


2.2

PC	=	0	[
EPC	=	0	[
Cause	=	0	[
BadVAddr	=	0	[
Status	=	3000ff10	[
HI	=	0	[
LO	=	0	[
R0	[r0]	= 0	[
R1	[at]	= 0	N
R2	[v0]	= 0	N
R3	[v1]	= 0	N
R4	[a0]	= 0	N
R5	[a1]	= 0	N
R6	[a2]	= 0	N
R7	[a3]	= 0	N
R8	[t0]	= 0	
R9	[t1]	= 0	
R10	[t2]	= 0	[
R11	[t3]	= 0	[
R12	[t4]	= 0	[
R13	[t5]	= 0	
R14	[t6]	= 0	
R15	[t7]	= 0	
R16	[s0]	= 0	
R17	[s1]	= 0	
R18	[s2]	= 0	
R19	[s3]	= 0	
R20	[s4]	= 0	
R21	[s5]	= 0	
R22	[s6]	= 0	
R23	[s7]	= 0	
R24	[t8]	= 0	
R25	[t9]	= 0	
R26	[k0]	= 0	
R27	[k1]	= 0	
R28	[gp]	= 0	
R29	[sp]	= 7ffffefc	
R30	[s8]	= 0	
R31	[ra]	= 0	

 E

Exec

Cont

[
[
[
[
[
[
[
[
[

$$\begin{array}{l} \text{HI} \\ \text{LO} \end{array} = 0$$

2 / 7

```
R24 [t8] = 0
R25 [t9] = 0
R26 [k0] = 0
R27 [k1] = 0
R28 [gp] = 10008000
R29 [sp] = 7fffea94
R30 [s8] = 0
R31 [ra] = 0
```

SPIM Version 9.1.24 of August 1, 2023 (final)

```
PC      = 0
EPC     = 0
Cause   = 0
BadVAddr = 0
Status  = 3000ff10
```

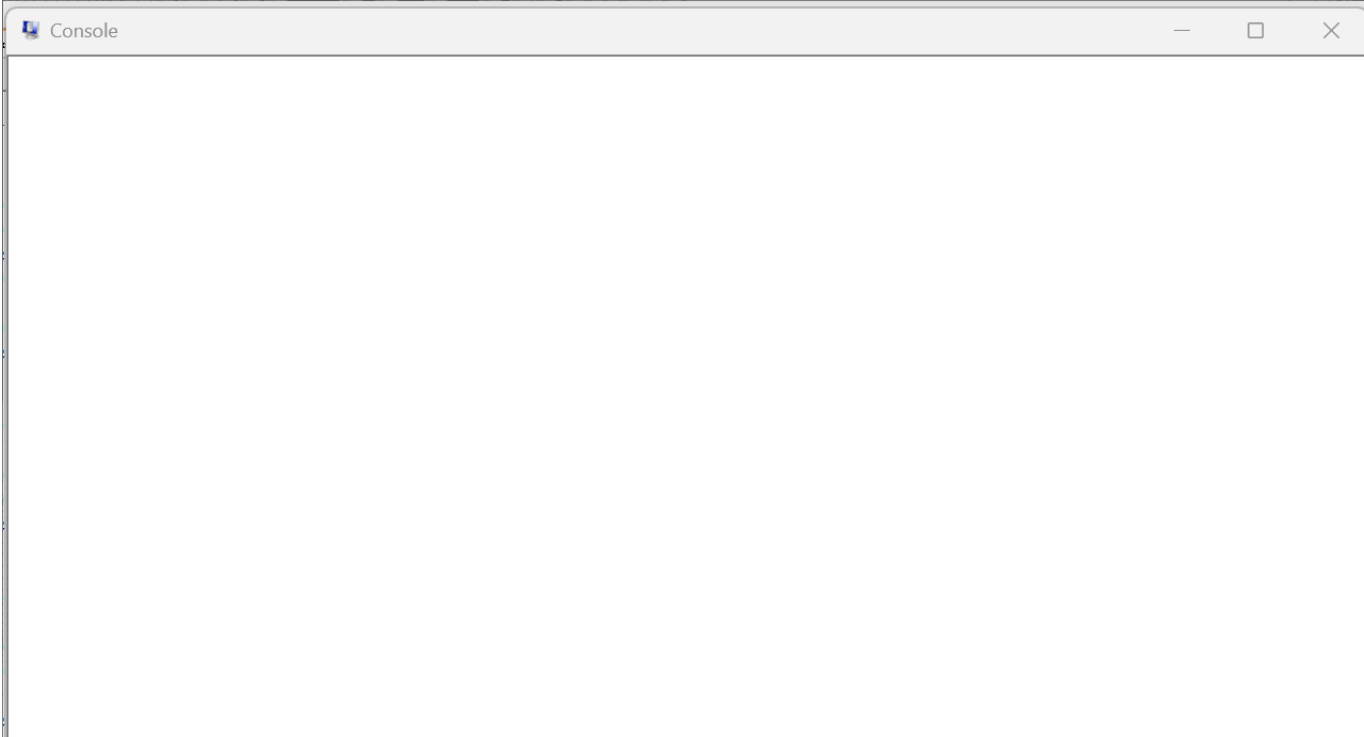
```
HI      = 0
LO      = 0
```

```
R0 [r0] = 0
R1 [at] = 0
R2 [v0] = 0
R3 [v1] = 0
R4 [a0] = 0
R5 [a1] = 0
R6 [a2] = 0
R7 [a3] = 0
R8 [t0] = 0
R9 [t1] = 0
R10 [t2] = 0
R11 [t3] = 0
R12 [t4] = 0
R13 [t5] = 0
R14 [t6] = 0
```

```
R15 [t7] = 0
R16 [s0] = 0
R17 [s1] = 0
R18 [s2] = 0
R19 [s3] = 0
R20 [s4] = 0
R21 [s5] = 0
R22 [s6] = 0
R23 [s7] = 0
R24 [t8] = 0
R25 [t9] = 0
R26 [k0] = 0
R27 [k1] = 0
R28 [gp] = 0
R29 [sp] = 7ffefffc
R30 [s8] = 0
R31 [ra] = 0
```

