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ASSIGNMENT 5

.eqv KEY\_CODE 0xFFFF0004 # ASCII code from keyboard, 1 byte

.eqv KEY\_READY 0xFFFF0000 # =1 if has a new keycode ?

# Auto clear after lw

.eqv DISPLAY\_CODE 0xFFFF000C # ASCII code to show, 1 byte

.eqv DISPLAY\_READY 0xFFFF0008 # =1 if the display has already to do

# Auto clear after sw

.eqv MASK\_CAUSE\_KEYBOARD 0x0000034 # Keyboard Cause

.text

li $k0, KEY\_CODE

li $k1, KEY\_READY

li $s0, DISPLAY\_CODE

li $s1, DISPLAY\_READY

loop: nop

WaitForKey: lw $t1, 0($k1) # $t1 = [$k1] = KEY\_READY

beq $t1, $zero, WaitForKey # if $t1 == 0 then Polling

MakeIntR: teqi $t1, 1 # if $t0 = 1 then raise an Interrupt

j loop

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

# Interrupt subroutine

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

.ktext 0x80000180

get\_caus: mfc0 $t1, $13 # $t1 = Coproc0.cause

IsCount: li $t2, MASK\_CAUSE\_KEYBOARD# if Cause value confirm Keyboard..

and $at, $t1,$t2

beq $at,$t2, Counter\_Keyboard

j end\_process

Counter\_Keyboard:

ReadKey: lw $t0, 0($k0) # $t0 = [$k0] = KEY\_CODE

WaitForDis: lw $t2, 0($s1) # $t2 = [$s1] = DISPLAY\_READY

beq $t2, $zero, WaitForDis # if $t2 == 0 then Polling

Encrypt: addi $t0, $t0, 1 # change input key

ShowKey: sw $t0, 0($s0) # show key

nop

end\_process:

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 :

Ảnh có chứa văn bản

Mô tả được tạo tự động