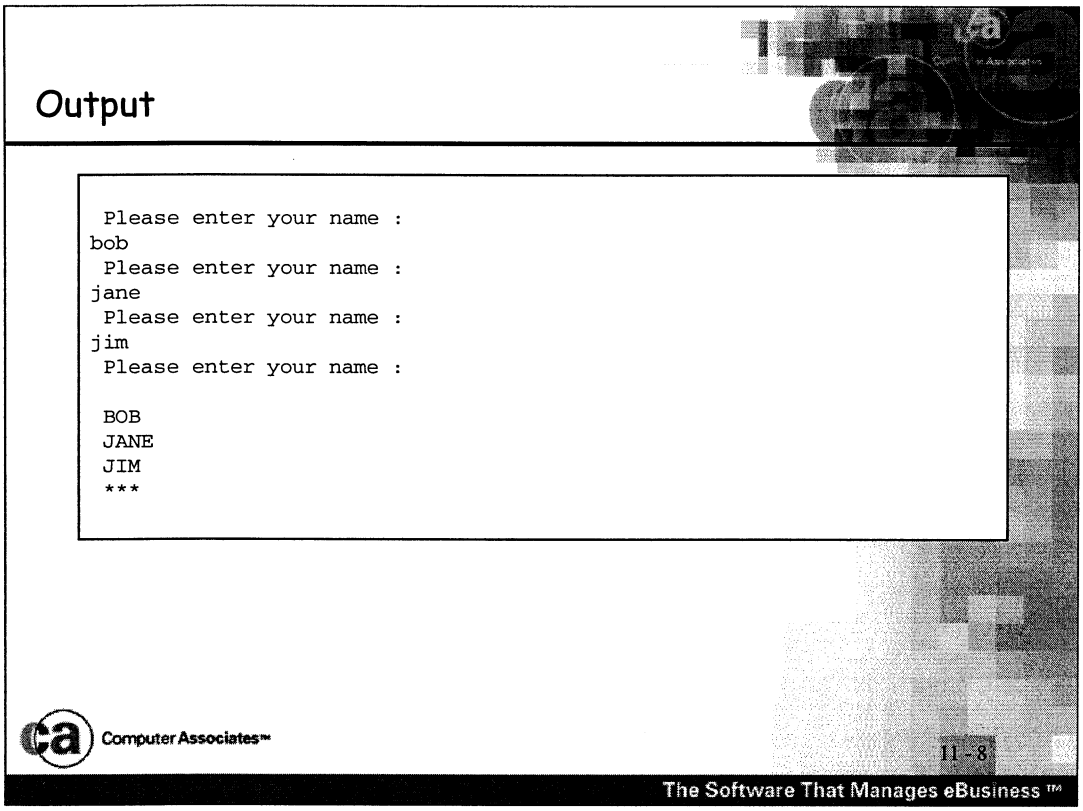

PUSH
Data 1
Data 2
Data 3
Data 4
Data 5
Data 5
Data 4
Data 3
Data 2
Data 1
Computer Associates™
11-5
The Software That Manages eBusiness ™

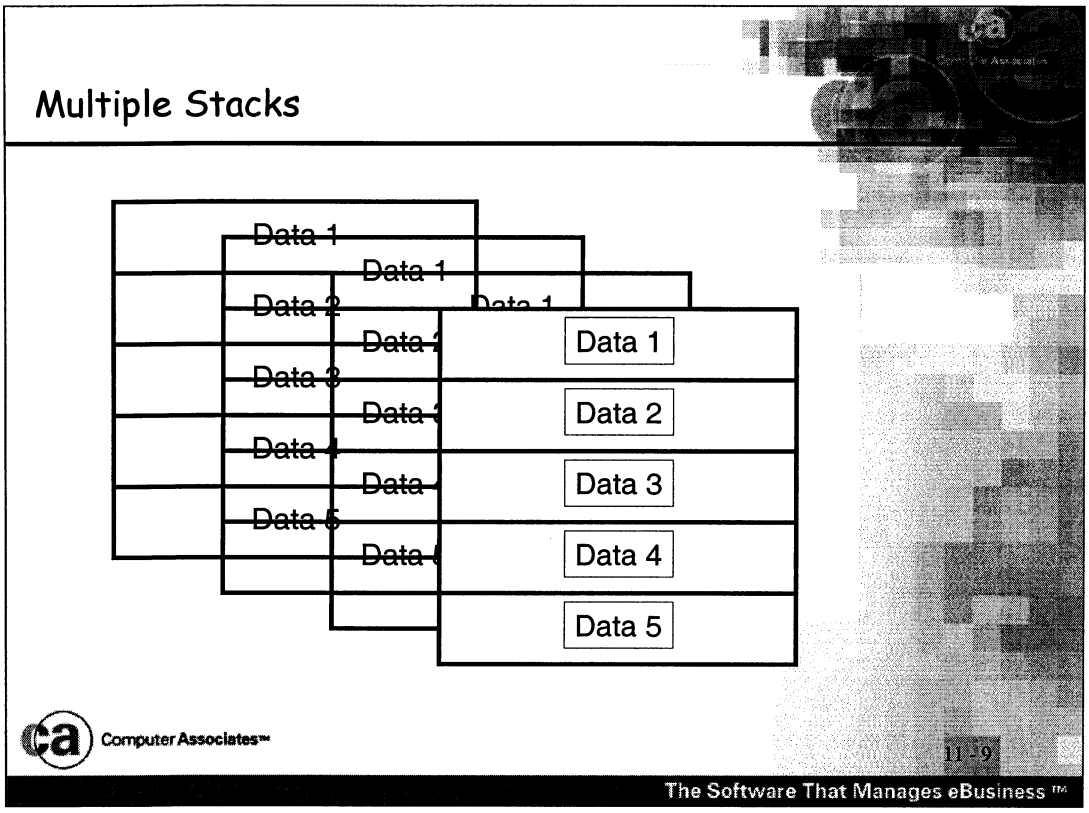


PUSH will put the data in the stack in LIFO order.

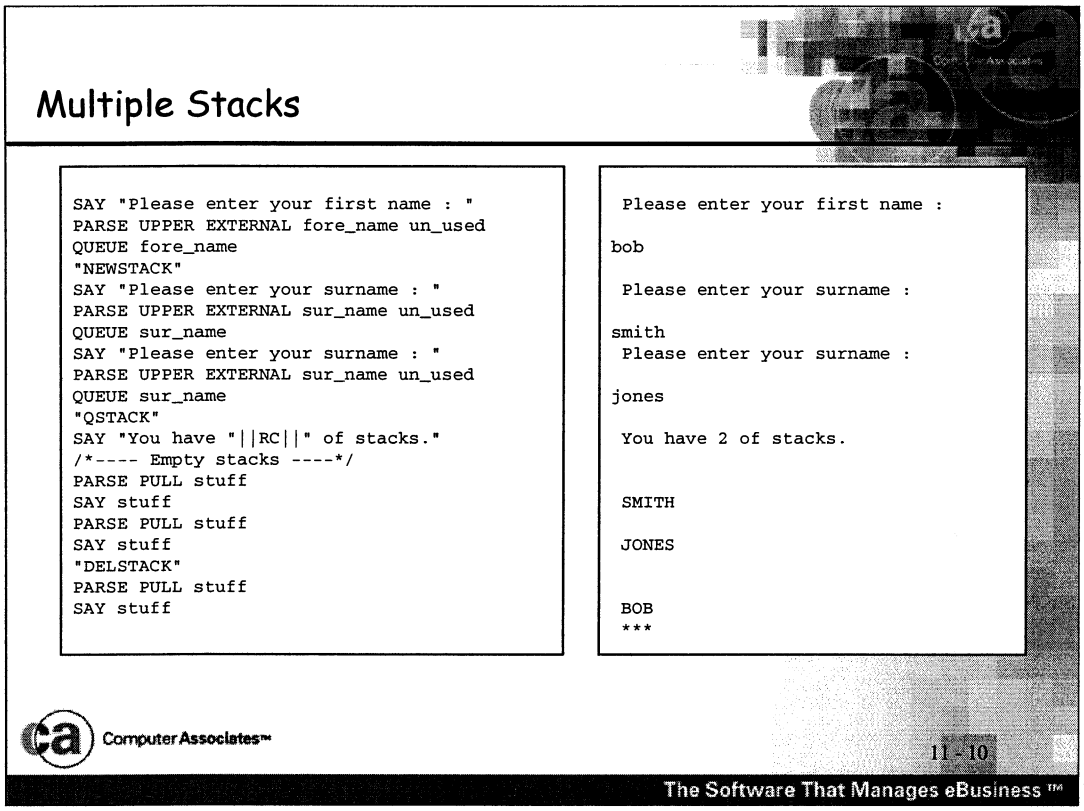


The QUEUED() function will return how many items are in the stack, and can be used to loop until the stack is empty.


