

External Databases

Paul Roy

RPG open Handler

- What is a handler...
 - A program that is called for I/O operation
 - Commercial for integration with web, phones, etc...
 - Many other usage
- SPECIAL File ...
 - Ancestor functionality (already existed on S3x)
 - Only sequential access
- Handler
 - Improvement on sequential access
 - Can be used for keyed access or WRKSTN

IEditor

- IEditor is an open source FREE editor that can be used to edit source files ...
- It is the work of Liam Allan a young developer (IBM Champion)
- Can be downloaded from <https://worksofbarry.com/>

SPECIAL DEVICE PROGRAM

- Is called by I/O operations
- Receives as parameter
 - Option (O=Open R=Read W=Write C=Close)
 - status (set to 1 for EOF.. Orset to 0 if OK)
 - Error number for debug...
 - Buffer (data read is sent or data to write is received)
 - https://www.ibm.com/support/knowledgecenter/en/ssw_ibm_i_73/rzasc/specialuse.htm

SPECIAL00 / OR00 /OR000

SPECIAL01/OR01 (User ``Parameter)

SPECIAL02/OR02 (write to IFS)

Java

- Java is a multiplatform language
- Virtual machine running standard bytecode
- Object oriented
- Available on IBMi and many others...
- Many open source app...
- Java can be called from RPG ILE
- Java can be compiled on your PC and run on IBMi
- Java can be compiled on IBMi and run on your PC
- `JAVA00/JAVA01/HelloWorld`
- `Java -cp z:/home/ropa/tmp HelloWorld`
- `javac HelloWorld1.java` (from windows)
- `Javac HelloWorld.java` (from QSH)

JDBC

- JDBC is a set of standard API to connect a database to a Java Program
- (like ODBC for Windows)
- (All) database editors provides JDBC drivers
 - Driver type 4 are written in Java so multiplatform
- Provide the ability to run SQL statements to a DB

JDBCR4

- Scott Klement (IBMi Guru) provided years ago (2005..) a library that demonstrates the use of JDBC from RPG...
- He also provides LIBHTTP and many others open source tools ...
- We will use this library in our examples...
- JDBCR4 can be downloaded from www.scottklement.com
- SPECIAL03/OR03 (read from MySQL and Print)

RPG Handler

- Like SPECIAL... but more functions
- More I/O operations
- See includes in QOAR/QRPGLESRC
 - OPEN, READ, CHAIN, SETLL, REAPD, READE,...
- Parameter of the handler is a big data structure with pointers...

HANDLE01 / HO01

HANDLE02/HR02

RPG OPEN HANDLER

- User parameter has to be specified in the handler() keyword
- HANDLER(PGM: UserParm)
- So handler program can receives info like an IFS file name...
- HANDLE03/HR03

- Also works with « OLD » RPG

HR04