Developing Applications with ISPF and Open Object Rexx

René Vincent Jansen
30th International Rexx Language Symposium 2019
Hursley Park, UK

Primary Menu Panel

Option ===>

```
0    Settings    Display and alter user settings
1    Browse      Browse files
2    Edit        Edit files
3    Utilities   File Utilities
4    Testing     Invoke Testing Program
5    Tasks       Display Tasks and System Resource Usage
6    Command     Enter Commands
7    Dialogue    Dialogue Testing
8    Lspf Log    Browse Lspf Log
9    Appl Log    Browse Application Log
10   Functions   Invoke dialogue functions or selection panel

D    MySQL       MySQL Database Actions
U    User Menu   User Actions
S    System      System Utilities

T    Tutorial    Start Tutorial
X    Terminate   Terminate Session
```

Enter HELP to display basic information, or X to exit

```
<      Calendar
     September
Su Mo Tu We Th
 1  2  3  4  5
 8  9 10 11 12
15 16 17 18 19
22 23 24 25 26
29 30

Time . . . . :
Day of Year. :
```

Screen[1   ]   Elapsed: 00.020 s   Screen: 1-1   Row 4 Col 14

Developing applications with ooRexx and ISPF

(that's ell-ess-pee-eff)

LSPF
Dialogue Manager by Daniel Erdos

Open source version of IBM's Dialogue Manager, for Linux

C++

Written in C++ with the Boost Library

```
Works with:

linux 5.2.9

gcc 9.1.0

ncurses 6.1

boost 1.69.0
```
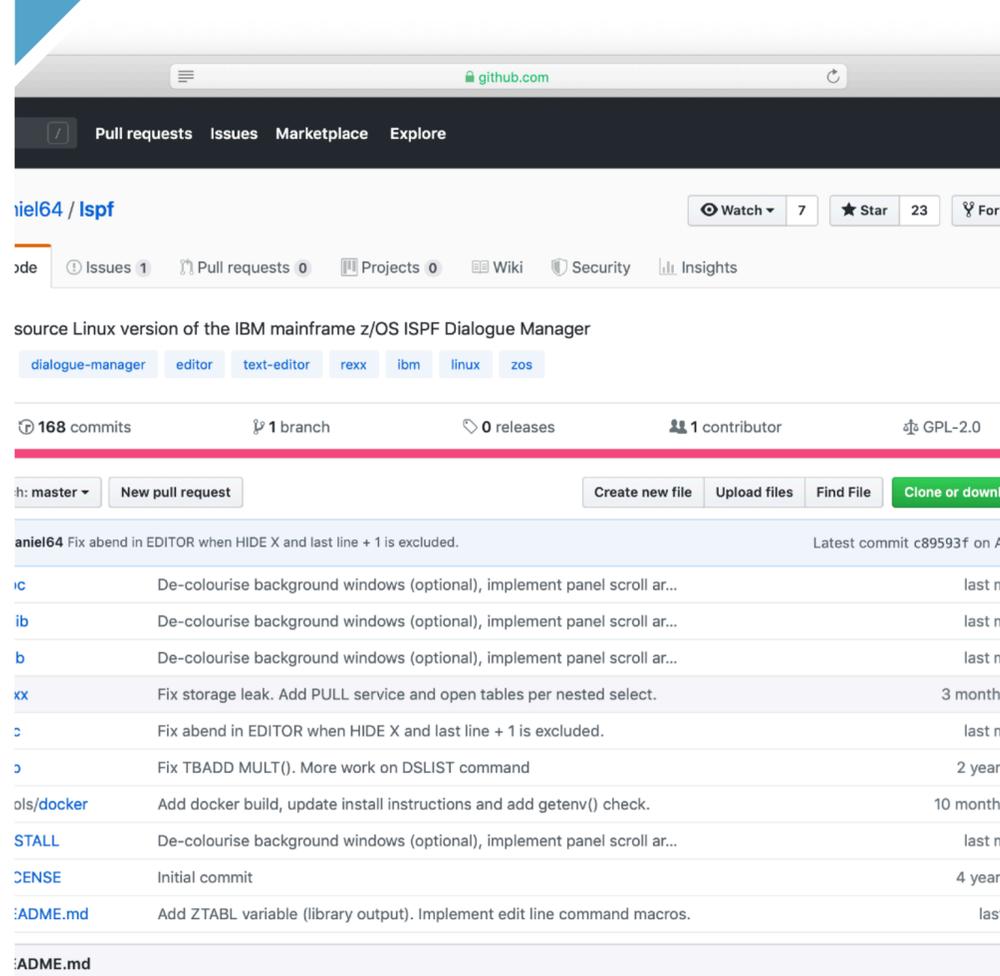
ooRexx

For application Programming

ISPF

Mostly compatible

Building the application

- Building is not particularly easy

- Very sensitive to OS and library versions

- After some attempts I chose what the author uses

- Which is Arch Linux and its toolchain

- Don't worry, I made a Docker image

- This contains ISPF and Open Object Rexx 5.00

```
➜  test git:(master) ✗ docker run -it -v "$PWD":/test -w /test rvjansen/lspf:latest
[root@58635729ae9c test]#
```