Output
Please enter your name :
bob
Please enter your name :
jane
Please enter your name :
jim
Please enter your name :
BOB
JANE
JIM
***
Computer Associates™
11-8
The Software That Manages eBusiness ™



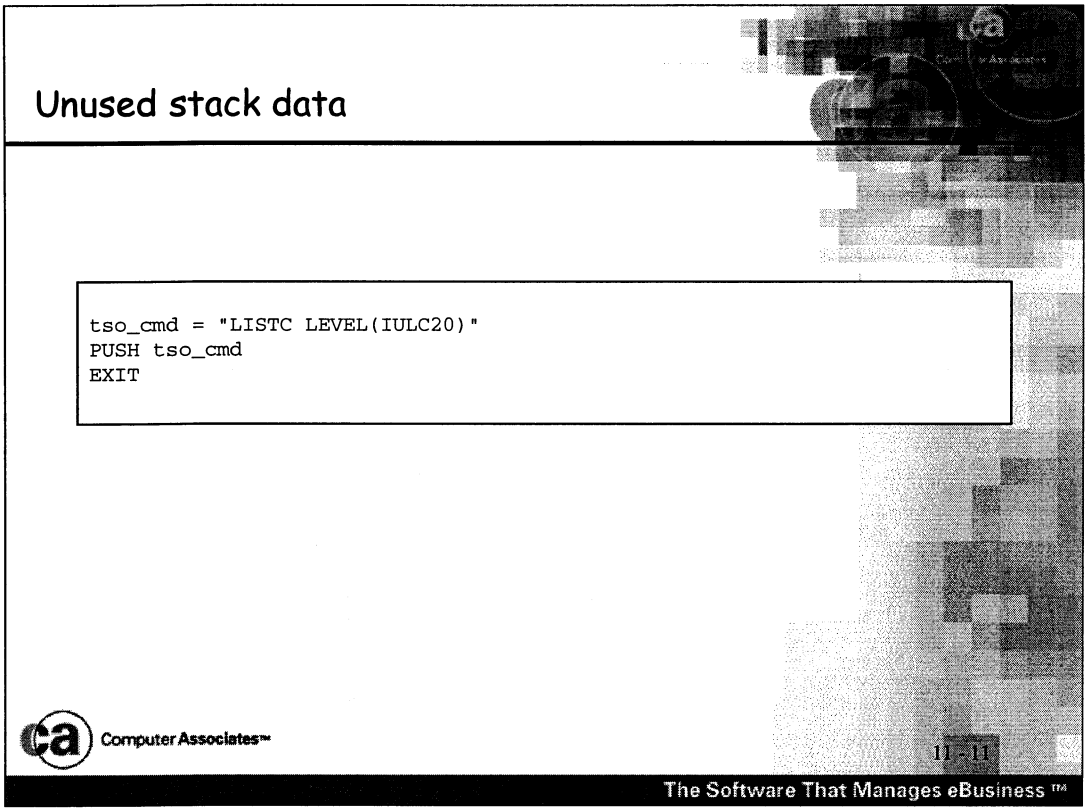
More than one stack can be in use at any time, but you can only access the current stack. The current stack has to be deleted to access the stacks behind it.



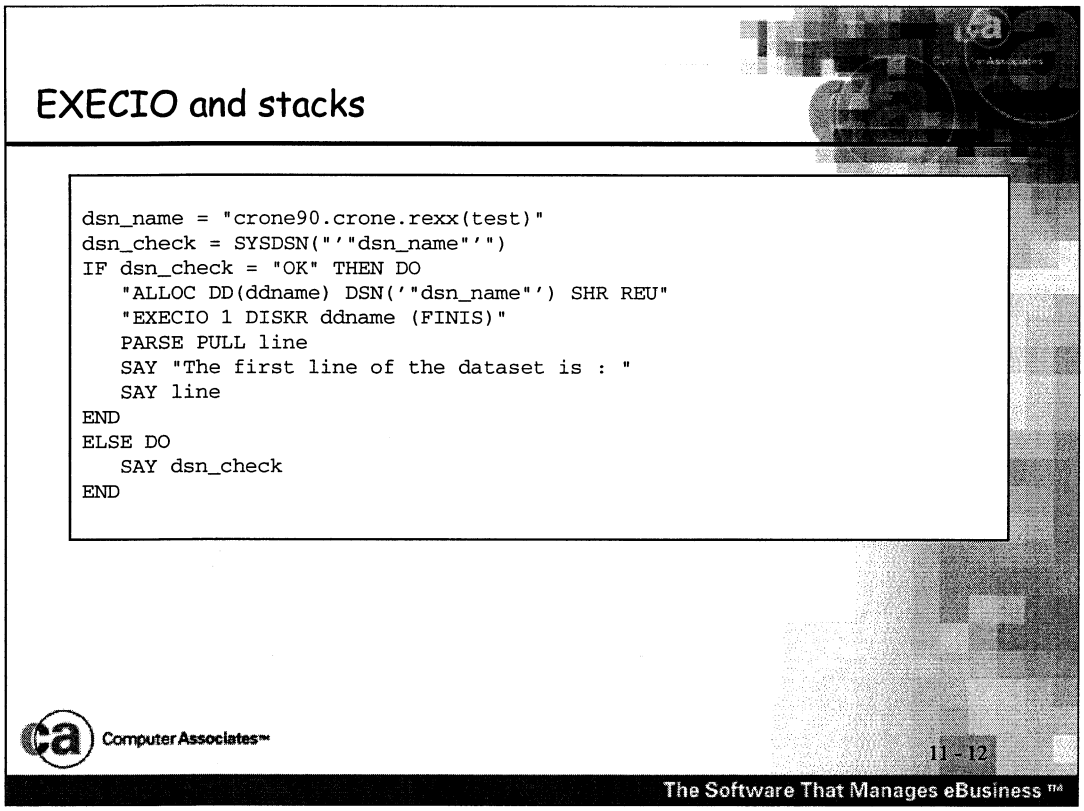
"NEWSTACK" creates an additional stack in front of the current stack. The newstack has to be removed before the data on the original stack can be retrieved.

"DELSTACK" deletes the current stack.

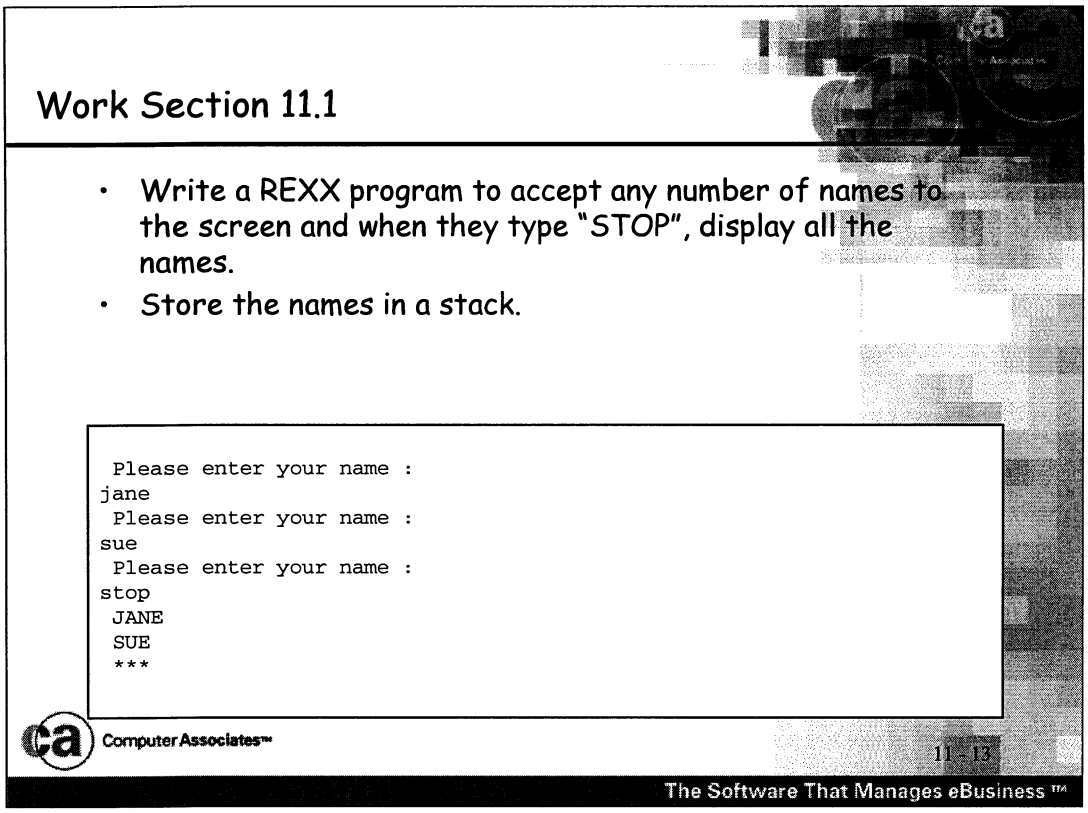
"QSTACK" returns the number of stacks into RC



Putting TSO commands on the stack allows them to be executed on completion of the REXX program.



