

Exiting a Loop Early in Forth

APPLICATION NOTE MI-AN-047

Summary

The following software shows how to exit a loop early in Forth

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\ This example demonstrates how to exit a loop early
\ using the QED-Forth assembler.
\ Mosaic Industries, Inc. 1997.
400 CONSTANT MAX. TIMES. THRU. LOOP
VARIABLE LOOP. FLAG
                               \ exit when this becomes zero
LOOP. FLAG ON
                               \ in this example, we assume that another
                                      \ task can turn the flag off.
CODE LOOP. WITH. EXIT
      \ enters a loop waiting on a flag;
      \ but enforces a maximum of 1024 times through the loop before exiting.
                                      \ make room on data stack for timeout parameter
      MAX. TIMES. THRU. LOOP IMM LDD
      O IND, Y STD
      BEGIN,
                         \ Wait for loop flag to clear
            LOOP. FLAG DROP EXT LDX
      NE WHILE,
                                      \ loop&wait while loop flag is set
            O IND, Y LDD
                                      \ D <- timeout counter
            1 IMM SUBD
            O IND, Y STD
                                      \ put decremented counter->stack
            2 REL BEQ
                                      \setminus exit {branch over REPEAT,} when count = 0
      REPEAT.
                                            (timeout.param --)
                                            ( -- ) \ clear data stack
      INY INY
      RTS
END. CODE
```

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