

REXXexpress

Overview

REXXexpress is a package of productivity tools for new and experienced REXX programmers. It is comprised of the following components:

- REXX function library – a library of commonly performed operations, including sorting, stem variable manipulation, file and directory I/O, math functions, and more.
- Tools for automatically managing updating internal REXX functions
- Tools which integrate REXX into a given environment

REXXexpress is portable! Runs in z/OS, Windows, UNIX / Linux

REXXexpress is the culmination of the work of dozens of consultants working in production environments. Their toolbox can now be yours!

Requirements

REXXexpress requires a supported REXX interpreter and editor on any platform where it runs

- Windows: Open Object REXX, KEdit editor
- MVS: Any IBM supported release, ISPF Editor
- CA-OPS/MVS: Any vendor supported release
- BMC AutoOPERATOR: Any vendor supported release
- IBM AF/Operator, NetView: Any supported release
- Linux: any ooREXX release

Features

REXXexpress provides edit macros for popular editors to let you insert, manage, and update internal REXX functions into your REXX programs.

If shared functions are updated, programs using those functions can be located and updated with a single command

REXXexpress provides internal and external REXX function libraries, so you can choose the technique that solves your problems best. The following chart shows an overview of these functions

Area	Number
CA-Automation Point productivity functions	3
Date and Time	36
New function Emulation	3
File and Directory I/O	6
Math functions	21
MVS interface functions	20
CA-OPS/MVS productivity functions	14
Stem variable manipulation	11
String manipulation	27
Web CGI support	2
Misc: Keyword parsing, error handling, stack save/restore, etc.	25

For example, the file and directory I/O functions IOREAD() and IOWRITE() are entirely portable, enabling development on Windows, and deployment on MVS, with no code changes. The emulation function xSocket() enables you to develop TCP/IP socket applications that run unchanged on Windows, UNIX, and MVS.

Benefits

REXXexpress enables programmers to get the job done *much* faster – turning a two-day project into a half-hour one! REXXexpress provides solid solutions to typical problems in the following areas:

- Calculation of schedules using date functions like holiday(), isLeap(), monthEnd(), and DateCalc()
- Performing search-and-replace operations through libraries of JCL – even if those libraries have been copied to a PC!
- Concatenation of MVS libraries.
- Parsing required and optional keywords and validating them
- Manipulation of stem variables: inserting, deleting, copying, sorting, searching, and formatting.

REXXexpress is extensible, so it can manage your site-written REXX functions too!

Automated Operations

Automated operations is a REXXexpress focus area. In this arena, Portability means functions that work in product environments including BMC AutoOperator, CA-OPS/MVS, IBM System Automation, NetView, AF/Operator, or native TSO including:

- MVSCMD() issues operator commands and retrieves the response
- RXWTO() issues WTO messages using multiple products
- xPrompt() allows development of interactive operator prompt applications that work at the console, in NetView, under ISPF, and even in Windows!
- Multiple CA-OPS/MVS function for quickly manipulating tables, parameters, MSF links, StateMan, EPI sessions, and more

Examples

The following example demonstrates kwparse() and errmsgx(), providing parameter parsing, with default values and validation, all in 13 lines of code:

```
debug = '' /* Debugging Keycode: DEBUG */
dsn = '' /* PDS DSN, fully qualified */
lessthan = '' /* Process members < # days old */
morethan = '' /* Process members > # days old */
nostats = 'NO' /* Process members w/o stats YES|NO */

rc = KWPARSE(ARG(1), 'DEBUG DSN LESSTHAN MORETHAN NOSTATS')
IF rc <> 0
THEN CALL ERRMSGX 'KWPARSE Failed, rc='rc

If dsn = '' | (morethan = '' & lessthan = '') Then
  Call ERRMSGX 'USAGE: MEMDATE DSN(fullyQualifiedDSname) DAYS(nn)',
  'LESSTHAN(nn) MORETHAN(nn)'

IF debug <> '' THEN TRACE I
```

The following 22 lines of code filters PDS members by date, using IOMemLst(), yy2yyyy(), greg2Jul(), getDate(), and dateDiff():

```
/*-----*/
/* Read the PDS member list, and include the ISPF statistics. */
/*-----*/
rc = IOMEMLST('DSNAME('dsn') MASK(*) STEM(MEMBERS.) STATS(YES)')
IF rc <> 0
THEN CALL ERRMSGX 'IOMEMLST FAILED, RC='rc

DO i = 1 TO MEMBERS.0 /* Loop through each member name */
  If zlmdate.i = '' Then /* Any ISPF stats for this member? */
  Do /* No. */
  If nostats <> 'YES' /* Should we process it anyway? */
  Then Iterate i /* No, skip over it. */
  diffDays = 'UNKNOWN' /* Fill in value for member age */
  End

  Else
  Do
  /*-----*/
  /* Convert ISPF date format to DATEDIFF format */
  /*-----*/
  Parse VAR zlmdate.i yy '/' mm '/' dd
  yyyy = yy2yyyy(yy) /* Window the date to 4 digit year */
  juldate = GREG2JUL(mm/'dd/'yyyy)'T00:00:00'
  today = GETDATE() /* Today's date in diffdate format */
  Parse VALUE DATEDIFF(today,juldate) WITH diffdays 'T'

  If lessthan <> '' Then /* If member too new, skip over it */
  If lessthan <= diffdays Then Iterate i

  If morethan <> '' Then /* If member too old, skip over it */
  If morethan >= diffdays Then Iterate i
  End

  /*-----*/
  /* Insert code here to operate on the selected members. */
  /*-----*/
  Say 'Processing member 'members.i' last updated on 'zlmdate.i,
  ('diffdays 'days old)'
```

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