

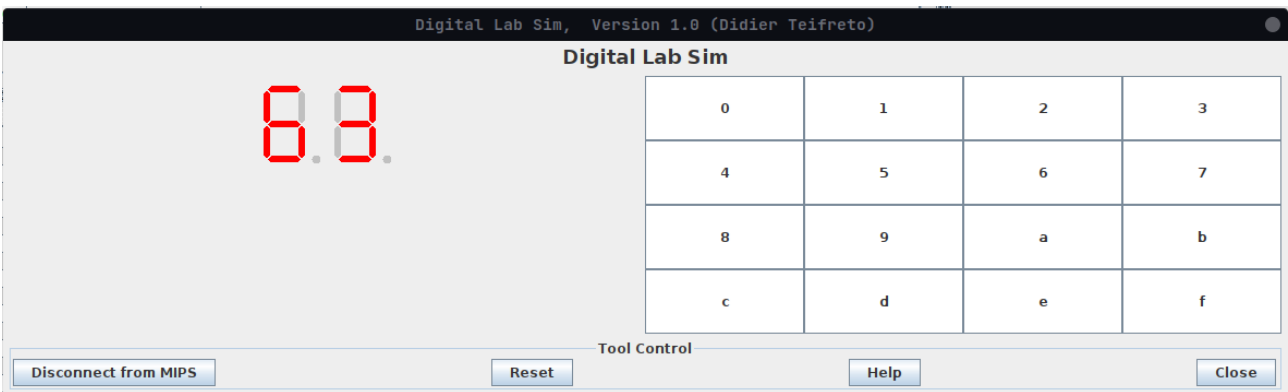
BÁO CÁO THỰC HÀNH TUẦN 10
Lương Thị Tâm – 20194663

Bài 1:

*Mã nguồn:

```
1 .eqv SEVENSEG_LEFT 0xFFFF0011# Địa chỉ của đèn led 7 đoạn trái.
2 # Bit 0 = đoạn a;
3 # Bit 1 = đoạn b; ...
4 # Bit 7 = dấu .
5 .eqv SEVENSEG_RIGHT 0xFFFF0010# Địa chỉ của đèn led 7 đoạn phải
6 .text
7 #1: 6
8 #2: 91
9 #3: 79
10 #4: 102
11 #5: 109
12 #6: 125
13 #7: 7
14 #8: 127
15 #9: 111
16 main:li $a0, 125 # set value for segments
17 jal SHOW_7SEG_LEFT # show
18 li $a0, 79 # set value for segments
19 jal SHOW_7SEG_RIGHT # show
20 exit:li $v0, 10
21 syscall
22 endmain:
23 #-----
24 # Function SHOW_7SEG_LEFT : turn on/off the 7seg
25 # param[in] $a0 value to shown
26 # remark $t0 changed
27 #-----
28 SHOW_7SEG_LEFT: li $t0, SEVENSEG_LEFT # assign port's address
29 sb $a0, 0($t0)# assign new value
30 jr $ra
31 #-----
32 # Function SHOW_7SEG_RIGHT : turn on/off the 7seg
33 # param[in] $a0 value to shown
34 # remark $t0 changed
35 #-----
36 SHOW_7SEG_RIGHT: li $t0, SEVENSEG_RIGHT# assign port's address
37 sb $a0, 0($t0)# assign new value
38 jr $ra
```

*Ảnh chụp minh họa kết quả:



