PSEUDOCODE

Parent program

READ numberOfArguments, textFile, numberOfTries, sleepTime

IF numberOfArguments <> 4

WRITE “program requires 4 arguments”

DO Exit

ENDIF

IF numberOfTries < 0

WRITE “number of tries must be non-negative”

DO Exit

ENDIF

IF sleepTime <= 0

WRITE “sleep time must be greater than zero”

DO Exit

ENDIF

DO ReleaseLockFile

IF lockFileReleased

WRITE “lock file is released”

ELSE

WRITE “lock file does not exist”

ENDIF

count = 0

WHILE count < 3

DO CreateChildProcess

childNumber = count

ADD 1 to count

If childProcess

DO ChildProgram

DO ErrorCheck

ELSE

If childProcessFails

WRITE “child process failed to create”

ELSE

DO WaitForChildProcess

WRITE “return child process status: ”, status

ENDIF

ENDIF

ENDWHILE

DO Exit

Child Program

READ numberOfArguments, textFile, numberOfTries, sleepTime, childNumber

sleep = rand() % sleepTime

returnValue = processID % 256

count = 0

WHILE createLock = false

IF count < numberOfTries

DO Sleep

ADD 1 to count

ELSE

WRITE “Unable to obtain lock file”

WRITE “Child is terminating with signal”, ProcessID, childNumber

DO Kill (using childNumber)

ENDIF

ENDWHILE

DO DisplayTextFile

DO ReleaseLockFile

DO exit (using returnValue)