BÁO CÁO THỰC HÀNH TUẦN 10

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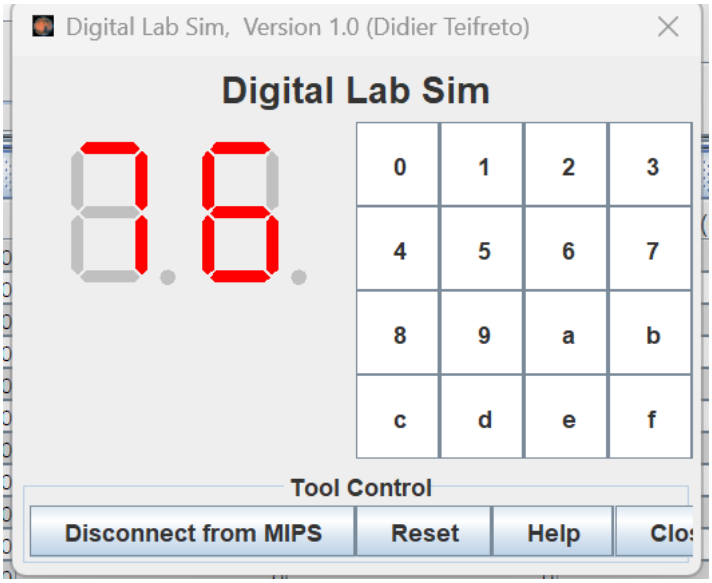
Assignment 1

```
.eqv SEVENSEG_RIGHT   0xFFFF0010
.eqv SEVENSEG_LEFT   0xFFFF0011
.textmain:
li    $a0,  7
jal   SHOW_7SEG_LEFT
li    $a0,  125
jal   SHOW_7SEG_RIGHT
exit:
li    $v0, 10
syscall
endmain:
SHOW_7SEG_LEFT:  li   $t0,  SEVENSEG_LEFT
sb   $a0,  0($t0)
jr   $ra
SHOW_7SEG_RIGHT: li   $t0,  SEVENSEG_RIGHT
sb   $a0,  0($t0)
jr   $ra
```

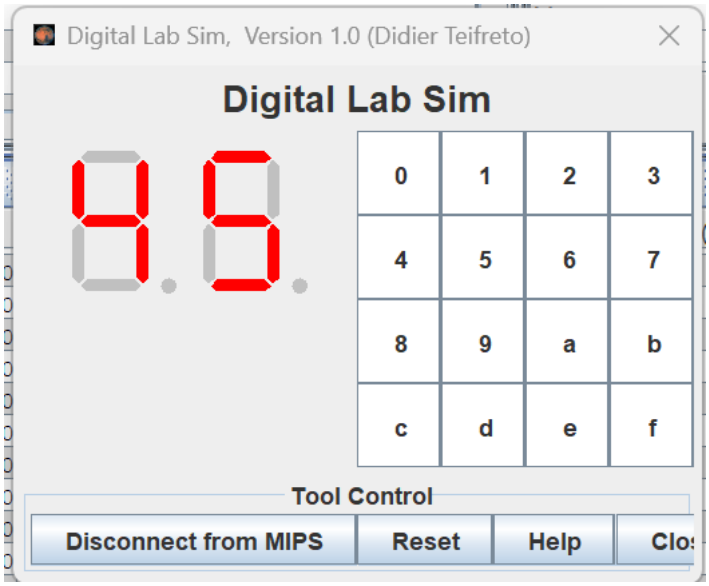


Assignment 2

```
.eqv SEVENSEG_LEFT  0xFFFF0010
.eqv SEVENSEG_RIGHT   0xFFFF0011
.data
Message: .asciiz "Nhap vao so nguyen tu ban phim: "
.text
main:
li $v0, 4
la $a0, Message
syscall
li $v0, 5
syscall
div $v0,$v0,10
mfhi $a0
jal CHECK
jal   SHOW_7SEG_LEFT
div $v0,$v0,10
mfhi $a0
jal CHECK
jal   SHOW_7SEG_RIGHT
exit:
li    $v0, 10
syscall
endmain:
CHECK:
beq $a0, 0, v0
beq $a0, 1, v1
beq $a0, 2, v2
beq $a0, 3, v3
beq $a0, 4, v4
beq $a0, 5, v5
beq $a0, 6, v6
beq $a0, 7, v7
```

```
beq $a0, 8, v8
beq $a0, 9, v9
v0: addi $a0,$zero, 63
jr $ra
v1: addi $a0,$zero, 69
jr $ra
v2: addi $a0,$zero, 91
jr $ra
v3: addi $a0,$zero, 79
jr $ra
v4: addi $a0,$zero 102
jr $ra
v5: addi $a0,$zero, 109
jr $ra
v6: addi $a0,$zero, 125
jr $ra
v7: addi $a0,$zero, 7
jr $ra
v8: addi $a0,$zero, 127
jr $ra
v9: addi $a0,$zero, 111
jr $ra
SHOW_7SEG_LEFT:  li   $t0,  SEVENSEG_LEFT
sb   $a0,  0($t0)
jr   $ra
SHOW_7SEG_RIGHT: li   $t0,  SEVENSEG_RIGHT
sb   $a0,  0($t0)
jr   $ra
```

```
-- program is finished running --

Nhap vao so nguyen tu ban phim: 145

-- program is finished running --
```



