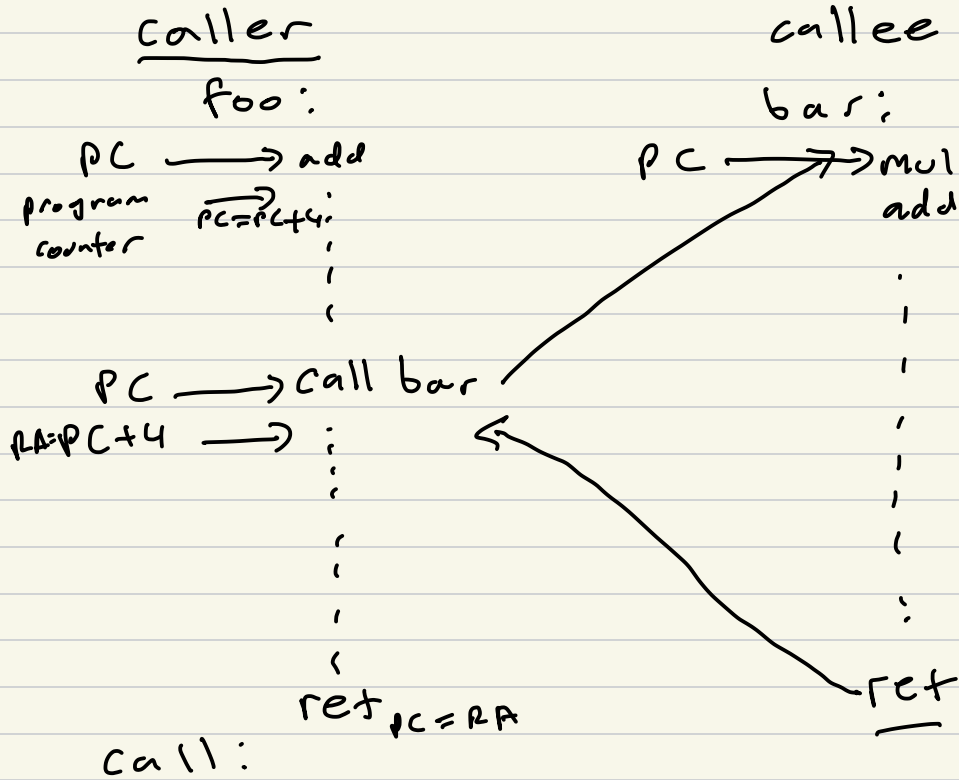


Complex functions



1) updates RA to PC + 4
 (return address)

2) updates PC to addr
 of target function (label)

ret :

1) updates PC = RA

Stack

SP

stack pointer
points
to current
top of stack
SP

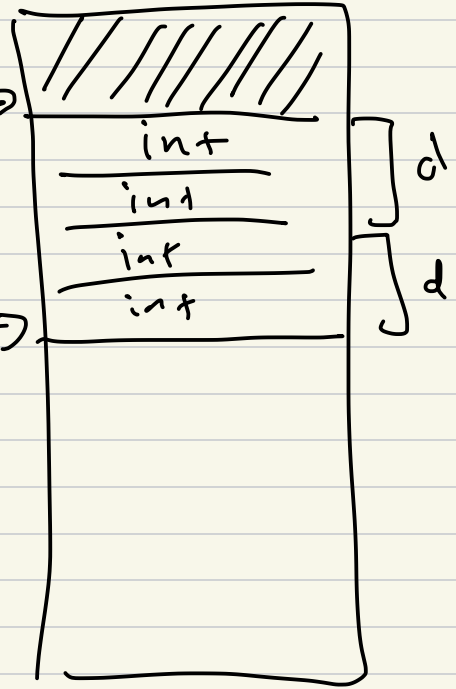
Stack allocation
subtract

`addi SP, SP, -16`

Stack deallocation

`addi SP, SP, 16`

Memory



RISC-V Registers

x0	zero	always zero
x1	ra	return address
x2	sp	stack pointer
x3	gp	} not going to use
x4	tp	

a	a0-a7	args and ret value
---	-------	--------------------

t	t0-t6	temp
---	-------	------

s	s0-s11	saved
---	--------	-------

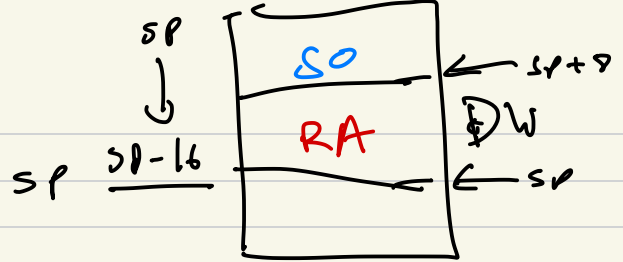
caller saved regs

a0-a7, t0-t6, ra

callee saved

s0-s11, sp

Full function call



```
foo:
    addi sp, sp, -16
    sd ra, (sp)
    sd so, 8(sp)
    ;
    call bar
    ;
    ;
    ld so, 8(sp)
    ld ra, (sp)
    addi sp, sp, 16
    ret
```

```
bar:
    add a0, a1, a2
    ;
    ;
    ;
    ;
    ;
    ;
    ;
    ret
    PC = RA
```