14) **software interrupts**

Although the terms trap and exception are often used synonymously, we will use the term *trap* to

denote a programmer initiated and expected transfer of control to a special handler routine. In many respects, a trap is nothing more than a specialized subroutine call. Many texts refer to traps as *software interrupts* . The80x86 int instruction is the main vehicle for executing a trap. Note that traps are usually *unconditional* ; thatis, when you execute an int instruction, control *always* transfers to the procedure associated with the trap. Since traps execute via an explicit instruction, it is easy to determine exactly which instructions in a program will invoke a *trap handling* routine.

Software interrupts use an INT vector table as the one drawn.

The applied interrupt is called as INT n where n=[0,255]

This will load in IP=[n\*4]

CS=[n\*4+2]

2

Push flags in stack

IRET finishes the INT n and after which

Flags<- Stack

CS<- Stack

IP<-Stack