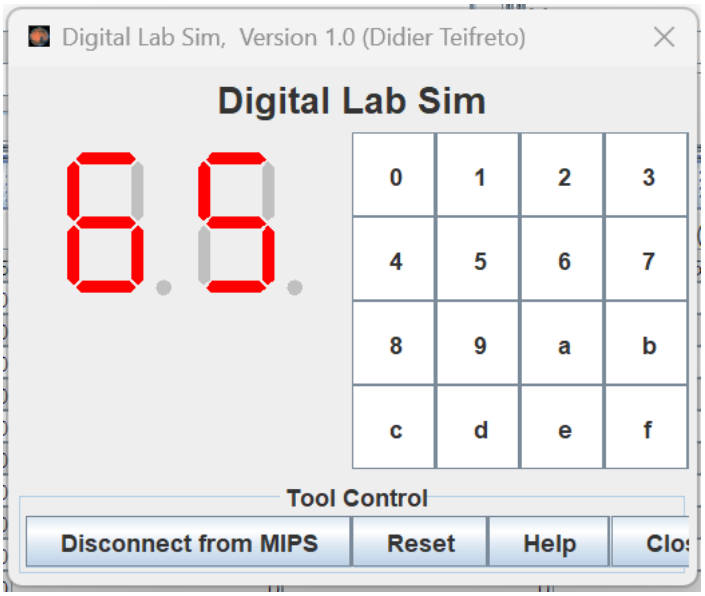
Assignment 3

```
.eqv SEVENSEG_LEFT  0xFFFF0010
.eqv SEVENSEG_RIGHT   0xFFFF0011
.data
Message: .asciiz "Nhap vao ky tu tu ban phim: "
.text
main:
li $v0, 4
la $a0, Message
syscall
li $v0, 12
syscall
div $v0,$v0,10
mfhi $a0
jal CHECK
jal   SHOW_7SEG_LEFT
div $v0,$v0,10
mfhi $a0
```

```
jal CHECK
jal   SHOW_7SEG_RIGHT
exit:
li    $v0, 10
syscall
endmain:
CHECK:
beq $a0, 0, v0
beq $a0, 1, v1
beq $a0, 2, v2
beq $a0, 3, v3
beq $a0, 4, v4
beq $a0, 5, v5
beq $a0, 6, v6
beq $a0, 7, v7
beq $a0, 8, v8
beq $a0, 9, v9
v0: addi $a0,$zero, 63
jr $ra
v1: addi $a0,$zero, 69
jr $ra
v2: addi $a0,$zero, 91
jr $ra
v3: addi $a0,$zero, 79
jr $ra
v4: addi $a0,$zero 102
jr $ra
v5: addi $a0,$zero, 109
jr $ra
v6: addi $a0,$zero, 125
jr $ra
v7: addi $a0,$zero, 7
```

```
jr $ra
v8: addi $a0,$zero, 127
jr $ra
v9: addi $a0,$zero, 111
jr $ra
SHOW_7SEG_LEFT:  li   $t0,  SEVENSEG_LEFT
sb   $a0,  0($t0)
jr   $ra
SHOW_7SEG_RIGHT: li   $t0,  SEVENSEG_RIGHT
sb   $a0,  0($t0)
jr   $ra
```

