

CS 631-01 Processor Design Branches Mem

Lab 07 Q&A

Project 05

Tests

unit tests

prog tests

codegen tests - project 02 utlans

Incremental development

Debug circuit

Major Processor Elements

Components

Data Path

Control Path

Remaining Instructions

Data processing

Branches

Data Memory

Setting up code to run on the processor.

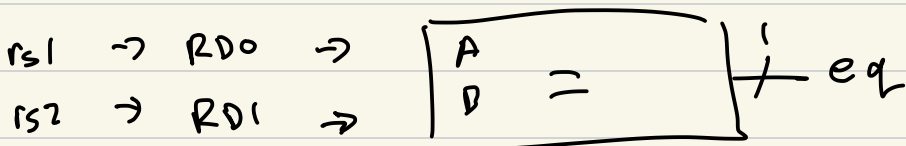
Branching

b eq t0, t1, label

1) Compute the BTA (branch target addr)

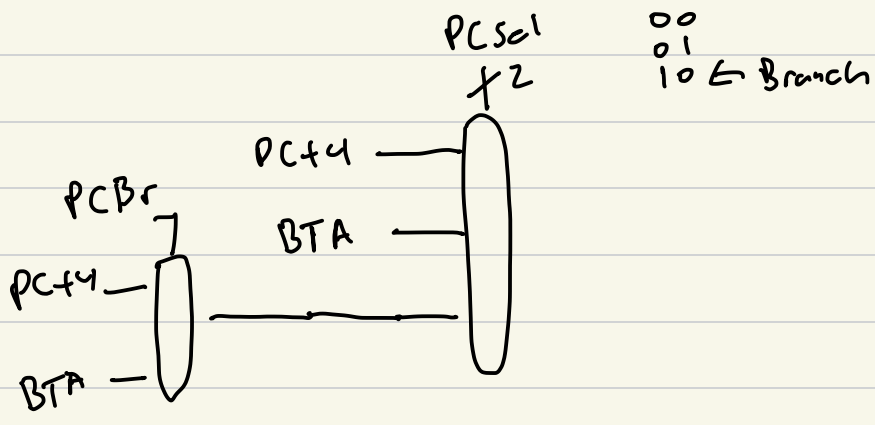
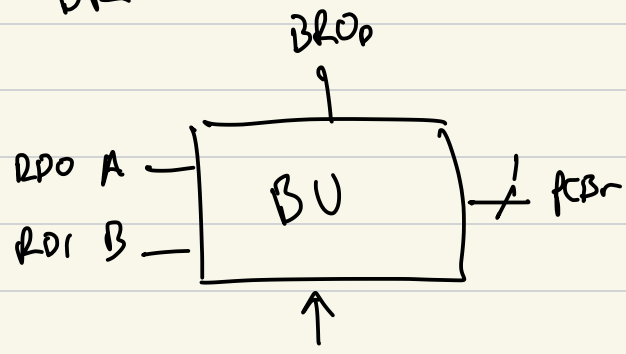
$$\text{BTA} = \text{PC} + \text{imm (b-type)}$$

2) Determine if we are going to take the branch.

