

```

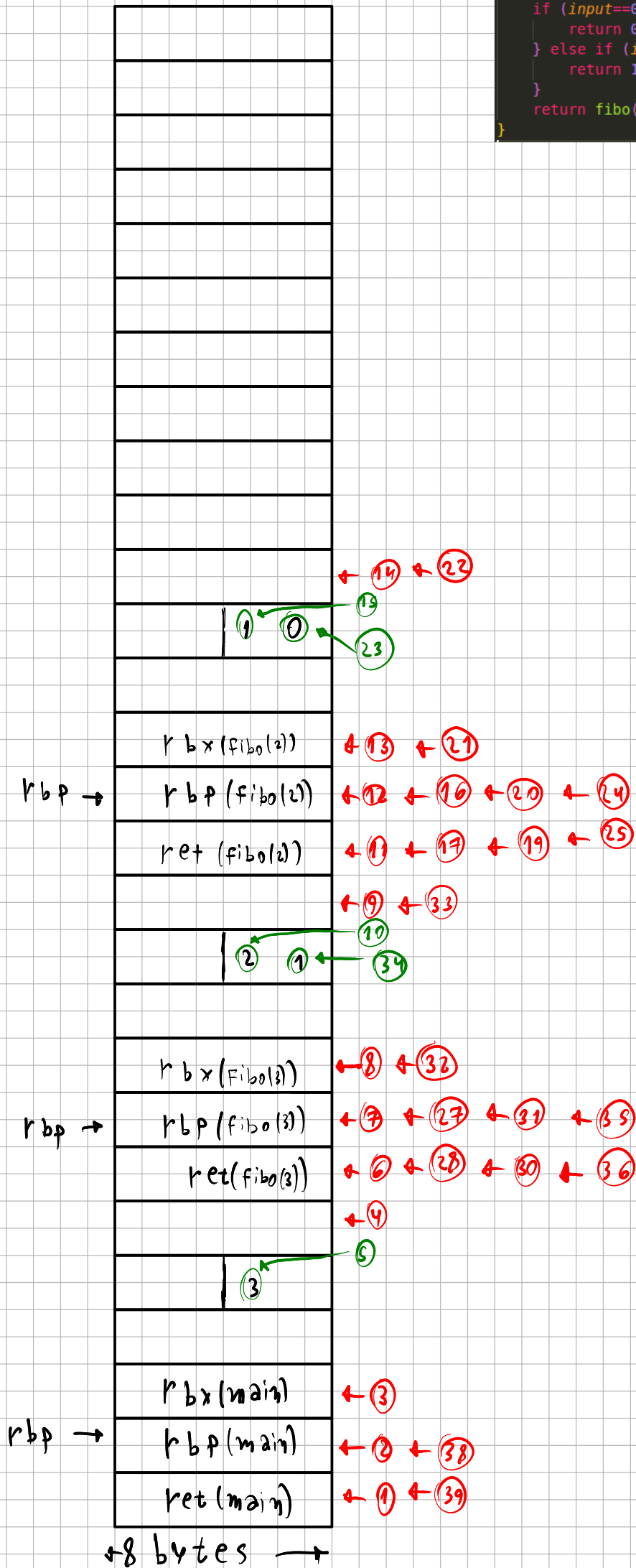
fibonacci:
    endbr64
    push    rbp
    mov     rbp, rsp
    push    rbx
    sub     rsp, 24
    mov     DWORD PTR -20[rbp], edi
    cmp     DWORD PTR -20[rbp], 0
    jne     .L2
    mov     eax, 0
    jmp     .L3
.L2:
    cmp     DWORD PTR -20[rbp], 1
    jne     .L4
    mov     eax, 1
    jmp     .L3
.L4:
    mov     eax, DWORD PTR -20[rbp]
    sub     eax, 1
    mov     edi, eax
    call    fibo
    mov     ebx, eax
    mov     eax, DWORD PTR -20[rbp]
    sub     eax, 2
    mov     edi, eax
    call    fibo
    add     eax, ebx
.L3:
    mov     rbx, QWORD PTR -8[rbp]
    leave
    ret

```

```

unsigned int fibo(unsigned int input){
    if (input==0){
        return 0;
    } else if (input==1){
        return 1;
    }
    return fibo(input-1)+fibo(input-2);
}

```



8 bytes →

① Call Fibo (3)
 ② Push rbp
 ③ Push rbx
 ④ Sub rsp, 24
 ⑤ {
 mov [rbp-20], edi
 mov eax, [rbp-20]
 sub eax, 1
 mov edi, eax
 }

⑥ Call Fibo (2)
 ⑦ Push rbp
 ⑧ Push rbx
 ⑨ Sub rsp, 24
 ⑩ {
 mov [rbp-20], edi
 mov eax, [rbp-20]
 sub eax, 1
 mov edi, eax
 }

⑪ Call Fibo (1)
 ⑫ Push rbp
 ⑬ Push rbx
 ⑭ Sub rsp, 24
 ⑮ {
 mov [rbp-20], edi
 mov eax, 1
 mov rbx, [rbp-8]
 }
 rbx(Fibo(2))

⑯ leave
 ⑰ ret
 ⑱ {
 mov ebx, eax
 mov eax, [rbp-20]
 sub eax, 2
 mov edi, eax
 }

⑲ Call fibo (0)
 ⑳ Push rbp
 ㉑ Push rbx

• move rsp
 • no || ||

㉒ Sub rsp, 24
 ㉓ {
 mov [rbp-20], edi
 mov eax, 0
 mov rbx, [rbp-8]
 }
 rbx(Fibo(2))

㉔ leave
 ㉕ ret

㉖ {
 add eax, ebx
 mov rbx, [rbp-8]
 }
 eax = 1
 rbx(Fibo(3))

㉗ leave

㉘ ret

㉙ {
 mov ebx, eax
 mov eax, [rbp-20]
 sub eax, 2
 mov edi, eax
 }

㉚ Call Fibo (1)

㉛ Push rbp

㉜ Push rbx

㉝ Sub rsp, 24

㉞ {
 mov [rbp-20], edi
 mov eax, 1
 mov rbx, [rbp-8]
 }
 rbx(Fibo(3)) = 1

㉟ leave

㊱ ret

㊲ {
 add eax, ebx
 mov rbx, [rbp-8]
 }
 eax = 2
 rbx(main)

㊳ leave

㊴ ret