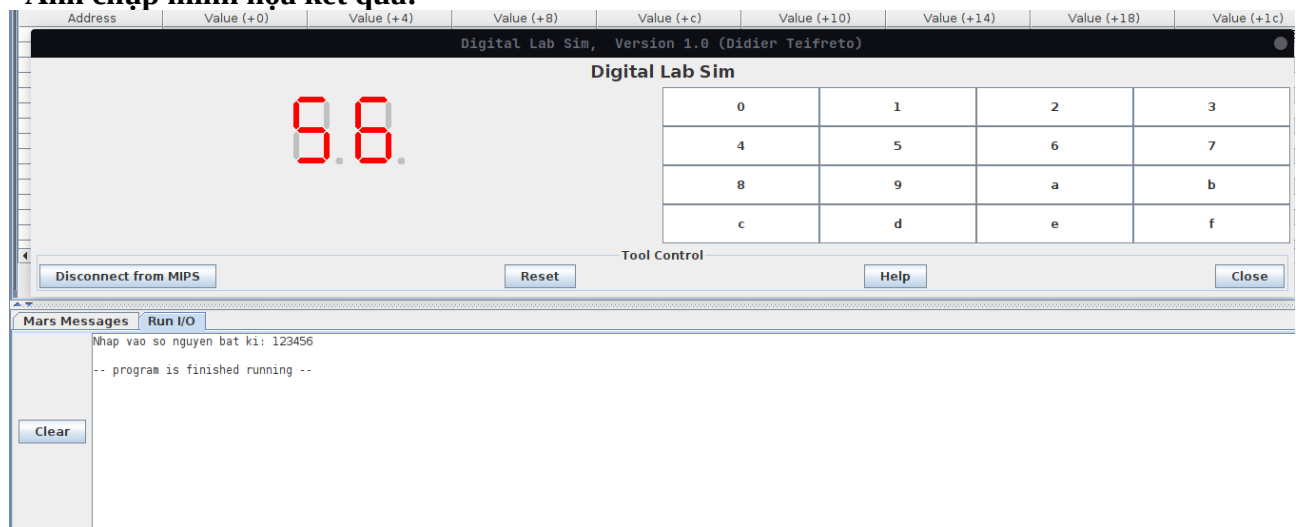
Bài 2:

*Mã nguồn:

```
1 .eqv SEVENSEG_LEFT 0xFFFF0011# Dia chi cua den led 7 doan trai.
2                                     # Bit 0 = doan a;
3                                     # Bit 1 = doan b; ...
4                                     # Bit 7 = dau .
5 .eqv SEVENSEG_RIGHT 0xFFFF0010# Dia chi cua den led 7 doan phai
6 .data
7 message: .asciiz "Nhap vao so nguyen bat ki: "
8 arr: .byte 63,6,91,79,102,109,125,7,127,111
9 .text
10 #0: 63
11 #1: 6
12 #2: 91
13 #3: 79
14 #4: 102
15 #5: 109
16 #6: 125
17 #7: 7
18 #8: 127
19 #9: 111
20 la $t1, arr
21 li $v0, 4
22 la $a0, message
23 syscall
24 li $v0, 5 #nhap vao so nguyen
25 syscall
26 addi $s0, $v0, 0
27 li $s5, 100
28 div $s0, $s5
29 mfhi $s1
30 li $s5, 10
31 div $s1, $s5
32 mfhi $s2 # lay ra hang don vi
33 mflo $s3 # lay ra hang chuc
34 add $s4, $t1, $s3
35 lb $a0, 0($s4)
36 jal SHOW_7SEG_LEFT # show

37 add $s4, $t1, $s2
38 lb $a0, 0($s4)
39 jal SHOW_7SEG_RIGHT # show
40 exit: li $v0, 10
41 syscall
42 endmain:
43 #-----
44 # Function SHOW_7SEG_LEFT : turn on/off the 7seg
45 # param[in] $a0 value to shown
46 # remark $t0 changed
47 #-----
48 SHOW_7SEG_LEFT: li $t0, SEVENSEG_LEFT # assign port's address
49 sb $a0, 0($t0) # assign new value
50 jr $ra
51 #-----
52 # Function SHOW_7SEG_RIGHT : turn on/off the 7seg
53 # param[in] $a0 value to shown
54 # remark $t0 changed
55 #-----
56 SHOW_7SEG_RIGHT: li $t0, SEVENSEG_RIGHT # assign port's address
57 sb $a0, 0($t0) # assign new value
58 jr $ra
```

*Ảnh chụp minh họa kết quả:

