

CS 631-02 Processor Design Memory $\frac{1}{2}$ Code gen

Data Memory

Inst name display

Code setup

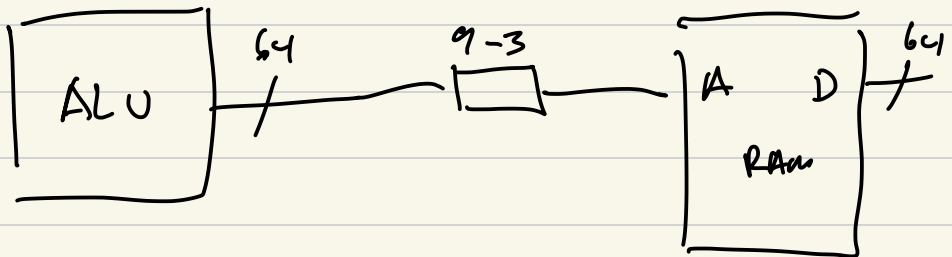
Code gen

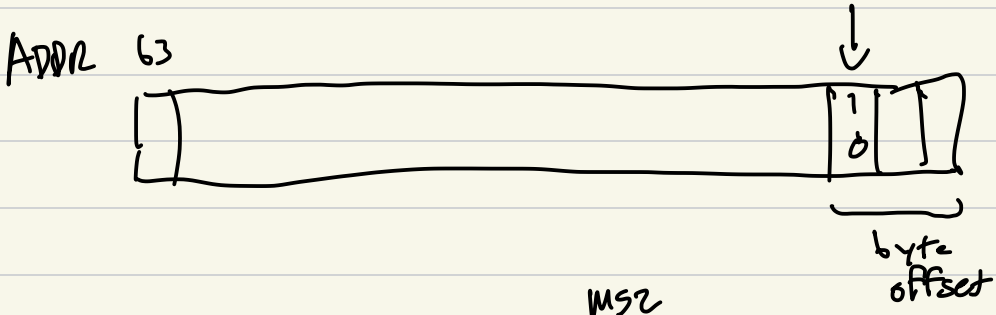
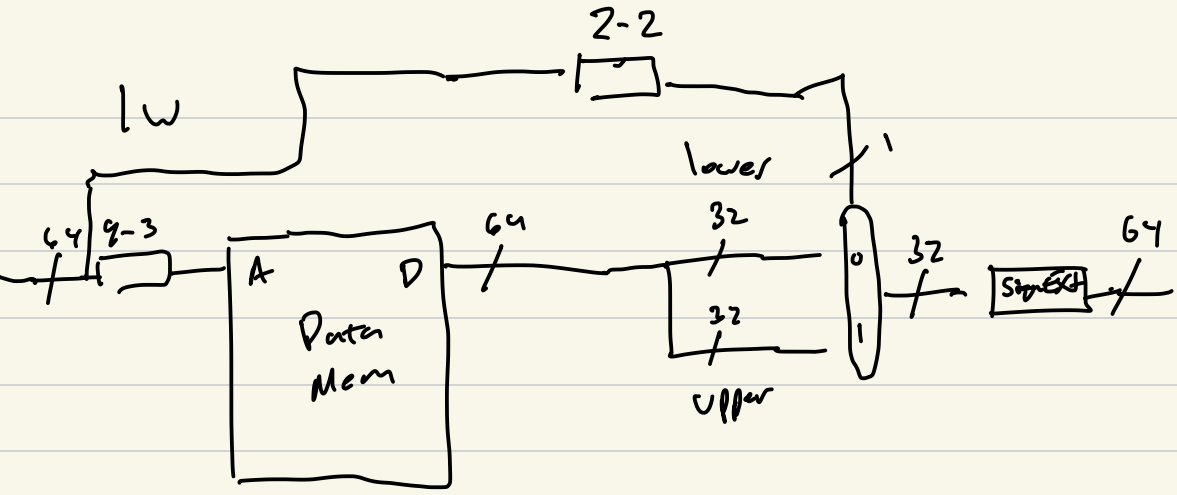
Data Memory