The data stack can be used with EXECIO instead of using STEM variables by removing the STEM option and variable.


Work Section 11.1
• Write a REXX program to accept any number of names to the screen and when they type "STOP", display all the names.
• Store the names in a stack.
Please enter your name :
jane
Please enter your name :
sue
Please enter your name :
stop
JANE
SUE
***
Computer Associates™
11 - 13
The Software That Manages eBusiness ™

Work Section 11.2

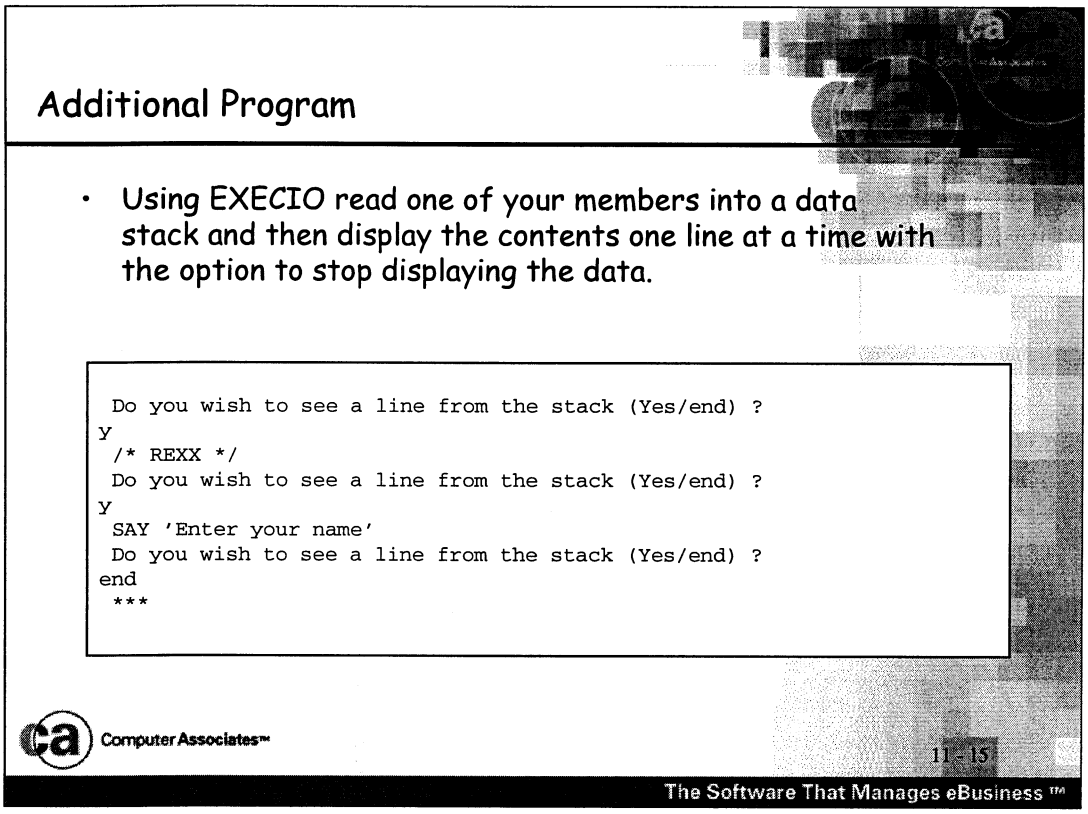
- Write a REXX program to accept a list of names and store in a stack, then create a new stack and accept a number of Date of births and store them in the new stack.
- Display the contents of each stack showing the names in reverse order.

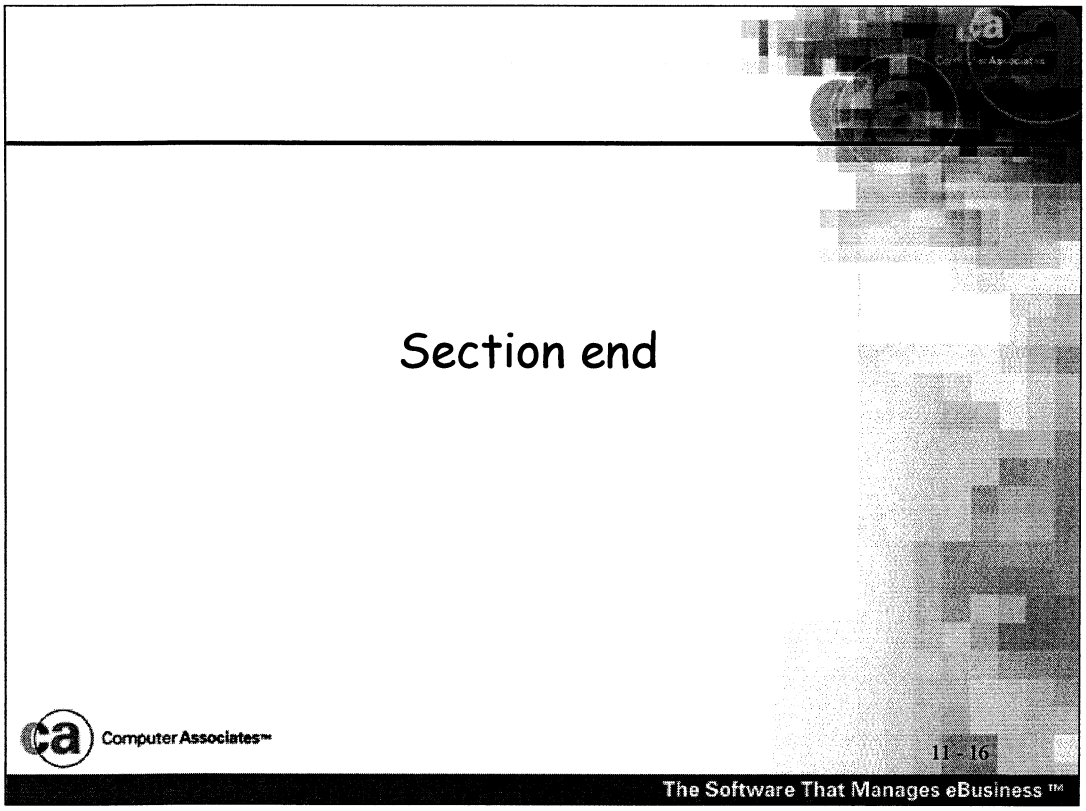
```
 Please enter your name :
bob
 Please enter your name :
fred
 Please enter your name :
stop
 Please enter your DOB :
051276
 Please enter your DOB :
040303
 Please enter your DOB :
stop
 051276
 040303
 FRED
 BOB
 ***
```