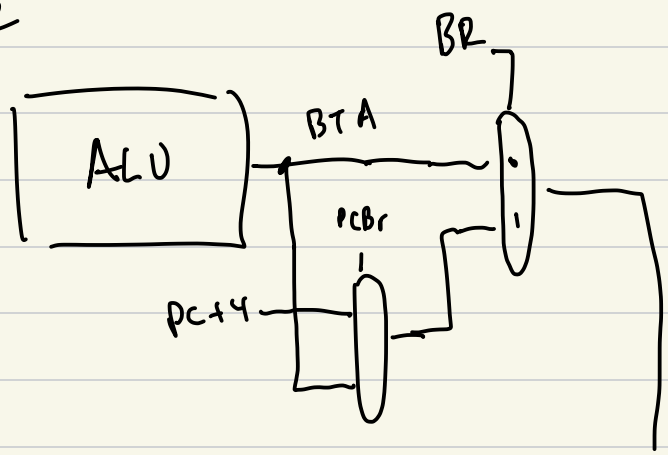


Option #1

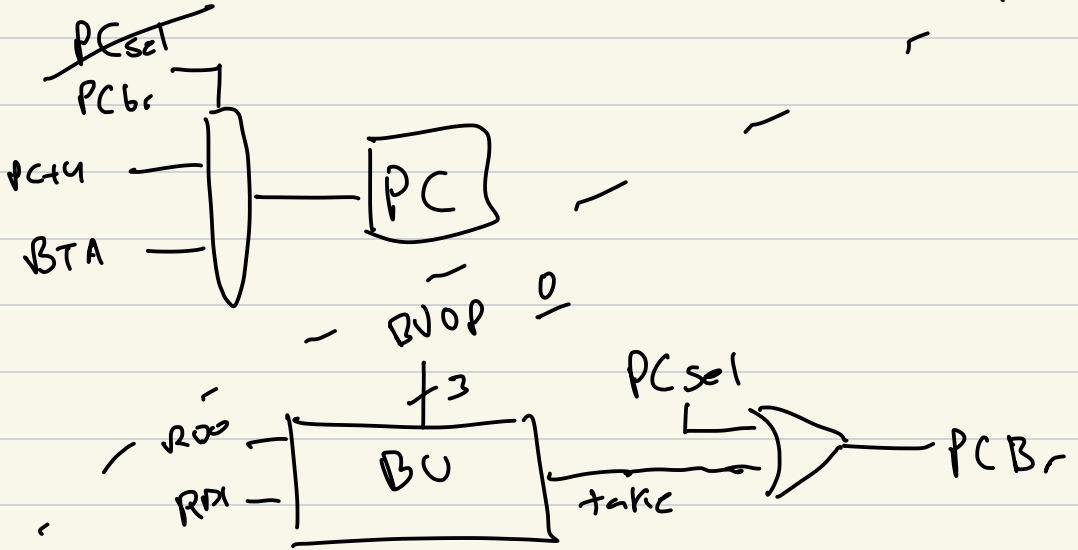
BR



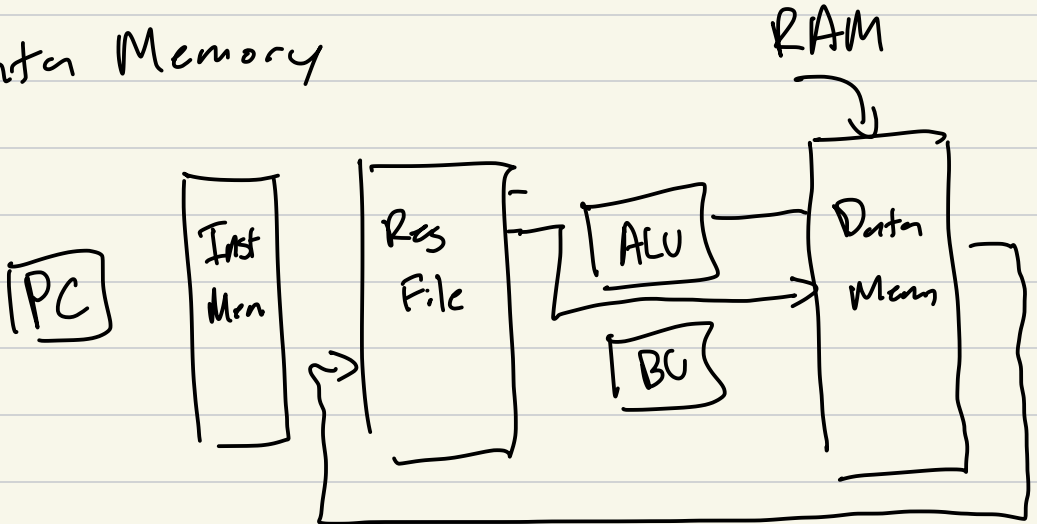
Option #2



Option #3



Data Memory



Target addresses

$lw\ to, 8(t1)$
 $\underbrace{\hspace{10em}}_{TA}$

$sw\ to, (t1)$