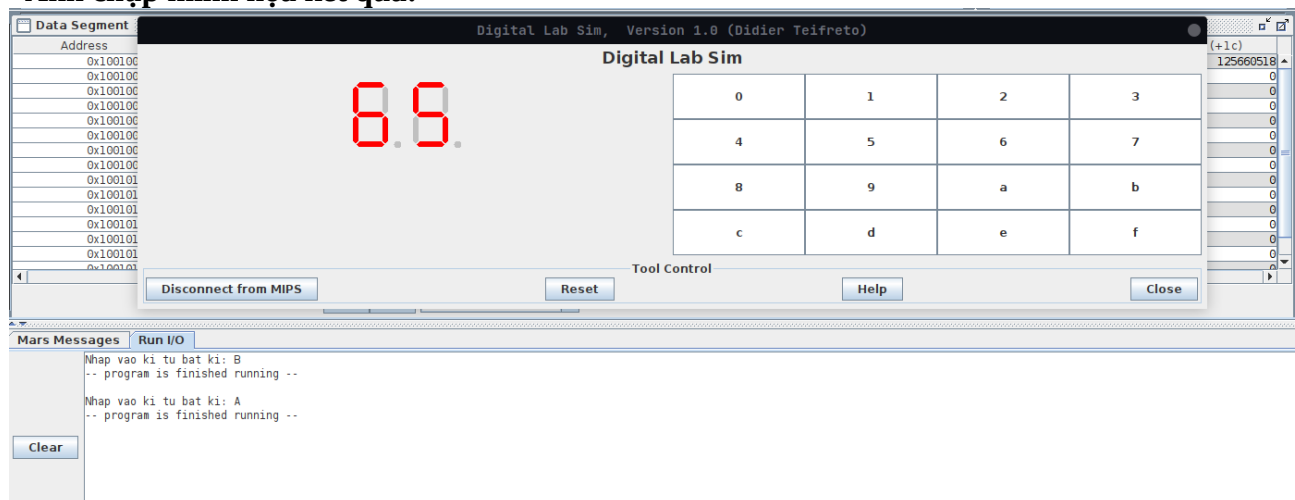


Bài 3:

*Mã nguồn:

```
1 .eqv SEVENSEG_LEFT 0xFFFF0011# Địa chỉ của đèn led 7 đoạn trái.
2 # Bit 0 = đoạn a;
3 # Bit 1 = đoạn b; ...
4 # Bit 7 = đoạn g
5 .eqv SEVENSEG_RIGHT 0xFFFF0010# Địa chỉ của đèn led 7 đoạn phải
6 .data
7 message: .asciiz "Nhập vào kí tự bất kì: "
8 arr: .byte 63,6,91,79,102,109,125,7,127,111
9 .text
10 #0: 63
11 #1: 6
12 #2: 91
13 #3: 79
14 #4: 102
15 #5: 109
16 #6: 125
17 #7: 7
18 #8: 127
19 #9: 111
20 la $t1, arr
21 li $v0, 4
22 la $a0, message
23 syscall
24 li $v0, 12 #nhập vào kí tự
25 syscall
26 addi $s0, $v0, 0
27 li $s5, 100
28 div $s0, $s5
29 mfhi $s1
30 li $s5, 10
31 div $s1, $s5
32 mfhi $s2 # lấy ra hàng đơn vị
33 mflo $s3 # lấy ra hàng chục
34 add $s4, $t1, $s3
35 lb $a0, 0($s4)
36 jal SHOW_7SEG_LEFT # show
37 add $s4, $t1, $s2
38 lb $a0, 0($s4)
39 jal SHOW_7SEG_RIGHT # show
40 exit: li $v0, 10
41 syscall
42 endmain:
43 #-----
44 # Function SHOW_7SEG_LEFT : turn on/off the 7seg
45 # param[in] $a0 value to shown
46 # remark $t0 changed
47 #-----
48 SHOW_7SEG_LEFT: li $t0, SEVENSEG_LEFT # assign port's address
49 sb $a0, 0($t0) # assign new value
50 jr $ra
51 #-----
52 # Function SHOW_7SEG_RIGHT : turn on/off the 7seg
53 # param[in] $a0 value to shown
54 # remark $t0 changed
55 #-----
56 SHOW_7SEG_RIGHT: li $t0, SEVENSEG_RIGHT # assign port's address
57 sb $a0, 0($t0) # assign new value
58 jr $ra
```