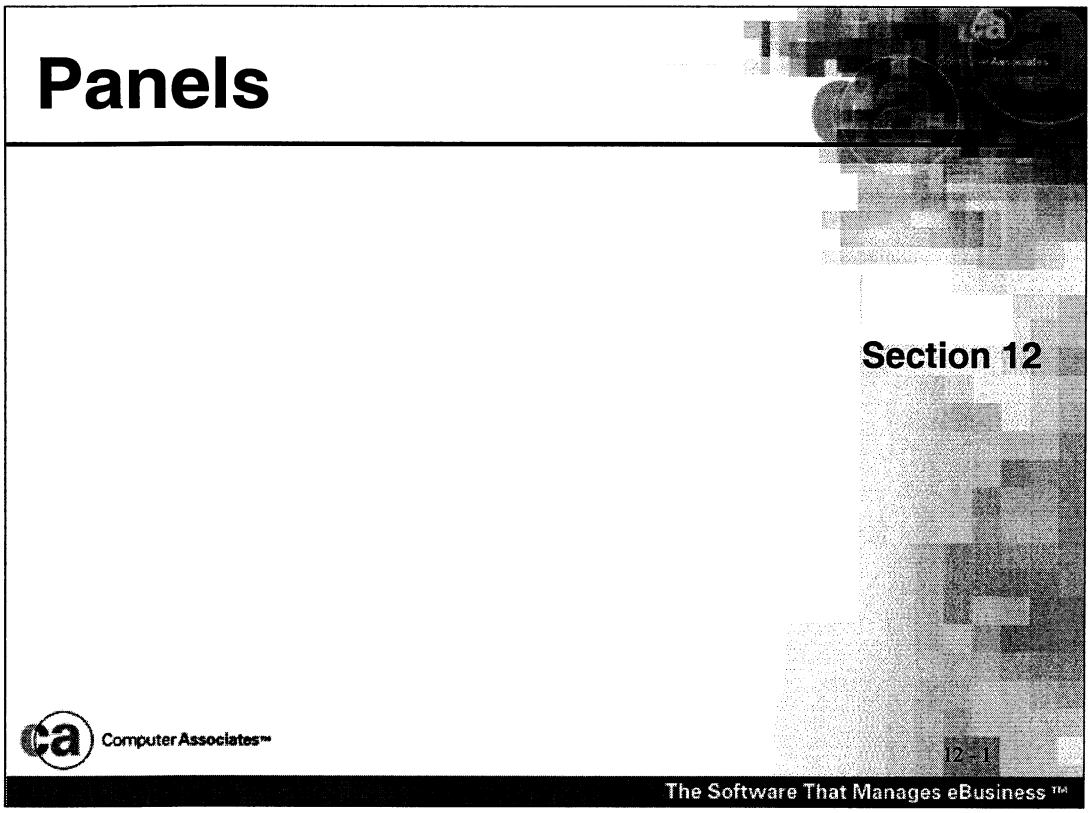
Computer Associates™

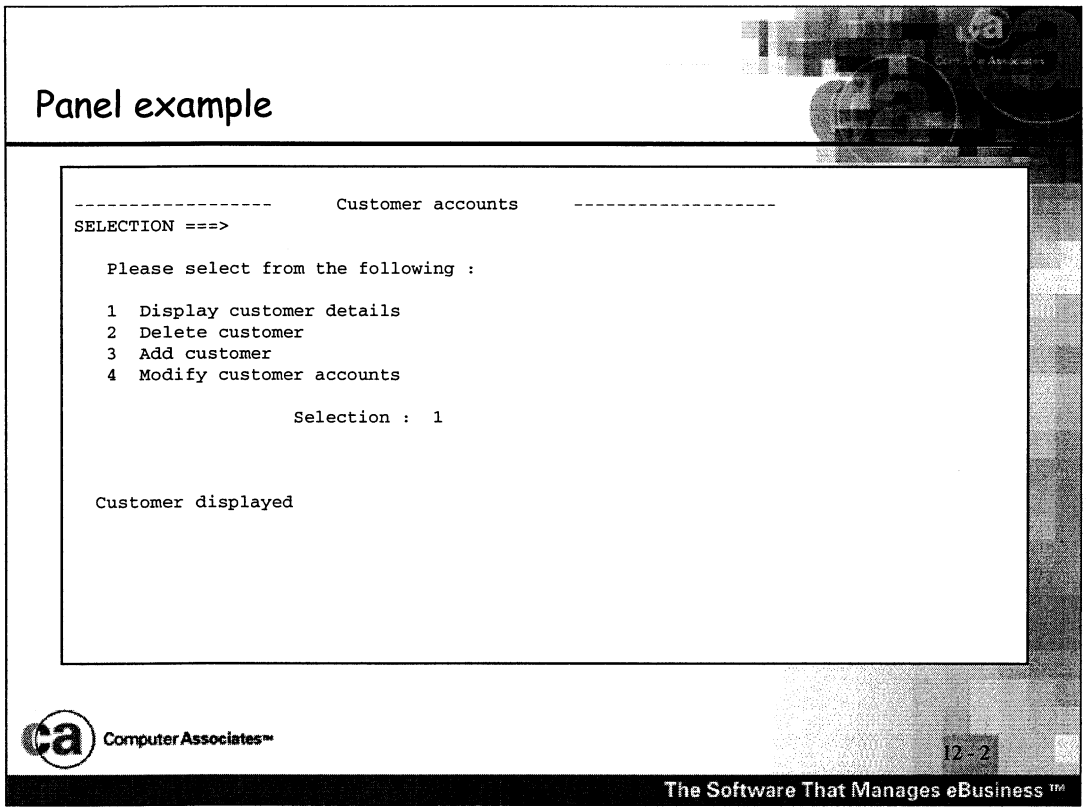
11 - 14

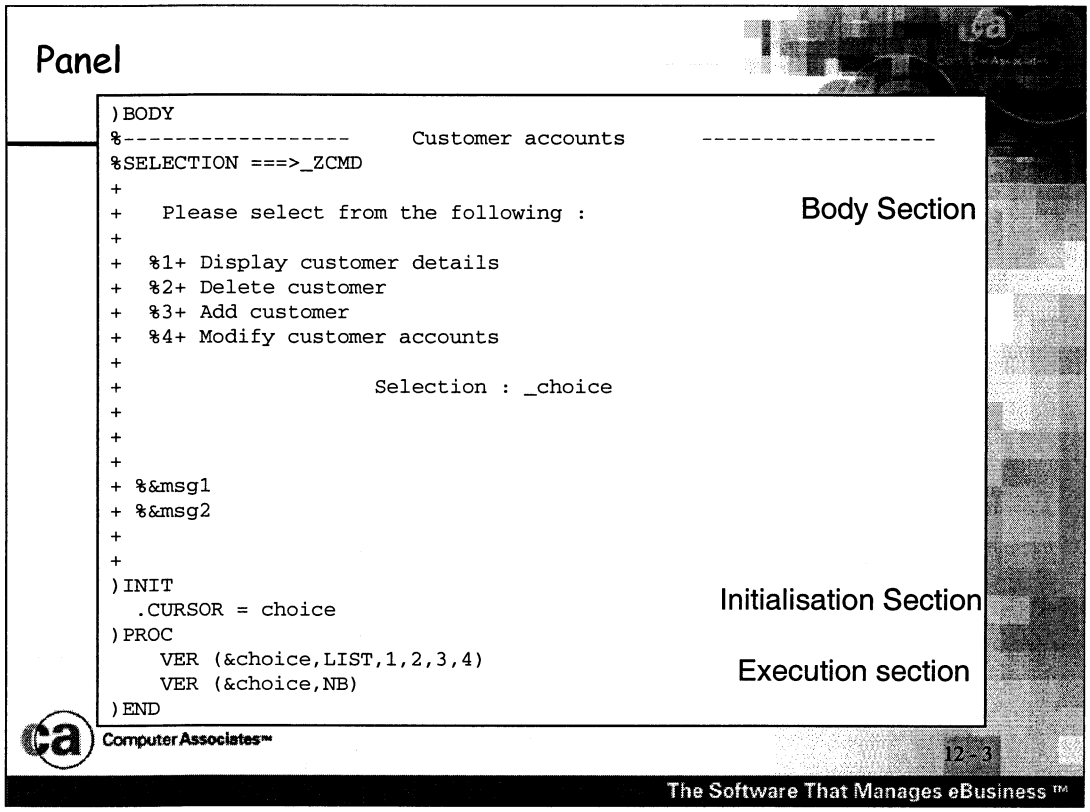
The Software That Manages eBusiness ™


Additional Program
• Using EXECIO read one of your members into a data stack and then display the contents one line at a time with the option to stop displaying the data.
Do you wish to see a line from the stack (Yes/end) ?
y
/* REXX */
Do you wish to see a line from the stack (Yes/end) ?
y
SAY 'Enter your name'
Do you wish to see a line from the stack (Yes/end) ?
end
***
Computer Associates™
11 - 15
The Software That Manages eBusiness ™


Section end
Computer Associates™
11 - 16
The Software That Manages eBusiness ™


Panels
Section 12
Computer Associates™
12 - 1
The Software That Manages eBusiness ™


Panel example
------------------ Customer accounts ------------------
SELECTION ===>
Please select from the following :
1 Display customer details
2 Delete customer
3 Add customer
4 Modify customer accounts
Selection : 1
Customer displayed
Computer Associates™
12 - 2
The Software That Manages eBusiness ™



Here is the ISPF panel. This is stored in the ISPPLIB dataset.

)BODY - Identifies the displayable section.

% - indicates highlighted protected field

+ - protected field

_name - input field with variable

& - variable protected.

)INIT - section to indicate set-up details.

