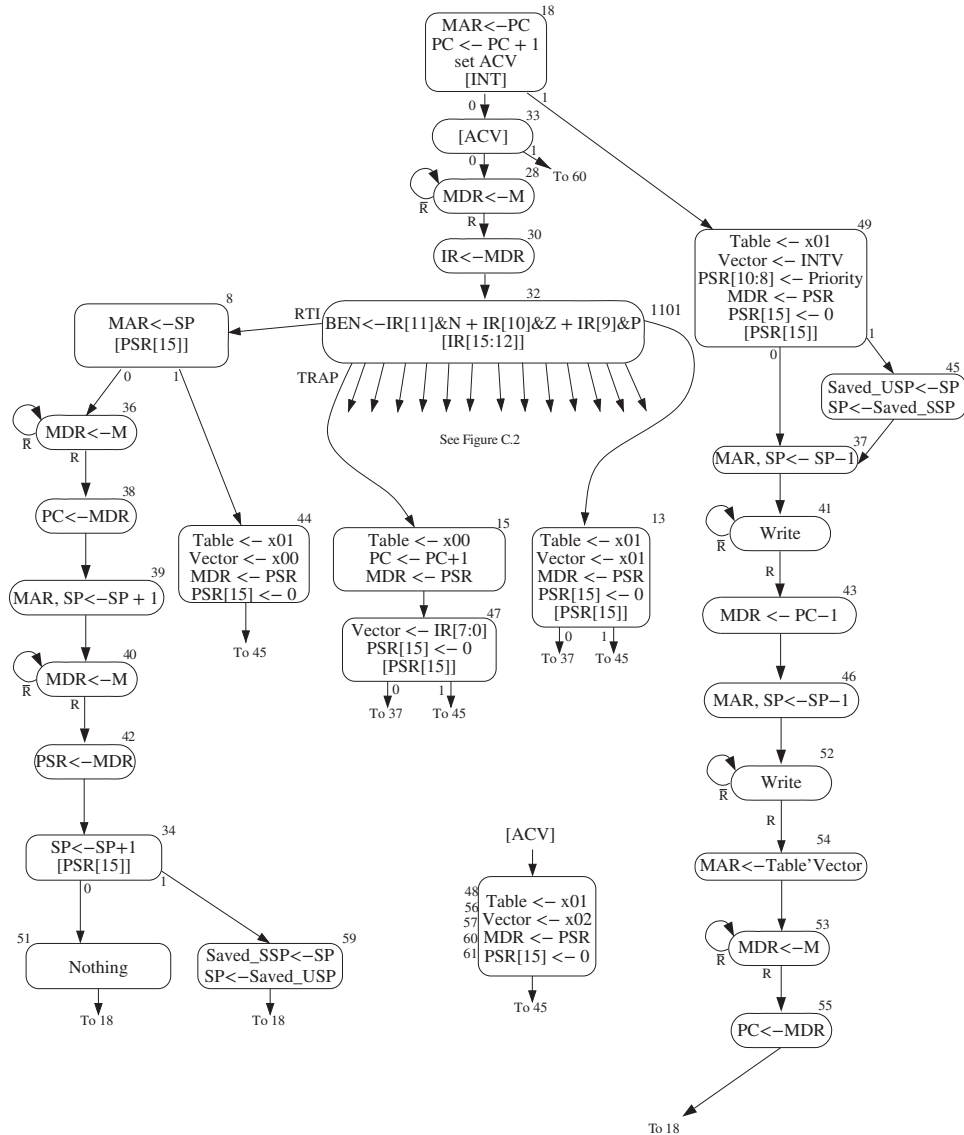


the event that causes the program that is executing to stop. Interrupts are events that usually have nothing to do with the program that is executing. Exceptions are events that are the direct result of something going awry in the program that is executing. The LC-3 specifies three exceptions: a privilege mode violation, an illegal opcode, and an ACV exception. Figure C.7 shows the state machine that carries these out. Figure C.8 shows the data path, after adding the additional structures to Figure C.3 that are needed to make interrupt and exception processing work.



Note: we have fixed state 45 in this handout. State 45 in the textbook is not correct.

Figure C.7 LC-3 state machine showing interrupt control.