*Ảnh chụp minh họa kết quả:

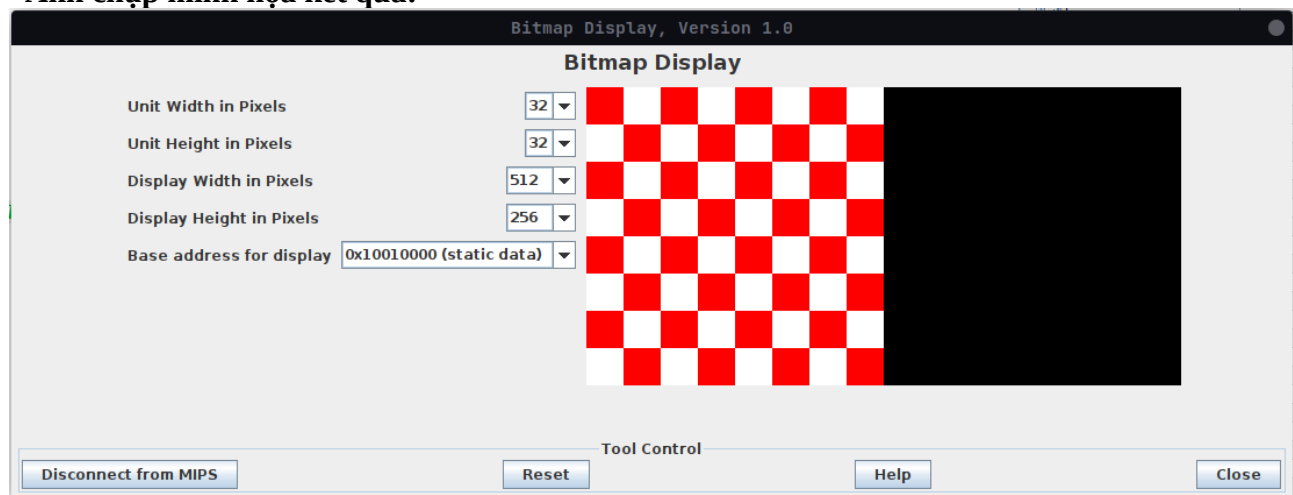


Bài 4:

*Mã nguồn:

```
1 .eqv MONITOR_SCREEN 0x10010000
2 .eqv RED 0x00FF0000
3 .eqv GREEN 0x0000FF00
4 .eqv BLUE 0x000000FF
5 .eqv WHITE 0x00FFFFFF
6 .eqv YELLOW 0x00FFFF00
7 .text
8 li $k0, MONITOR_SCREEN
9 li $t7, 2
10 li $t6, 64
11 li $t1, 0 # TOA DO Y
12 li $t3, 8
13 loop1: slt $t2, $t1, $t3
14 beq $t2, $zero, end_loop1
15 mul $s1, $t1, $t6
16 add $s0, $k0, $s1 # LAY TOA DO X CUA MOI DONG
17 li $t4, 0 #TOA DO X
18 loop2: slt $t2, $t4, $t3
19 beq $t2, $0, end_loop2
20 add $t2, $t4, $t4
21 add $t2, $t2, $t2
22 add $t5, $s0, $t2
23 div $t1, $t7
24 mfhi $s5
25 div $t4, $t7
26 mfhi $s6
27 add $s7, $s5, $s6
28 div $s7, $t7
29 mfhi $s7
30 beq $s7, $0, next # NEU TONG HAI TOA DO CHIA HET CHO 2, IN RA MAU DO, NGUOC LAI IN RA MAU TRANG
31 li $t0, WHITE
32 sw $t0, 0($t5)
33 j next2
34 next: li $t0, RED
35 sw $t0, 0($t5)
36 next2: addi $t4, $t4, 1 # TANG TOA DO X
37 j loop2
38 end_loop2: addi $t1, $t1, 1 # TANG TOA DO Y
39 j loop1
40 end_loop1:
```