.CURSOR - set cursor location on panel start-up

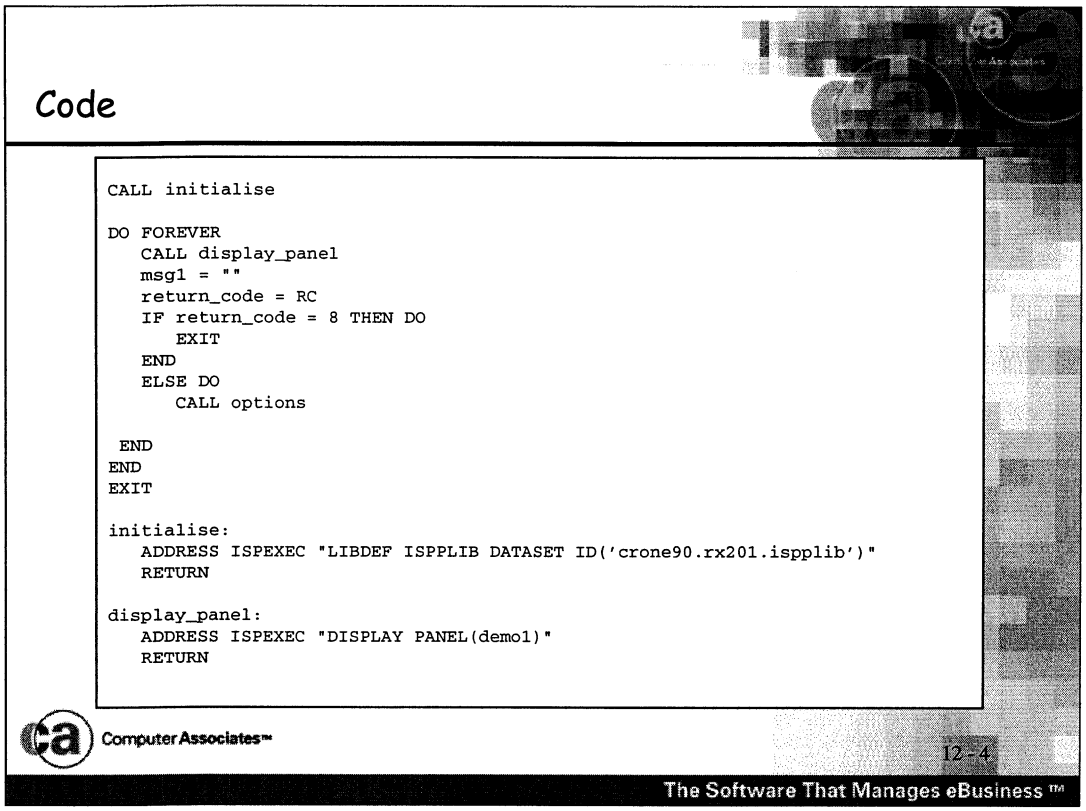
)PROC - Executable section

VER - Verification options

LIST - Check a list

NB - Check value is None blank

)END - End of panel.



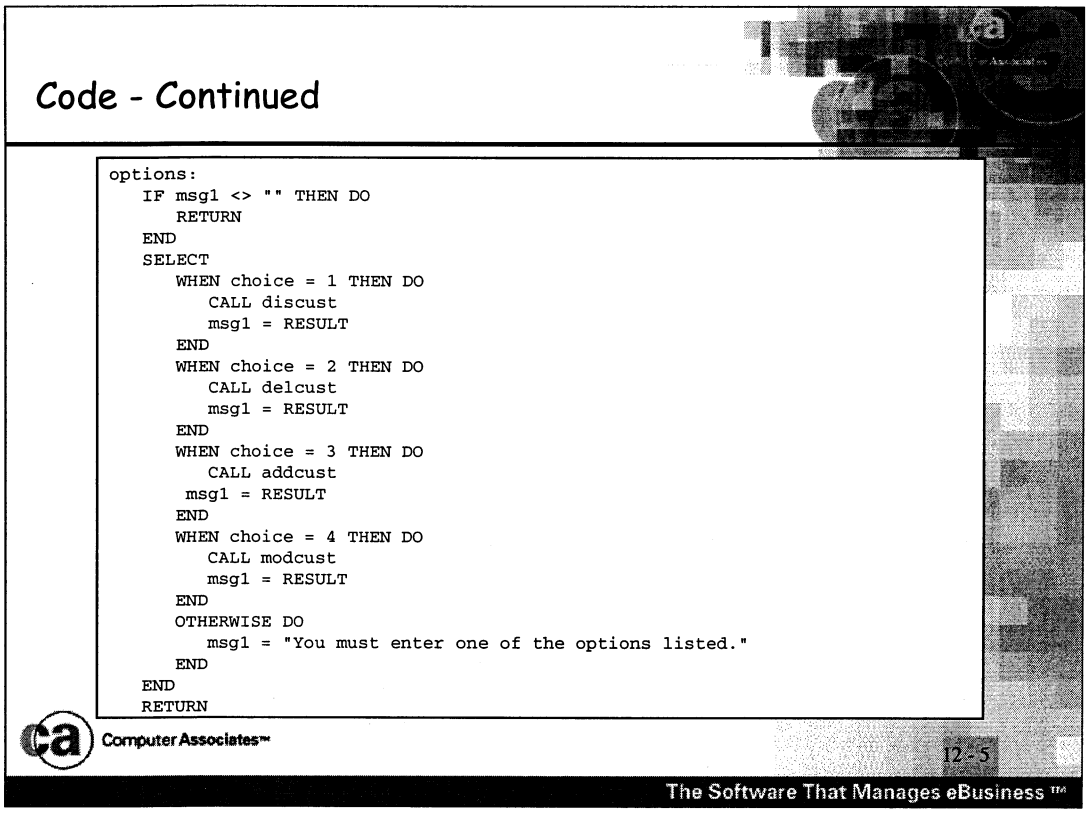
ADDRESS ISPEXEC "LIBDEF ISPPLIB DATASET ID('crone90.rx201.ispplib')"

Address the ISPEXEC environment to define the library. (The display will work without this but will not display the latest version.

ADDRESS ISPEXEC "DISPLAY PANEL(demo1)"

DISPLAY PANEL will display the member called demo1

Control will be returned when ever enter is pressed the DO FOREVER keeps the panel on the screen until PF3 is pressed and sends a return code of 8 to the program.

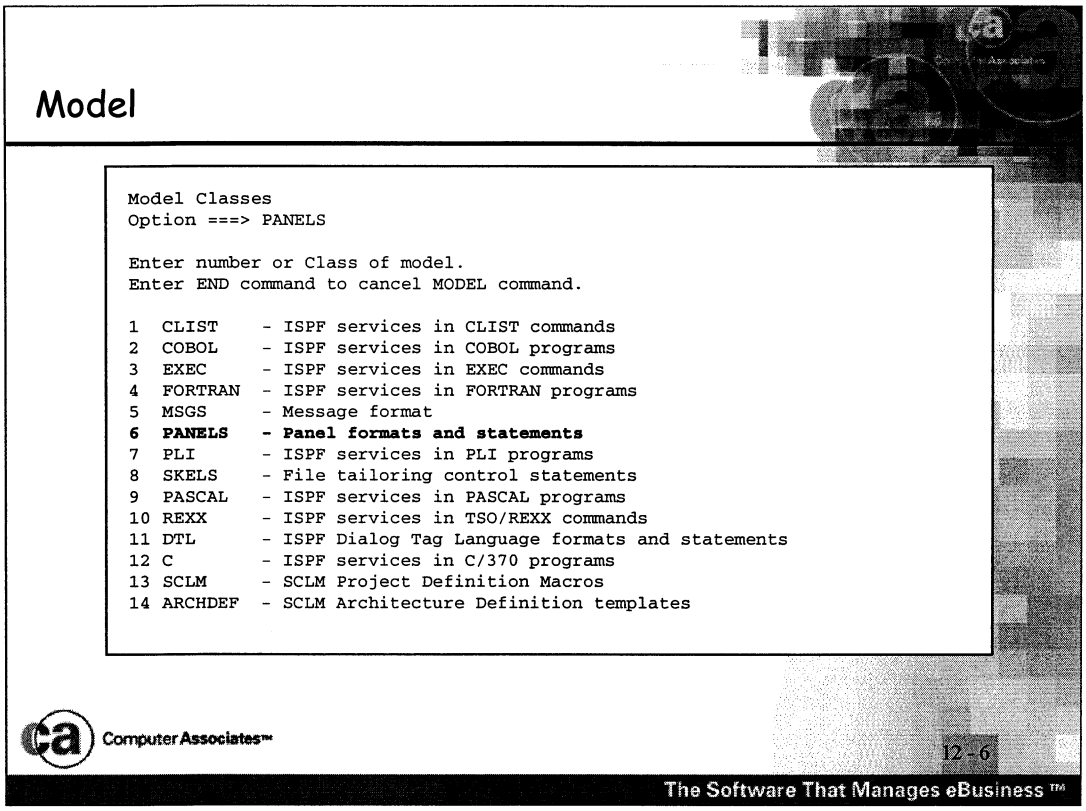


Calling external subroutines.

The returned value is stored in a system variable called RESULT.