SPIM Version 9.1.24 of August 1, 2023 (final)

2.3



2.4

```

Source Control (Ctrl+Shift+G)
• (base) PS D:\work\computer_architecture\lab1> gcc -S .\code.c -o code.asm
• (base) PS D:\work\computer_architecture\lab1> cat code.asm
.file "code.c"
.text
.globl sumn
.def sumn; .scl 2; .type 32; .endef
.seh_proc sumn
sumn:
    pushq %rbp
    .seh_pushreg %rbp
    movq %rsp, %rbp
    .seh_setframe %rbp, 0
    subq $16, %rsp
    .seh_stackalloc 16
    .seh_endprologue
    movq %rcx, 16(%rbp)
    movl %edx, 24(%rbp)
    movl $0, -4(%rbp)
    movl $0, -8(%rbp)
    jmp .L2
.L3:
    movl -8(%rbp), %eax
    cltq
    leaq 0(,%rax,4), %rdx
    movq 16(%rbp), %rax
    addq %rdx, %rax
    movl (%rax), %eax
    addl %eax, -4(%rbp)
    addl $1, -8(%rbp)
.L2:
    movl -8(%rbp), %eax
    cmpl 24(%rbp), %eax
    jl .L3
    movl -4(%rbp), %eax
    addq $16, %rsp
    popq %rbp
    ret
.seh_endproc
.def __main; .scl 2; .type 32; .endef

```

2.5

```
Console
Please enter the index of the fib number you want to calculate: 30
832040
Do you want to try another(0-continue/1-exit)0
Please enter the index of the fib number you want to calculate: 10
55
Do you want to try another(0-continue/1-exit)0
Please enter the index of the fib number you want to calculate: 1
1
Do you want to try another(0-continue/1-exit)0
Please enter the index of the fib number you want to calculate: 8
21
Do you want to try another(0-continue/1-exit)1
1|
0
5
0
4
0
c
4
4
0
4
0
4
4
0
h
n
h
```