Start the docker container

Primary Menu Panel

Option ===>

```
0    Settings    Display and alter user settings
1    Browse      Browse files
2    Edit        Edit files
3    Utilities   File Utilities
4    Testing     Invoke Testing Program
5    Tasks       Display Tasks and System Resource Usage
6    Command     Enter Commands
7    Dialogue    Dialogue Testing
8    Lspf Log    Browse Lspf Log
9    Appl Log    Browse Application Log
10   Functions   Invoke dialogue functions or selection panel

D    MySQL       MySQL Database Actions
U    User Menu   User Actions
S    System      System Utilities

T    Tutorial    Start Tutorial
X    Terminate   Terminate Session
```

Enter HELP to display basic information, or X to exit

```
<    Calendar
     September
Su Mo Tu We Th
    1  2  3  4  5
 8  9 10 11 12
15 16 17 18 19
22 23 24 25 26
29 30

Time . . . . :
Day of Year. :
```

It looks like this

You can fully customize this as in real ISPF

File/Directory List

Command ===> _____

Path Name . . . /test_____

_ Show hidden entries also

CMD	Entry name	Message	Type			
____	AddFile.nrx		File			
____	BaseChange.nrx		File			
____	Calculator.nrx		File			
____	CalculatorTest.nrx		File			
____	ChangeFile1.nrx		File			
____	ChangeFile2.nrx		File			
____	ChangeFile3.nrx		File			
____	ChangeReport.nrx		File			
____	ChangedFiles.nrx		File			
____	CompilerVersion.java		File			
____	DownloadFile.nrx		File			
____	DownloadPDS.nrx		File			
____	DynamicHalloWorld.java		File			
____	ECJCompilerVersion.nrx		File			
____	EbcdicTest.java		File			
____	EnzoFX$1.class		File			
____	EnzoFX.class		File			
____	EnzoFX.java		File			
____	EnzoLCD$timer_.class		File			
____	EnzoLCD.class		File			
____	EnzoLCD.nrx		File			
____	Expr.g4		File			
____	ExprJoyRide.java		File	-rw-r--r--	1258	09/10/2017 18:28:25
____	FormatNumber.nrx		File	-rw-r--r--	413	24/07/2019 12:45:05
____	FtpPDS.nrx		File	-rw-r--r--	1116	15/12/2014 09:23:52
____	GetSha1.nrx		File	-rw-r--r--	535	09/10/2017 18:28:25
____	HelloWorldMainTopic.java		File	-rw-r--r--	1110	09/10/2017 18:28:25
____	HexPrint.nrx		File	-rw-r--r--	2782	09/10/2017 18:28:25
____	IMG_0725_2.jpg		File	-rw-r--r--	23332	28/03/2018 17:40:09
____	IMG_0735_2.jpg		File	-rw-r--r--	28625	28/03/2018 17:40:09
____	IMG_0767_2.jpg		File	-rw-r--r--	23109	28/03/2018 17:40:09
____	IMG_1147.jpg		File	-rw-r--r--	1157321	28/03/2018 17:40:09
____	InsertFile.nrx		File	-rw-r--r--	539	09/10/2017 18:28:25

⌗ Screen[1   ]   Elapsed: 00.169 s   Screen: 1-3   Row 19 Col 39

It does a
nice 3.4

```
EDIT     /test/qtime.rex
Command ===>
000020 /*                                                                    */
000021 /* ------------------------------------------------------------------ */
000022 /* Argument words:                                                     */
000023 /*                                                                     */
000024 /* Two argument strings may be supplied.  If "?" is given              */
000025 /* as the first argument then the program displays a                   */
000026 /* description of itself.  If a second argument is supplied            */
000027 /* it is used as a test value to check the operation of the            */
000028 /* program.  This second value must be a time in the format            */
000029 /* HH:MM:SS, and does not have its syntax checked.                     */
000030 /* ------------------------------------------------------------------ */
000031
000032 /*--------- First process the argument strings -------------*/
000033 parse arg parm, testtime .        /* get the argument strings */
000034 select
000035   when parm='?' then call tell          /* say what we do */
000036   when parm=''  then nop                /* OK (no first argument) */
000037   otherwise
000038     say 'The only valid parameter to QT is "?".  The argument'
000039     say 'that you supplied ("'parm'") has been ignored.'
000040     call tell    /* usually helpful to describe the program */
000041   end
000042
000043 if testtime='' then now=time()    /* default - use time now */
000044                 else now=testtime  /* caller gave test value */
000045
000046 /*--------- Now start processing in earnest ---------------*/
000047 /* Nearness phrases - using a compound variable as example  */
000048 near.0=''                                    /* exact */
000049 near.1=' just gone';  near.2=' just after'     /* after */
000050 near.3=' nearly';     near.4=' almost'         /* before */
000051
000052 /* Extract the hours, minutes, and seconds from the time.   */
000053 parse var now hour':'min':'sec
000054
000055 if sec>29 then min=min+1                 /* round up minutes */
000056 mod=min//5                 /* where we are in 5 minute bracket */
000057 out="It's"near.mod         /* start building the result */
000058 if min>32 then hour=hour+1         /* we are TO the hour... */
000059 min=min+2       /* shift minutes to straddle a 5-minute point */
```

Screen[1   ]   Elapsed: 00.002 s   Screen: 1-4   Row 4 Col 15

PDF compatible editor does syntax colouring