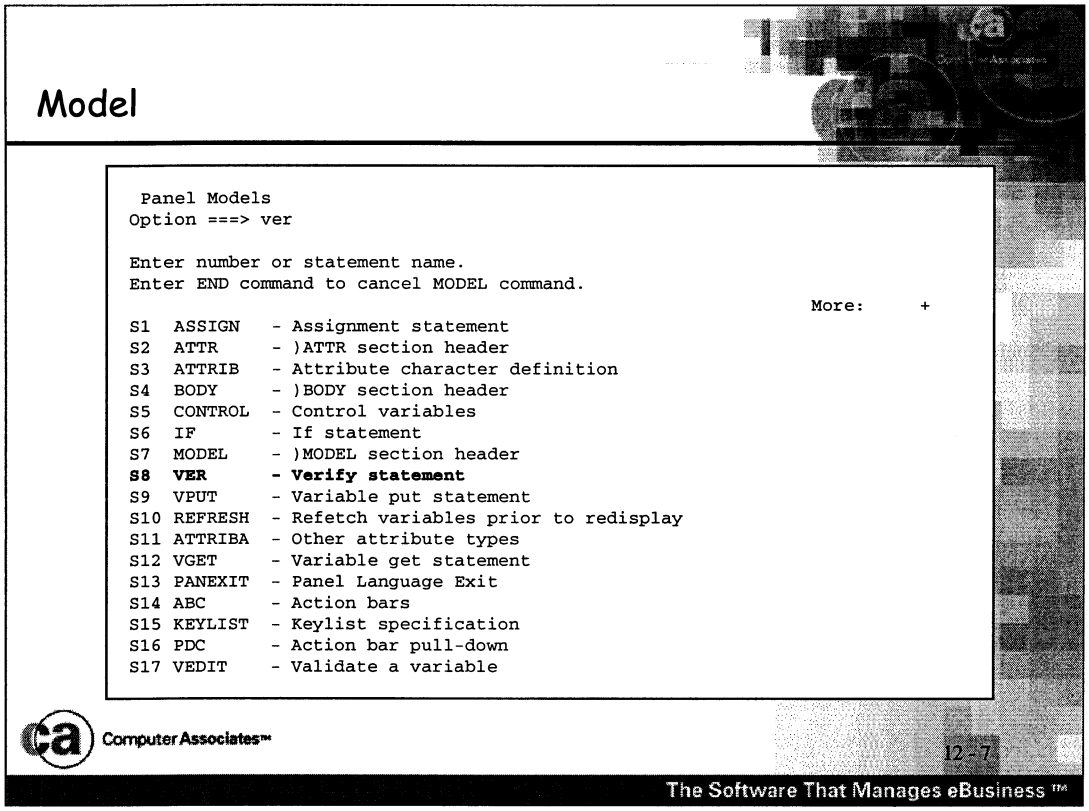
The REXX program and the panel share the same variable pool and therefor variable assigned to the panel can be set in the program e.g.

msg1 = RESULT

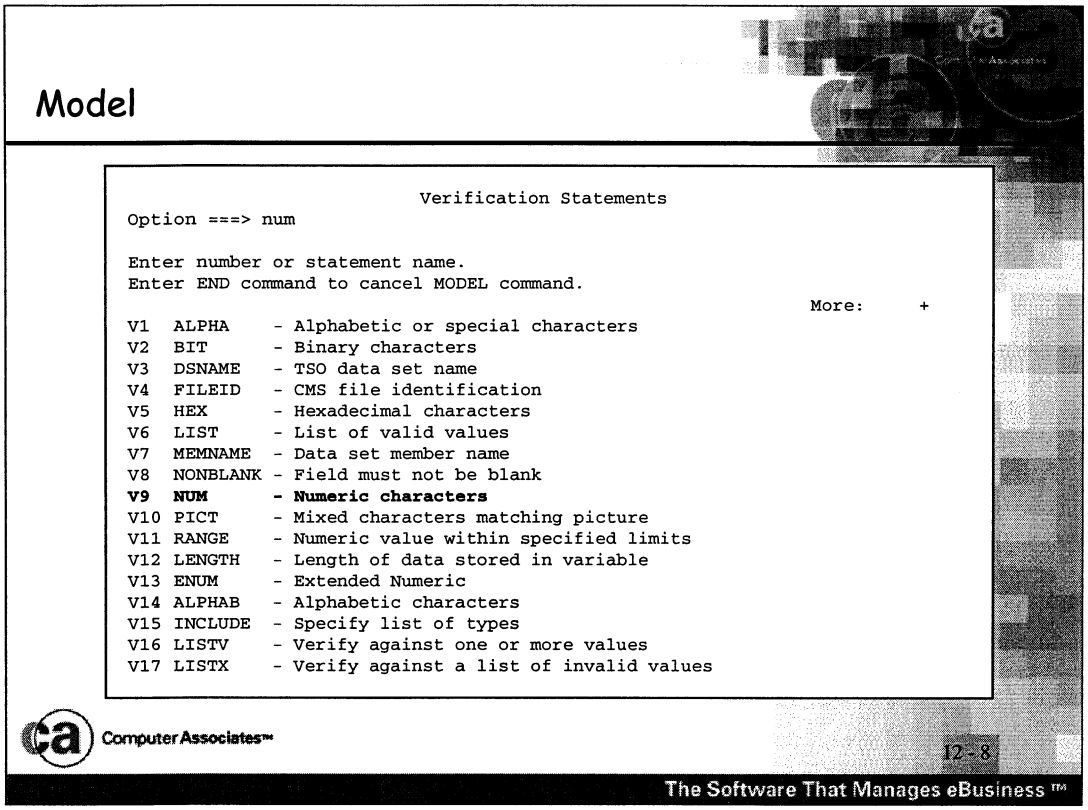


Enter "MODEL" and a help screen for the system is displayed.

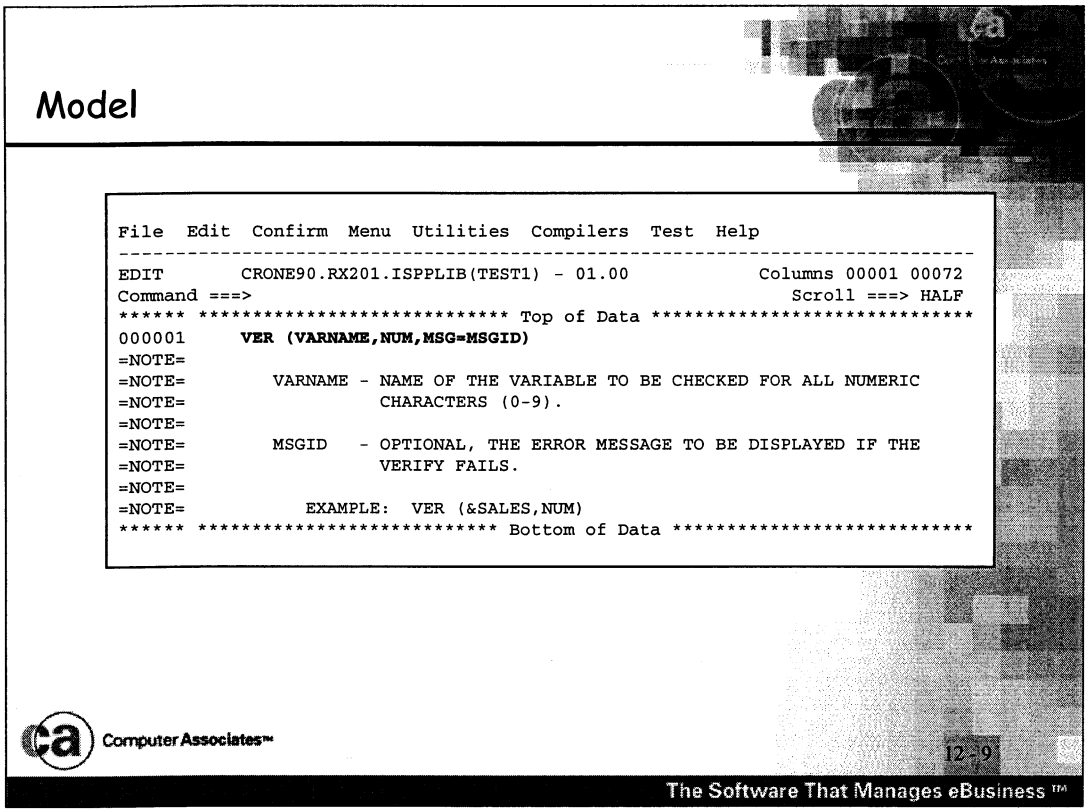
Select option PANELS for panels.



Select option VER for Verification section.



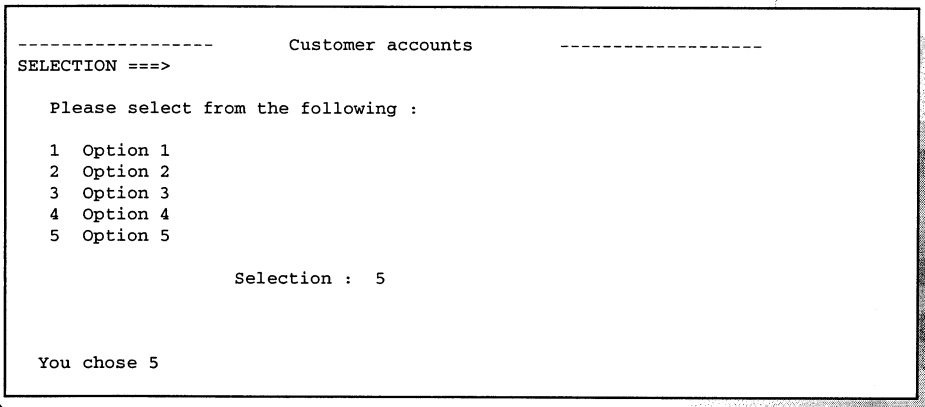
Select option NUM for Verification of numbers.