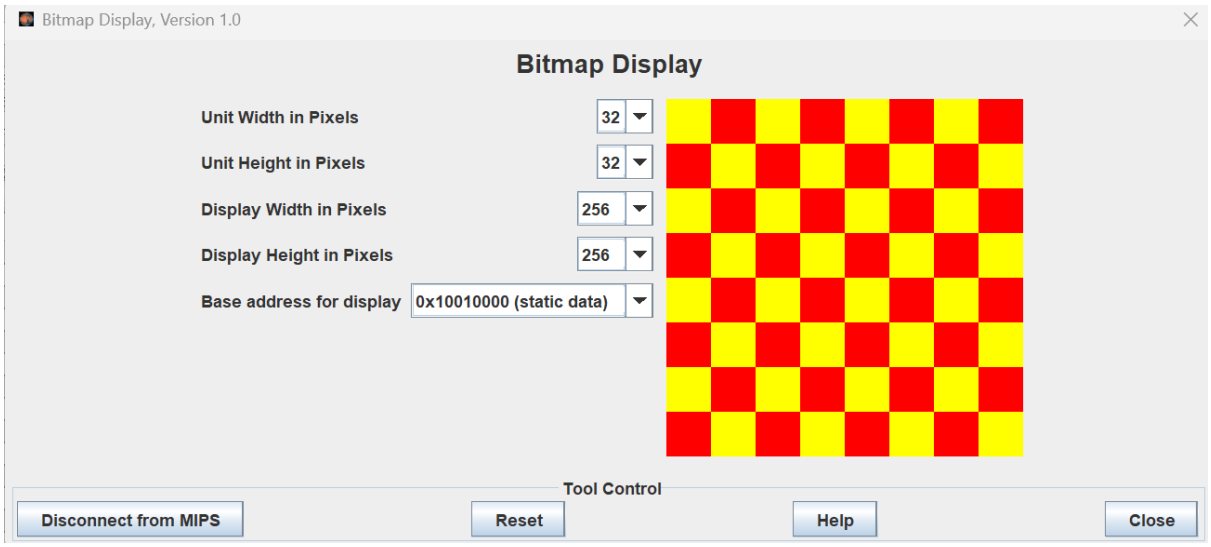
```
-- program is finished running --

Nhap vao ky tu tu ban phim: A
-- program is finished running --
```



Assignment 4

```
.eqv MONITOR_SCREEN 0x10010000
.eqv RED            0x00FF0000
.eqv YELLOW         0x00FFFF00
.text
li $k0, MONITOR_SCREEN
addi $k1, $k0, 256
```

```
addi $a0, $zero, 0
LOOP:
beq $k0, $k1, END
beq $a0, 4, REVERSE
li $t0, YELLOW
sw  $t0, 0($k0)
li $t0, RED
sw  $t0, 4($k0)
addi $a0, $a0, 1
addi $k0, $k0, 8
j LOOP
REVERSE:
beq $k0, $k1, END
beqz $a0, LOOP
li $t0, RED
sw  $t0, 0($k0)
li $t0, YELLOW
sw  $t0, 4($k0)
addi $a0, $a0, -1
addi $k0, $k0, 8
j REVERSE
END:
```



Assignment 5

```
.eqv MONITOR_SCREEN 0x10010000
.eqv RED            0x00FF0000
.eqv GREEN          0x0000FF00
.data
Message_x1: .asciiz "Nhap vao x1: "
Message_y1: .asciiz "Nhap vao y1: "
Message_x2: .asciiz "Nhap vao x2: "
Message_y2: .asciiz "Nhap vao y2: "
.text
li $v0, 4
la $a0, Message_x1
syscall
li $v0, 5
syscall
move $t1, $v0
li $v0, 4
la $a0, Message_y1
syscall
li $v0, 5
syscall
move $s1, $v0
li $v0, 4
la $a0, Message_x2
syscall
li $v0, 5
syscall
move $t2, $v0
li $v0, 4
la $a0, Message_y2
syscall
li $v0, 5
```

```
syscall
move $s2, $v0
MONITOR:
li $k0, MONITOR_SCREEN
li $t0, RED
addi $v0, $zero, 0
addi $t3, $t1, -1
addi $s3, $s1, -1
addi $t4, $t2, 1
addi $s4, $s2, 1
BORDER:
mul $k1, $s4, 8
add $k1, $k1, $t4
mul $k1, $k1, 4
add $k1, $k1, $k0
LOOP:
mul $a0, $s3, 8
add $a0,  $a0, $t3
mul $a0, $a0, 4
add $a0, $a0, $k0
beq $a0, $k1, RESET_BORDER
beq $t3,$t4, RESET
sw  $t0, 0($a0)
addi $t3, $t3, 1
j LOOP
RESET:
addi $t3, $t1, -1
add $t3, $t3, $v1
addi $s3, $s3, 1
j LOOP
RESET_BORDER:
bnez $v1, EXIT
```

addi $v1, $v1, 1

li $t0, GREEN

addi $t3, $t1, 0

addi $s3, $s1, 0

addi $t4, $t2, 0

addi $s4, $s2, 0

j BORDER

EXIT:

```
Nhap vao x1: 1
Nhap vao y1: 1
Nhap vao x2: 5
Nhap vao y2: 5

-- program is finished running (dropped off bottom) --
```