*Ảnh chụp minh họa kết quả:



Bài 5:

*Mã nguồn:

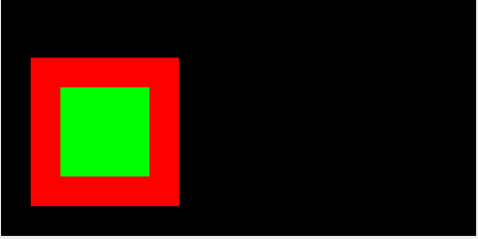
```
1 .eqv MONITOR_SCREEN 0x10010000
2 .eqv RED 0x00FF0000
3 .eqv GREEN 0x0000FF00
4 .data
5 mess1: .asciiz "Nhap vao toa do diem thu nhat:"
6 mess2: .asciiz "Nhap vao toa do diem thu hai:"
7 mess3: .asciiz "Nhap x: "
8 mess4: .asciiz "Nhap y: "
9 .text
10 li $k0, MONITOR_SCREEN
11
12 li $v0, 4
13 la $a0, mess1
14 syscall
15 li $v0, 4
16 la $a0, mess3
17 syscall
18 li $v0, 5
19 syscall
20 addi $s1, $v0, 0 # toa do x1
21 li $v0, 4
22 la $a0, mess4
23 syscall
24 li $v0, 5
25 syscall
26 addi $s2, $v0, 0 # toa do y1
27
28 li $v0, 4
29 la $a0, mess2
30 syscall
31 li $v0, 4
32 la $a0, mess3
33 syscall
34 li $v0, 5
35 syscall
36 addi $s3, $v0, 0 # toa do x2
37 li $v0, 4
38 la $a0, mess4
39 syscall
40
41 li $v0, 5
42 syscall
43 addi $s4, $v0, 0 # toa do y2
44 li $t6, 64
45 addi $t5, $s2, 0 # t5 = y1
46 loop1: slt $t1, $s4, $t5
47 bne $t1, $0, end_loop1
48 mul $t2, $t5, $t6
49 add $t2, $k0, $t2
50 addi $t4, $s1, 0 # t4 = x1
51 loop2: slt $t1, $s3, $t4
52 bne $t1, $0, end_loop2
53 add $t3, $t4, $t4
54 add $t3, $t3, $t3
55 add $t3, $t2, $t3
56 beq $t5, $s2, if1 # neu toa do bang cac dau mut thi in mau do, nguoc lai in xanh
57 beq $t5, $s4, if1
58 beq $t4, $s1, if1
59 beq $t4, $s3, if1
60 li $t0, GREEN
61 sw $t0, 0($t3)
62 addi $t4, $t4, 1
63 j loop2
64 end_loop2: addi $t5, $t5, 1
65 j loop1
66 if1: li $t0, RED # in ra mau do
67 sw $t0, 0($t3)
68 addi $t4, $t4, 1
69 j loop2
70 end_loop1:
```

*Ảnh chụp minh họa kết quả:

0x00400038: 0x3c011001 lui \$1,4097 22: la \$a0, mess4
0x0040003c: 0x34240046 ori \$4,\$1,70
0x00400040: 0x...

Bitmap Display, Version 1.0

Unit Width in Pixels32
Unit Height in Pixels32
Display Width in Pixels512
Display Height in Pixels256
Base address for display0x10010000 (static data)



Disconnect from MIPS

Reset

Help

Close

Mars MessagesRun I/O

Clear

Nhap y: 2
Nhap vao toa do diem thu hai:Nhap x: 5
Nhap y: 6

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

Nhap vao toa do diem thu nhut:Nhap x: 1
Nhap y: 2
Nhap vao toa do diem thu hai:Nhap x: 5
Nhap y: 6

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