

Код программы:

fib.asm

```
1 #
2 # Example that calculates the Fibonacci sequence.
3 #
4 main:
5     mv t0, zero           # pseudo: addi t0, zero, 0 (I-type)
6     li t1, 1              # pseudo: addi t1, zero, 1 (I-type)
7
8     li a7, 5              # pseudo: addi a7, zero, 5 (I-type)
9     ecall                 # I-type
10    mv t3, a0              # pseudo: addi t3, a0, 0 (I-type)
11 fib:
12    beqz t3, finish        # pseudo: beq t3, zero, finish (B-type)
13    add t2, t1, t0         # R-type
14    mv t0, t1              # pseudo: addi t0, t1, 0 (I-type)
15    mv t1, t2              # pseudo: addi t1, t2, 0 (I-type)
16    addi t3, t3, -1        # I-type
17    j fib                  # J-type
18 finish:
19    li a7, 1               # pseudo: addi a7, zero, 1 (I-type)
20    mv a0, t0              # pseudo: addi a0, t0, 0 (I-type)
21    ecall                  # I-type
--
```

Результат:

Messages Run I/O

```
20
6765
-- program is finished running (dropped off bottom) --
```

Дамп:

Text Segment				
Bkpt	Address	Code	Basic	Source
<input type="checkbox"/>	0x00400000	0x000002b3	add x5,x0,x0	5: mv t0, zero # pseudo: addi t0, zero, 0 (I-type)
<input type="checkbox"/>	0x00400004	0x00100313	addi x6,x0,1	6: li t1, 1 # pseudo: addi t1, zero, 1 (I-type)
<input type="checkbox"/>	0x00400008	0x00500893	addi x17,x0,5	8: li a7, 5 # pseudo: addi a7, zero, 5 (I-type)
<input type="checkbox"/>	0x0040000c	0x00000073	ecall	9: # I-type
<input type="checkbox"/>	0x00400010	0x00a00e33	add x28,x0,x10	10: mv t3, a0 # pseudo: addi t3, a0, 0 (I-type)
<input type="checkbox"/>	0x00400014	0x000e0c63	beq x28,x0,0x00000018	12: beqz t3, finish # pseudo: beq t3. zero, finish (B-type)
<input type="checkbox"/>	0x00400018	0x005303b3	add x7,x6,x5	13: add t2, t1, t0 # R-type
<input type="checkbox"/>	0x0040001c	0x006002b3	add x5,x0,x6	14: mv t0, t1 # pseudo: addi t0, t1, 0 (I-type)
<input type="checkbox"/>	0x00400020	0x00700333	add x6,x0,x7	15: mv t1, t2 # pseudo: addi t1, t2, 0 (I-type)
<input type="checkbox"/>	0x00400024	0xfffe0e13	addi x28,x28,0xffffffff	16: addi t3, t3, -1 # I-type
<input type="checkbox"/>	0x00400028	0xfedff06f	jal x0,0xfffffffec	17: j fib # J-type
<input type="checkbox"/>	0x0040002c	0x00100893	addi x17,x0,1	19: li a7, 1 # pseudo: addi a7, zero, 1 (I-type)
<input type="checkbox"/>	0x00400030	0x00500533	add x10,x0,x5	20: mv a0, t0 # pseudo: addi a0, t0, 0 (I-type)
<input type="checkbox"/>	0x00400034	0x00000073	ecall	21: # I-type