

CS 315-01 Processor Design Data Memory

Project 06

Tests

Program (Prog) tests

No ".global"

use jal instead call

Need main

jal <func>

Unimp

initialize sp

possible
padding
code

into
 a_0, a_1, a_2, a_3

7 addr
bits

$$2^7 = 128$$

$$2^7 * 2^3 = 2^{10} = 1024$$

init stack
and
arguments

Data Memory

sp 127

RAM

0

↑
64 bits (8 bytes)

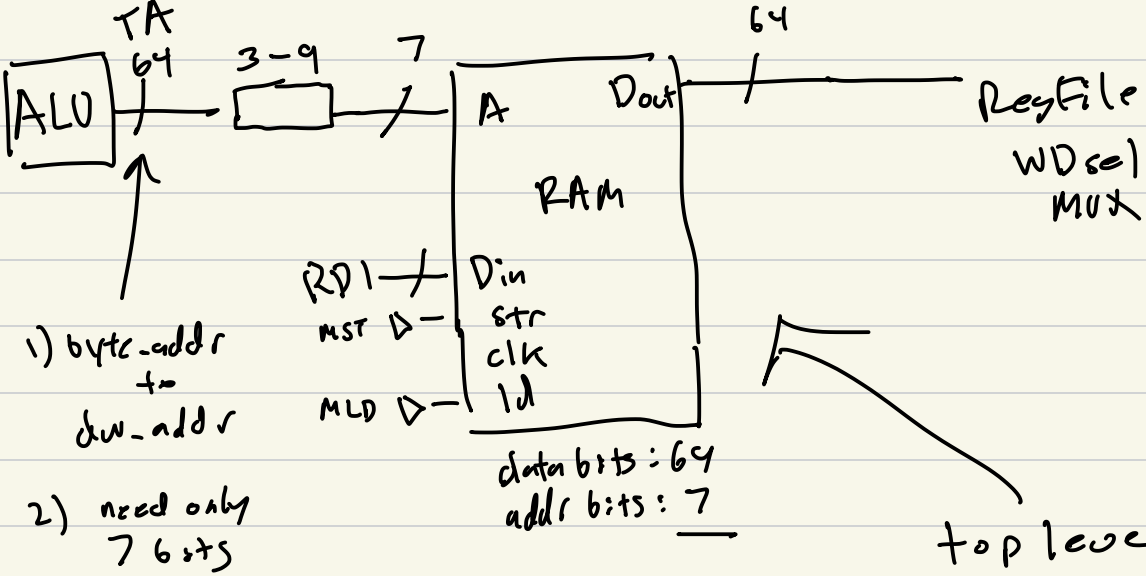
Adding instructions

- 1) Modify or add components
- 2) May need to add to or modify the data path. Usually you will need to add or extend MUXes
- 3) Extend or add control lines
Do this in the spreadsheet
The build Just Decode Rom
- 4) Test

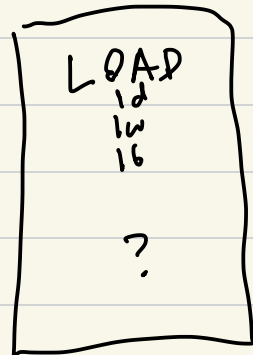
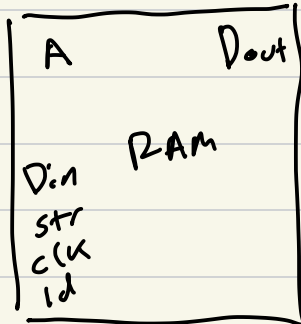
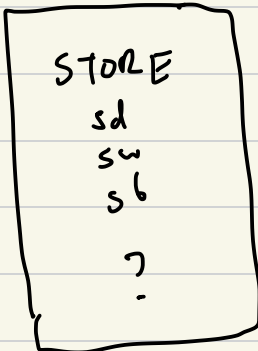
Data Memory