The help is displayed and the example code is entered into the member.

Work Section 12.1

- Write a REXX program to display a selection panel.
- The panel should do nothing more than display the selection in a message section.



Computer Associates™

12 - 10

The Software That Manages eBusiness ™

Work Section 12.2

- Write a REXX program to display a name collection panel.
- When PF3 is pressed leave the panel and display the list of names.

```
------------------    Name Collection Panel    --------------------
SELECTION ===>

   Please Enter a list of names  :

                    Names :  JANE


  JANE stored.
```

```
JANE
***
```

Computer Associates™

12 - 11

The Software That Manages eBusiness ™

Additional Program

- Write a REXX program to add new customers to a dataset.
- Before writing the data to the dataset ask if the user is OK to save the data..
- The data should be customer name and postcode.

```
------------------    New Customer Entry Screen    --------------
SELECTION ===>

   Please enter a customer name and postcode press enter for
   next customer.
   <PF3> to save the new customers.

            Customer Name :  harrods
            Postcode      :  W1


  HEINZ ASD213 accepted.
```

Computer Associates™

12 - 12

The Software That Manages eBusiness ™

Additional Program continued

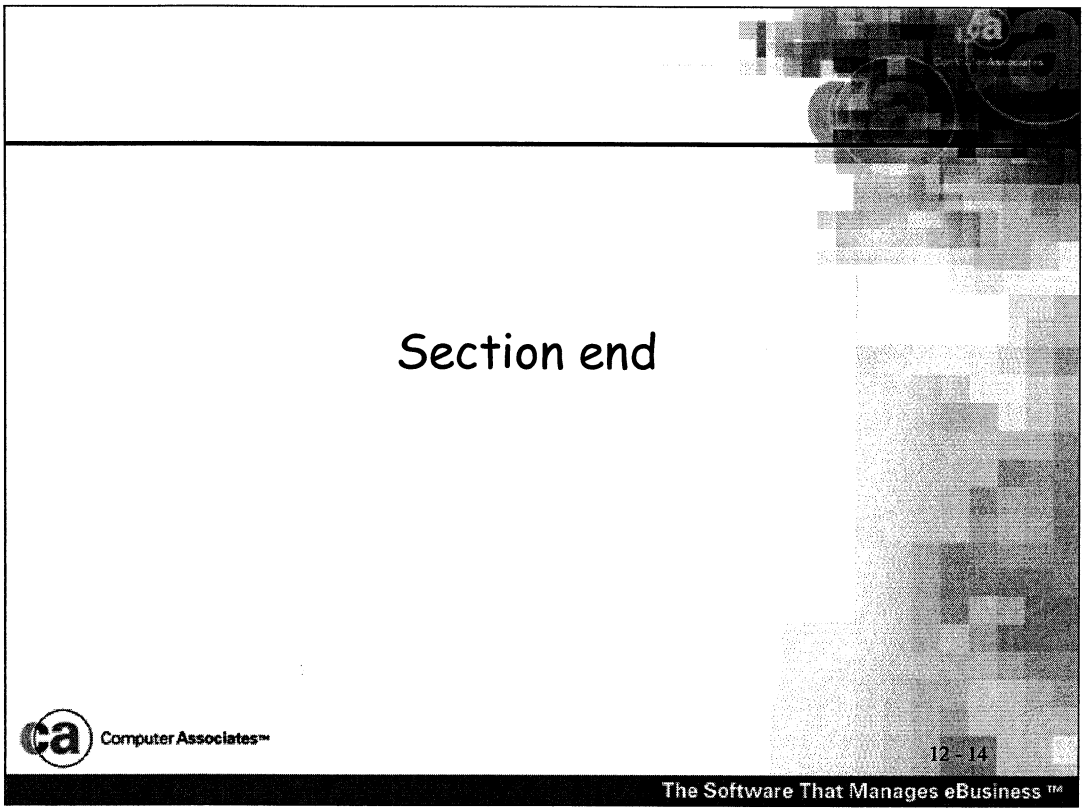
```
 Do you want to save the data (YES/NO) ?
yes
 Data stored successfully.
 ***
```

```
****** ***************************** Top of Data ******************
000001 HEINZ ASD213
000002 HARRODS W1
****** **************************** Bottom of Data ****************
```

Computer Associates™

12 - 13

The Software That Manages eBusiness ™


Section end
Computer Associates™
12-14
The Software That Manages eBusiness ™

TSO REXX Keywords and functions

- ABBREV
- ABS
- ADDRESS
- ADDRESS()
- ARG
- ARG()
- BITAND
- BITOR
- BITXOR
- B2X
- CALL
- CENTER
- CENTRE
- COMPARE
- CONDITION
- COPIES
- C2D
- C2X
- DATATYPE
- DATE
- DELSTACK
- DELSTR
- DELWORD
- DIGITS
- DO
- DROP
- DROPBUF
- D2C
- D2X
- ERRORTEXT
- EXECIO
- EXECUTIL
- EXIT
- EXTERNALS
- FIND
- FORM
- FORMAT
- FUZZ
- GETMSG
- HE
- HI
- HT
- IF
- INDEX
- INSERT
- INTERPRET
- ITERATE
- JUSTIFY
- LASTPOS
- LEAVE
- LEFT
- LENGTH
- LINESIZE
- LISTDSI
- MAKEBUF
- MAX
- MIN
- MSG
- MVSVAR
- NEWSTACK
- NOP
- NUMERIC
- OPTIONS
- OTHERWISE
- OUTTRAP
- OVERLAY
- PARSE
- POS
- PROCEDURE
- PROMPT
- PULL
- PUSH
- QBUF
- QELEM
- QSTACK
- QUEUE
- QUEUED
- RANDOM
- RETURN
- REVERSE
- REXX
- RIGHT
- RT
- SAY
- SELECT
- SETLANG
- SIGN
- SIGNAL
- SOURCELI
- SOURCELINE
- SPACE
- STORAGE
- STRIP
- SUBCOM
- SUBSTR
- SUBWORD
- SYMBOL
- SYSCPUS
- SYSDSN
- SYSVAR
- TE
- TIME
- TRACE
- TRACE()
- TRANSLATE
- TRUNC
- TS
- UPPER
- USERID
- VALUE
- VERIFY
- WHEN
- WORD
- WORDINDEX
- WORDLENG
- WORDLENGTH
- WORDPOS
- WORDS
- XRANGE
- X2B
- X2C
- X2D

ABBREV
The ABBREV function is used to determine whether one character string is a prefix for another; or, in other words, whether one character string can be used as an abbreviation for another string.

ABS
The ABS function returns the absolute value of a number.

ADDRESS
The ADDRESS instruction is used to indicate what the destination of non-REXX commands is to be.

ADDRESS()
The ADDRESS function returns the name of the destination to which commands are currently being routed

ARG
ARG is used to parse out the arguments passed to a program or internal subroutine and store the arguments in variables.

ARG()
The ARG function is used to return or test the presence of one of the arguments passed to a called subroutine or function.

BITAND
The BITAND function logically AND's two strings bit-by-bit and returns the result of the AND operation

BITOR
The BITOR function logically OR's two strings bit-by-bit and returns the result of the OR operation

BITXOR
The BITXOR function logically EXCLUSIVE OR's two strings bit-by-bit and returns the result of the EXCLUSIVE OR operation.

B2X
The B2X function converts a string of binary digits (i.e., zeros and ones) to a string of one or more upper-case hexadecimal digits in character format.

CALL
The CALL statement is used to invoke a subroutine, a program or external routine, or a built-in function.

CENTER or CENTRE
The CENTER function (also spelled CENTRE) is used to center one string within a certain length area, and pad on the left and right of the centered string with an optional padding character.

COMPARE
The CENTER function (also spelled CENTRE) is used to center one string within a certain length area, and pad on the left and right of the centered string with an optional padding character.

CONDITION
The CONDITION function is used to retrieve the setting information for the currently trapped REXX condition.

COPIES
The COPIES function is used to concatenate or append a string to itself a certain number of times.

C2D
The C2D function converts a string value into a decimal number.

C2X
The C2X function converts a character string to its EBCDICrepresentation in hexadecimal.

DATATYPE
The DATATYPE function is used to determine the data type of a string.

DATE
The DATE function returns the current date.

DELSTACK
The DELSTACK REXX command is used to delete the data stack that was created last in that REXX environment.

DELSTR
The DELSTR function is used to delete or remove one string from within another string.

DELWORD
The DELWORD function is used to delete a word or group of words froma character string.

DIGITS
The DIGITS function is used to extract the current setting of the NUMERIC DIGITS option.

DO
The DO instruction is used to execute a group of REXX statements under the control of an expression that determines how may times the DO statement set is to be executed.

DROP
You can use the DROP statement to return one or more REXX variables to their initial or uninitialized state.

DROPBUF
The DROPBUF REXX command is used to delete a data stack buffer from the data stack in that REXX environment.

