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ASSIGNMENT 2

.eqv IN\_ADRESS\_HEXA\_KEYBOARD 0xFFFF0012

.data

Message: .asciiz "Oh my god. Someone's presed a button.\n"

#~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# MAIN Procedure

#~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

.text main:

#---------------------------------------------------------

# Enable interrupts you expect

#---------------------------------------------------------

# Enable the interrupt of Keyboard matrix 4x4 of Digital Lab Sim

li $t1, IN\_ADRESS\_HEXA\_KEYBOARD

li $t3, 0x80 # bit 7 of = 1 to enable interrupt

sb $t3, 0($t1)

#---------------------------------------------------------

# No-end loop, main program, to demo the effective of interrupt

#---------------------------------------------------------

Loop: nop

nop

nop

nop

b Loop # Wait for interrupt end\_main:

#~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

# GENERAL INTERRUPT SERVED ROUTINE for all interrupts

#~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

.ktext 0x80000180

#--------------------------------------------------------

# Processing

#--------------------------------------------------------

IntSR: addi $v0, $zero, 4 # show message

la $a0, Message

syscall

#--------------------------------------------------------

# Evaluate the return address of main routine

# epc <= epc + 4

#--------------------------------------------------------

next\_pc:mfc0 $at, $14 # $at <= Coproc0.$14 = Coproc0.epc

addi $at, $at, 4 # $at = $at + 4 (next instruction)

mtc0 $at, $14 # Coproc0.$14 = Coproc0.epc <= $at

return: eret # Return from exception

* **Kết quả**