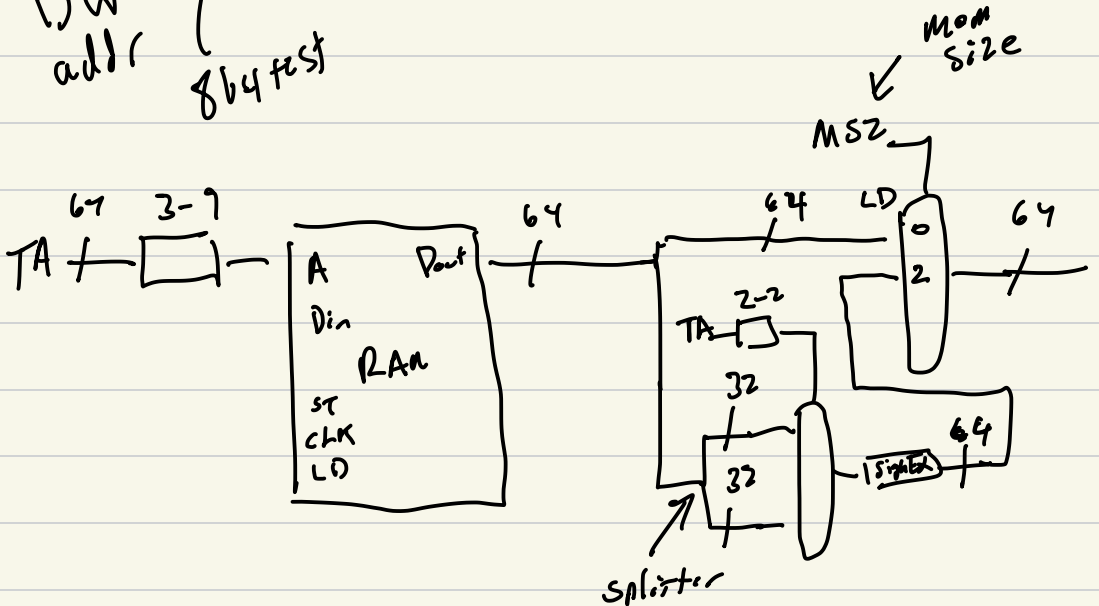
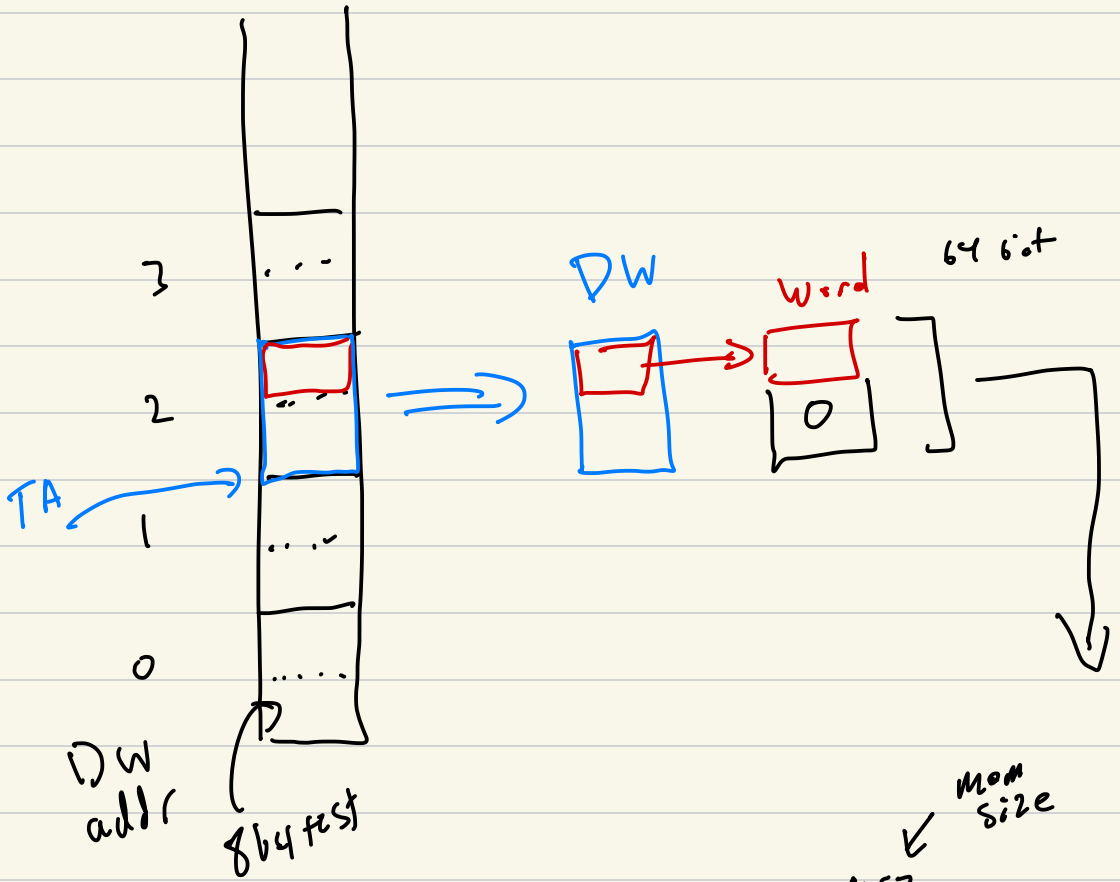
ld / sd

offset
base address
↓ ↓
ld to, 8 (sp)
target_addr = base + offset
(TA) = sp + 8



lw/sw (16/16)





ADDR