D2C
The D2C function is used to convert a decimal number into its internal hexadecimal format.

D2X
The D2X function is used to convert a decimal number into the character representation of its internal hexadecimal format.

ERRORTEXT
The ERRORTEXT function is used to extract from REXX the error message that is associated with a particular REXX error number.

EXECIO
The EXECIO REXX command is used to perform read and write operations against a sequential data set or a PDS member.

EXECUTIL
The EXECUTIL REXX command is used to control REXX processing options for the current REXX environment.

EXIT
The EXIT instruction is used to unconditionally leave a program and (optionally) pass back a string to the caller being returned to.

EXTERNALS
The EXTERNALS function is used to extract the number of terminal buffer or command stack elements that have been logically typed ahead by the terminal user.

FIND
The FIND function is used to determine the position of a phrase of words within another string of words.

FORM
The FORM function is used to extract the current setting of the NUMERIC FORM option.

FORMAT
The FORMAT function is used to round off and format a number using REXX rules.

FUZZ
The FUZZ function is used to extract the current setting of the NUMERIC FUZZ option.

GETMSG
The GETMSG TSO/E external function retrieves in variables a message issued during an extended MCS console session that was established under TSO/E using the CONSOLE command.

HE
The HE REXX immediate command is used to halt execution of a REXX exec.

HI
The HI REXX command is used to immediately halt interpretation and execution of all active REXX execs.

HT
The HT REXX command is used to immediately halt typing at the terminal, that is, all terminal output from REXX execs is prevented.

IF
The IF instruction is used to conditionally execute a single REXX statement or a group of REXX statements.

INDEX
The INDEX function is used to find the position of one character string within another character string.

INSERT
The INSERT function is used to insert one string into another at a designated point.

INTERPRET
The INTERPRET instruction is used to execute instructions that have been built dynamically

ITERATE
The ITERATE instruction is used to restart the flow of execution in a repetitive DO loop.

JUSTIFY
The JUSTIFY function justifies text (words with blanks between them) so that the text is evenly aligned on the left and right boundaries of the area whose width is given by the positive number 'length' in the function call.

LASTPOS
The LASTPOS function returns the last occurrence position, relative to 1, of one character string within another.

LEAVE
The LEAVE instruction causes REXX to stop executing the current DO-END loop just as if the DO loop termination condition had occurred.

LEFT
The LEFT function is used to extract the leftmost characters of a string.

LENGTH
The LENGTH function is used to obtain the length of the string passed to the function.

LINESIZE
The LINESIZE function is used to determine the value that is the current setting for the line length of the TSO terminal.

LISTDSI
The LISTDSI function will retrieve information about an existing data set and store the information in special REXX variables.

MAKEBUF
The MAKEBUF REXX command is used to add a buffer to the data stack in the REXX environment.

MAX
The MAX function returns the maximum numeric value from a list of numeric values.

MIN
The MIN function returns the minimum numeric value from a list of numeric values.

MSG
The MSG function is a TSO/E function, not a REXX function. It returns the prior setting of the message issuing feature, either ON OR OFF.

MVSVAR
MVSVAR returns information about MVS, TSO/E, and the current session, such as the symbolic name of the MVS system, or the security label of the TSO/E session.

NEWSTACK
The NEWSTACK REXX command is used to create a new data stack in the current REXX environment.

NOP
The NOP instruction causes REXX to perform a 'no-operation' condition; that is, to do nothing.

NUMERIC
The NUMERIC instruction sets controlling limits that govern how REXX evaluates and reports the results of arithmetic operations it performs.

OPTIONS
OPTIONS is used pass processing options to REXX.

OUTTRAP
The OUTTRAP function is used to trap the output from TSO/E commands.

OVERLAY
The OVERLAY function is used to overlay a target string with another string, starting at a particular location within the target string.

PARSE
The PARSE instruction tells REXX how to assign data to one or more variables.

POS
The POS function returns the position, relative to 1, of one string within another.

PROCEDURE
The PROCEDURE instruction is used within a called subroutine or function to protect (save) the variables in existence when the subroutine or function is called.

PROMPT
The PROMPT function is used to turn on and off prompting of the TSO user when a TSO/E command in an exec needs input from the user.

PULL
PULL is used to obtain the topmost element from the REXX data stack.

PUSH
PUSH is used to place a new element on the top of the REXX data stack.

QBUF
The QBUF REXX command is used to determine the number of data stack buffers that have been explicitly created by the MAKEBUF REXX command.

QELEM
The QELEM REXX command is used to determine the number of data stack elements that are contained in the buffer that was most recently created by the MAKEBUF REXX command.

QSTACK
The QSTACK REXX command is used to determine the total number of data stacks currently in existence.

QUEUE
QUEUE is used to place a new element on the bottom of the REXX data stack.

QUEUED
The QUEUED function returns the number of elements that remain on the REXX data stack.

RANDOM
The RANDOM function generates a "pseudo-random" number that will lie somewhere between a supplied (or defaulted) upper and lower bound.

RETURN
The RETURN instruction is used to pass control back to the caller of a subroutine or function. An optional result value can also be passed

REVERSE
The REVERSE function reverses the order of all of the characters in a string.

RIGHT
The RIGHT function returns the rightmost characters from a given string.

RT
The RT REXX command is used to resume typing at the terminal after it has been previously stopped with the HT (Halt Typing) command.

SAY
SAY is used to write a line of output to the TSO terminal or to the SYSTSPRT DD statement in batch.

SELECT
The SELECT instruction causes REXX to execute one of several different instructions.

SETLANG
The SETLANG function is used to query or query and set the language code used to control the language in which REXX messages are issued.

SIGN
The SIGN function is used to determine the sign of a number.

SIGNAL
The SIGNAL instruction is used to cause a change in the flow of execution within a REXX exec.

SOURCELINE
The SOURCELINE function is used to extract the relative line number of a line within the source for current REXX exec.

SPACE
The SPACE function is used to force padding space to be inserted or deleted between the words in a string.

STORAGE
The STORAGE function is a TSO/E external function that is available within REXX in any MVS address space. It is used to retrieve some number of bytes from a specified main storage address, and optionally to store data at the specified main storage address.

STRIP
The STRIP function is used to remove the leading and/or trailing characters from a character string.

SUBCOM
The SUBCOM REXX command is used to determine whether or not a particular host command environment exists.

SUBSTR
The SUBSTR function is used to extract a portion of a string.

SUBWORD
The SUBWORD function is used to extract a substring of one or more words from a string.

SYMBOL
The SYMBOL function is a TSO/E external function that is available from REXX in a TSO/E address space. SYMBOL is used to determine whether a particular symbol is a valid REXX symbol, a variable with a value assigned to it, or a literal.

SYSCPUS
SYSCPUS places, in a stem variable, information about those CPUs that are online.

SYSDSN
The SYSDSN function is a TSO/E function that is used to determine whether or not a partcular data set exists, and to obtain some descriptive information about the data set.

SYSVAR
The SYSVAR function is a TSO/E function that is used to extract information about the TSO/E and MVS environment.

TE
The TE REXX command is used to stop interactive tracing of a REXX exec.

TIME
The TIME function is a TSO/E external function that is available within REXX in a TSO/E address space.

TRACE
The TRACE instruction is used to enable or disable selective tracing of the interpretation and execution of a REXX exec.

TRACE()
The TRACE function is used to alter or return the current REXX trace options that are in effect.

TRANSLATE
The TRANSLATE function is used to translate or reorder the characters in a string, based upon the contents of an input and output translate table.

TRUNC
The TRUNC function call is used to truncate a number to an integer portion and a decimal fraction portion.

TS
The TS REXX command is used to start interactive tracing of a REXX exec.

UPPER
The UPPER function is used to translate the contents of a single variable or a list of variables to uppercase.

USERID
The USERID function returns the TSO/E user ID of the TSO/E address space in which the USERID function is called.

VALUE
The VALUE function is used to return the current value of a REXX symbol.

VERIFY
The VERIFY function is used to check whether or not a string contains only certain characters.

WORD
The WORD function is used to extract a specific word from within a string of words.

WORDINDEX
The WORDINDEX function is used to extract the position, relative to 1, of the first character in a specific word within a string of words.

WORDLENGTH
The WORDLENGTH function is used to extract the length in characters of a specific word contained within a string of words.

WORDPOS
The WORDPOS function is used to extract position, relative to 1, of a specific word string within another word string.

WORDS
The WORDS function is used to determine the number of words contained within a string of words.

XRANGE
The XRANGE function is used to develop a contiguous EBCDIC characters in the range bounded by a supplied starting and ending character.

X2B
The X2B function converts a string of hexadecimal digits (i.e., 0-9, A-F) to a string of four or more binary digits (i.e., zeros and ones) in character format.

X2C
The X2C function is used to convert a string containing only hexadecimal characters into a printable EBCDIC character string.

X2D
The X2D function is used to convert a string containing only hexadecimal characters into a numeric decimal string.