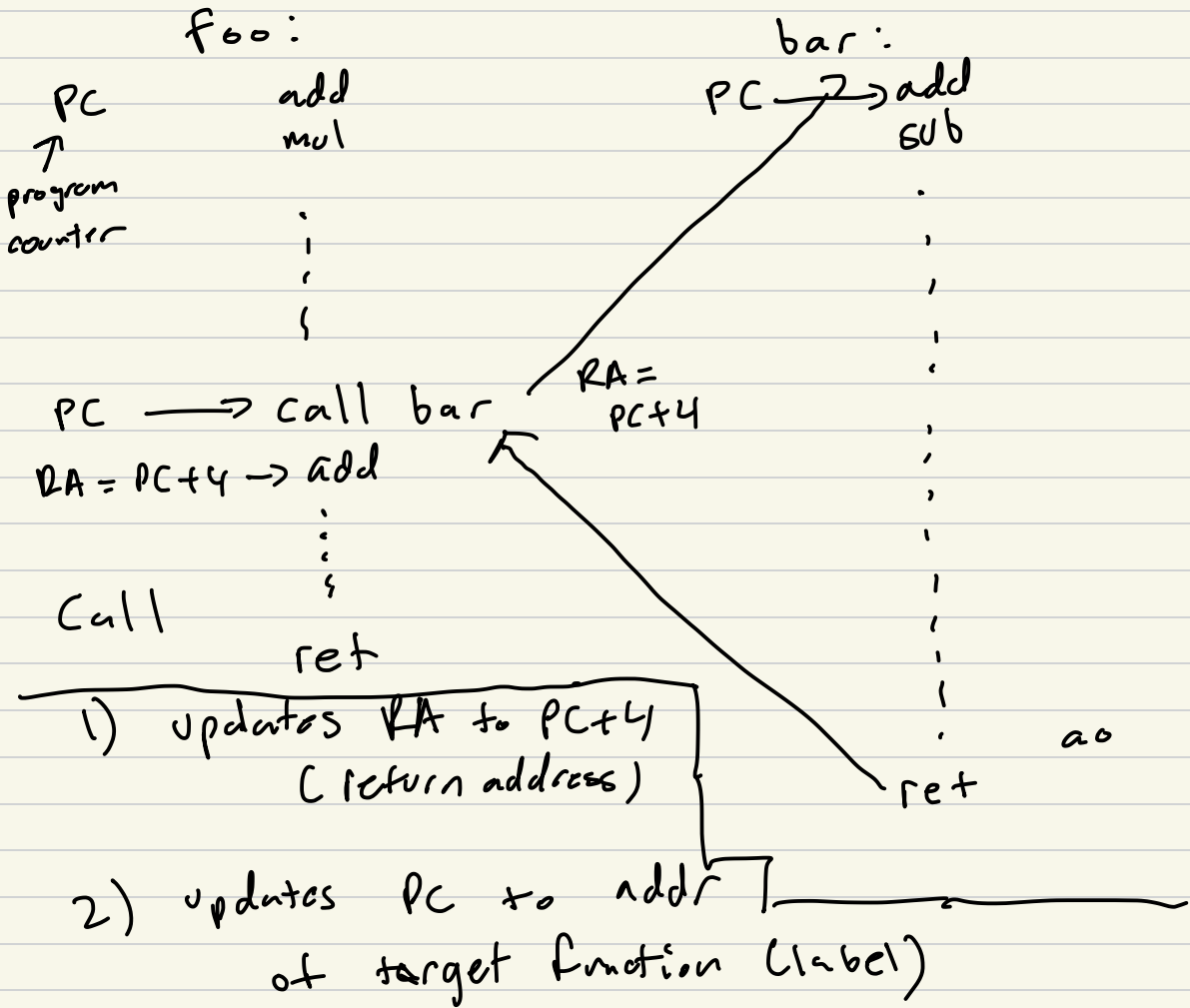


CS315-02 Lab RISC-V Assembly 4

Complex Functions



`ret`

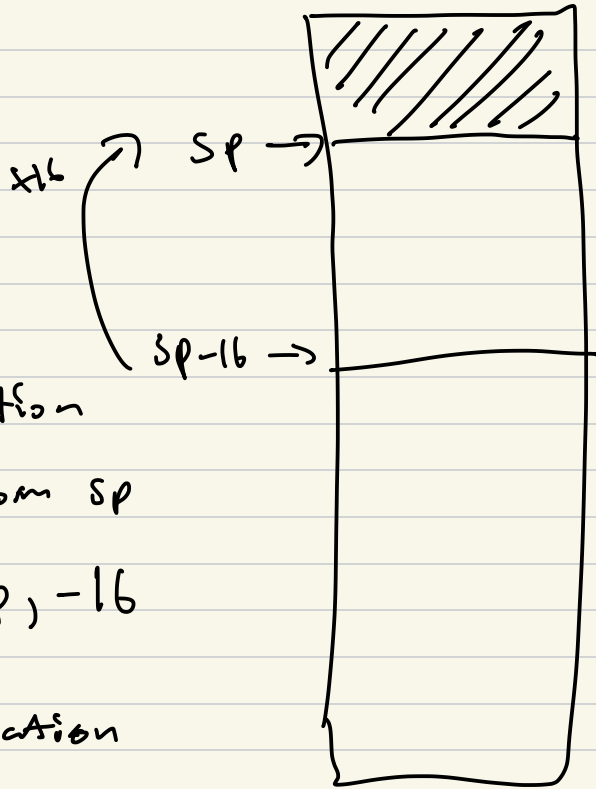
- 1) updates PC = RA

Stack

SP (reg)
stack pointer
top of the stack
stack allocation
subtract from SP
addi SP, SP, -16

Stack deallocation

addi SP, SP, 16



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

s	s0-s11	saved
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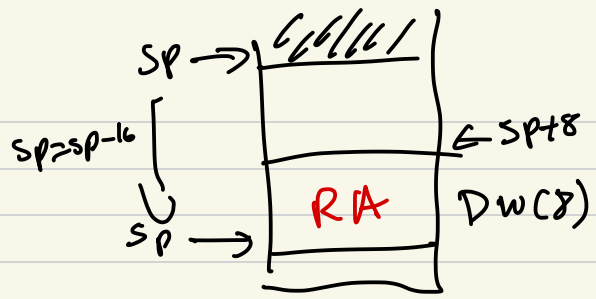
caller saved regs

a0-a7, t0-t6

callee saved regs

s0-s11, sp, ra

Full function call



foo:
addi sp, sp, -16
sd ra, (sp)
sd to, 8(sp) RA = PC+4
call bar
ld to, 8(sp)
to
ld ra, (sp)
addi sp, sp, 16
ret

bar:
PC → add a0, a0, a1
:
:
:
:
:
:
:
:
:
ret RA = PC