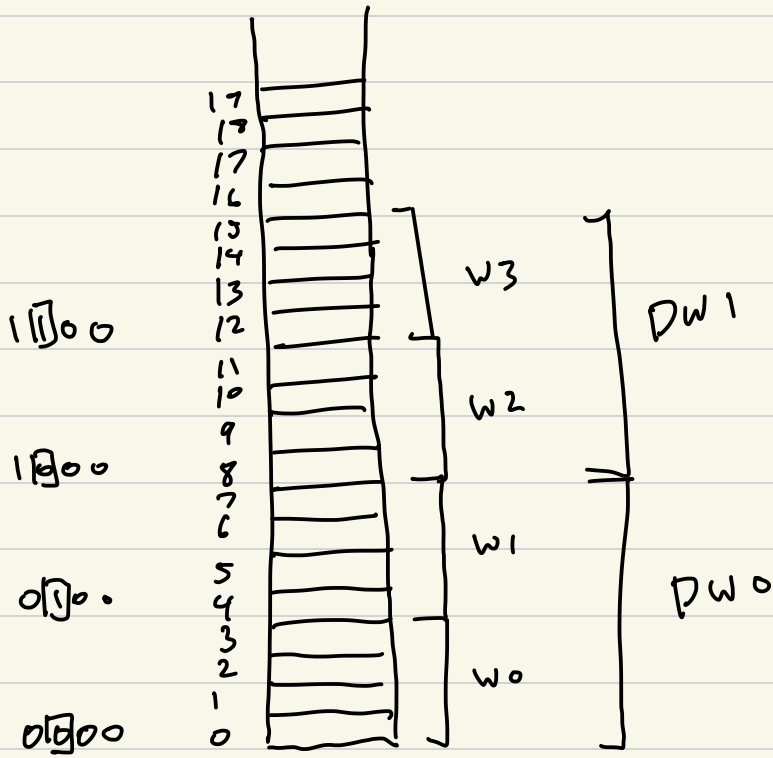
* ld

lb

lw

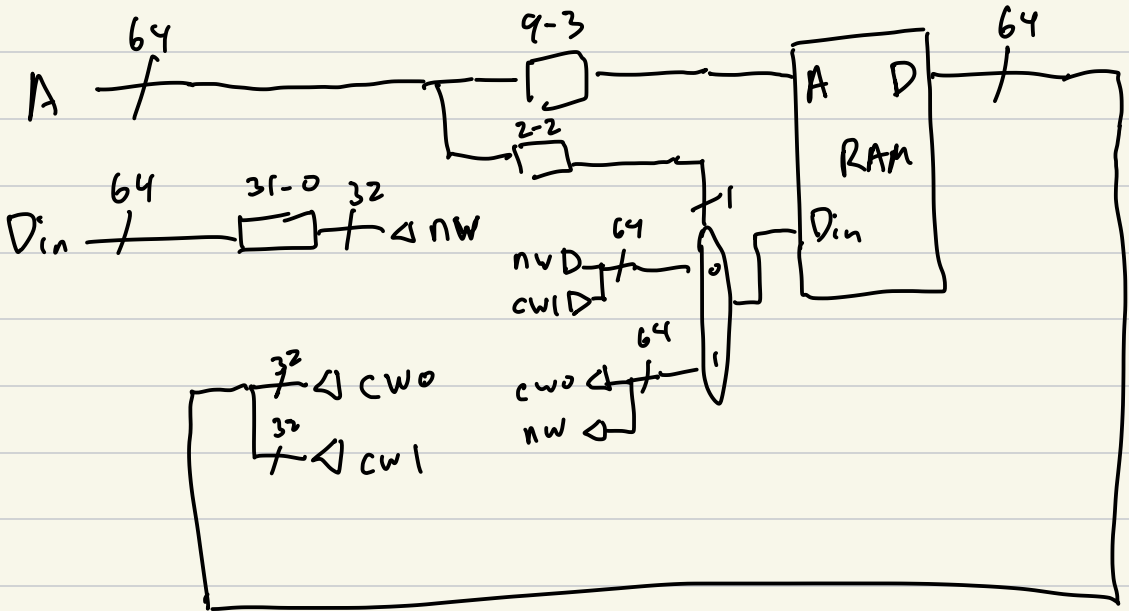




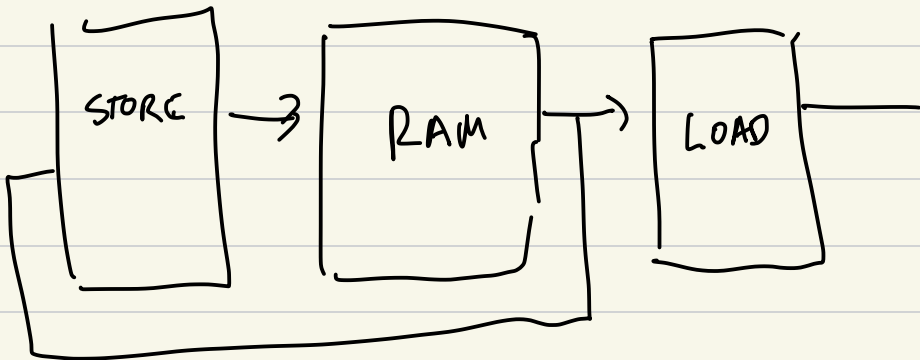


L → word
 selector

SW

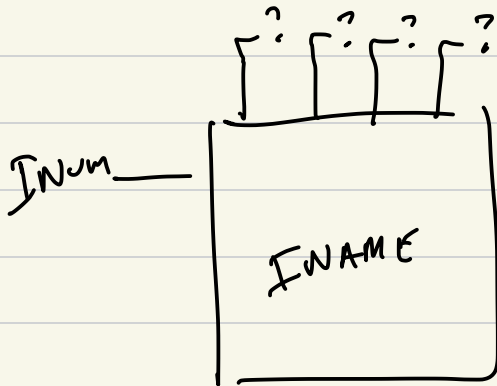
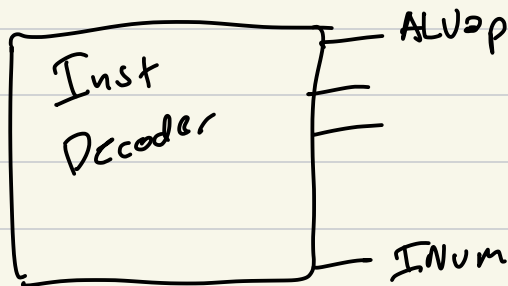


Read Modify Write



Instruction Name Display

ADDI



Project 05 Tests

Initialize the sp Stack pointer

7 addr bits

$$2^7 \cdot 2^3 = 2^{10} = \boxed{1024}$$

0 - 1023

Code gen

preamble

main:

li sp, 1024

mv a0, io_a0

mv a1, io_a1

⋮

lbu

$lbu \quad a_0, \underline{(x_0)} \quad \rightarrow \quad mv \quad a_0, i_0 - a_0$
 rd

$lbu \quad a_1, (x_1)$

.

:

$lbu \quad a_7, (x_7)$