

MIPS Datapath

Datapath

PC

Input



Output

Instruction Memory

Input



Output

Register File

Inputs

Read register 1

Read register 2

Write register

Write data

Control Line: Reg Write

Outputs

Read data 1

Read data 2

ALU

Inputs



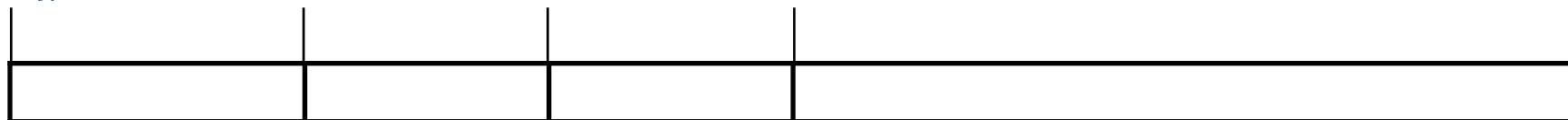
Output

Instruction Formats

R Type



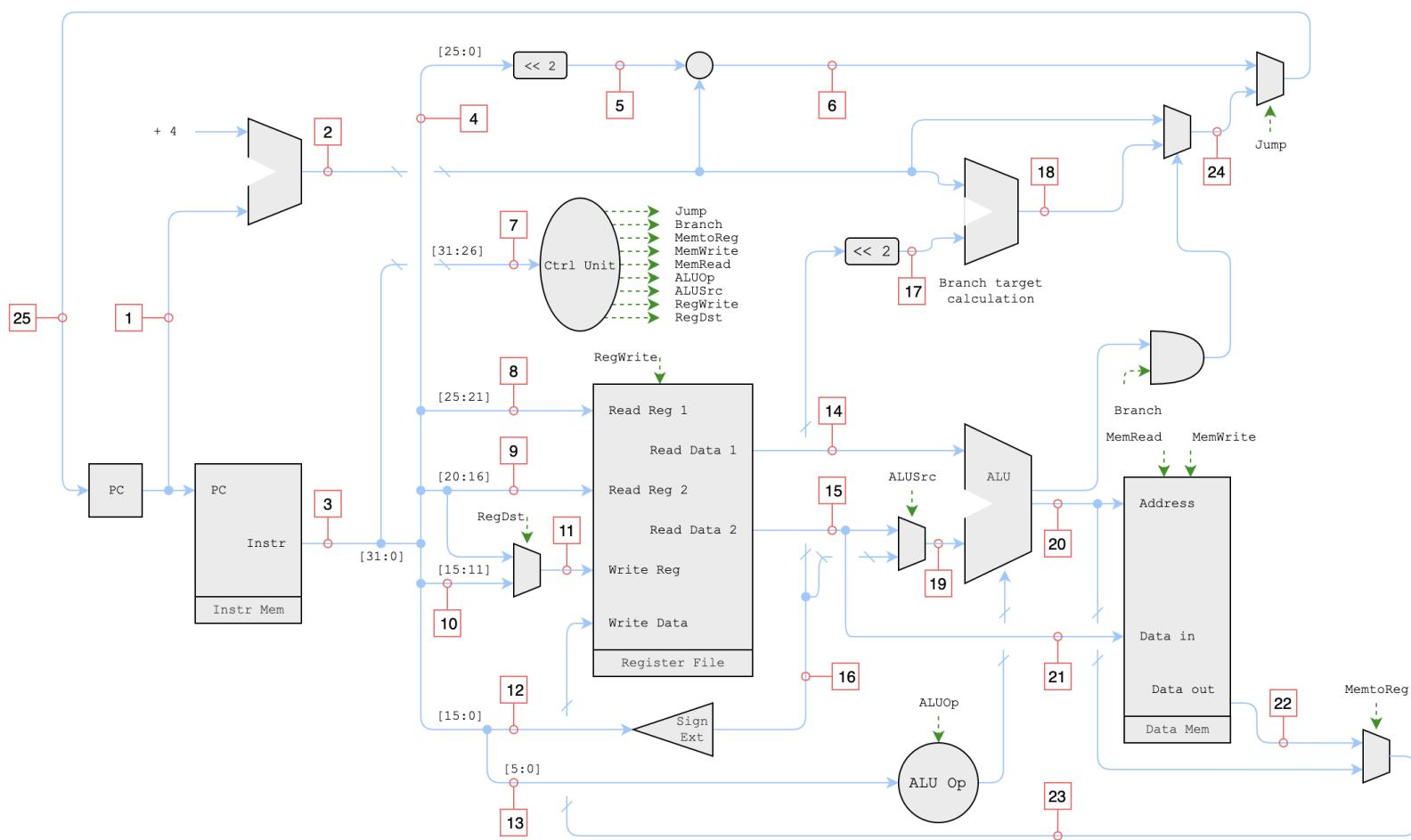
I Type



J Type



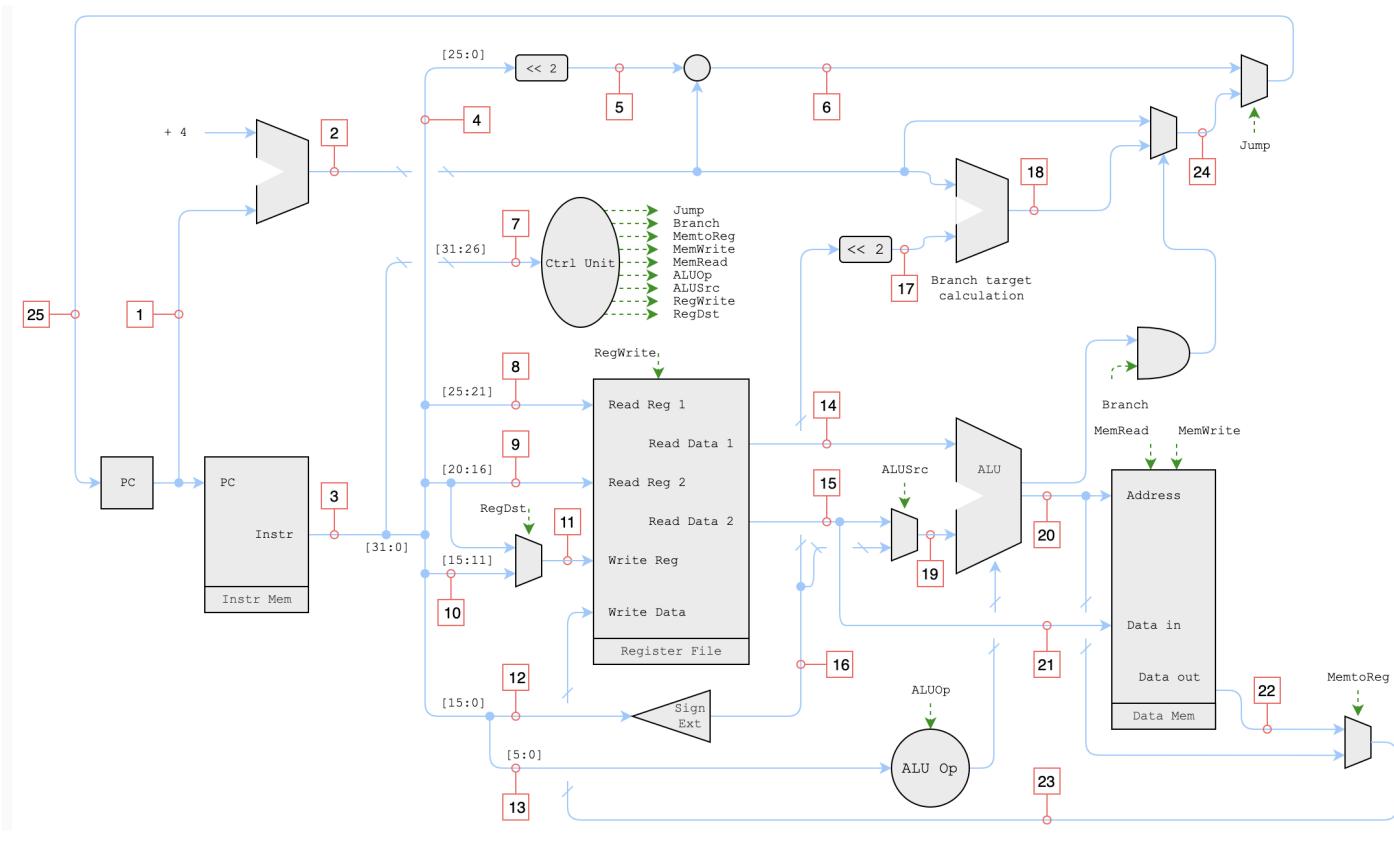
R Type



Arithmetic Example: _____



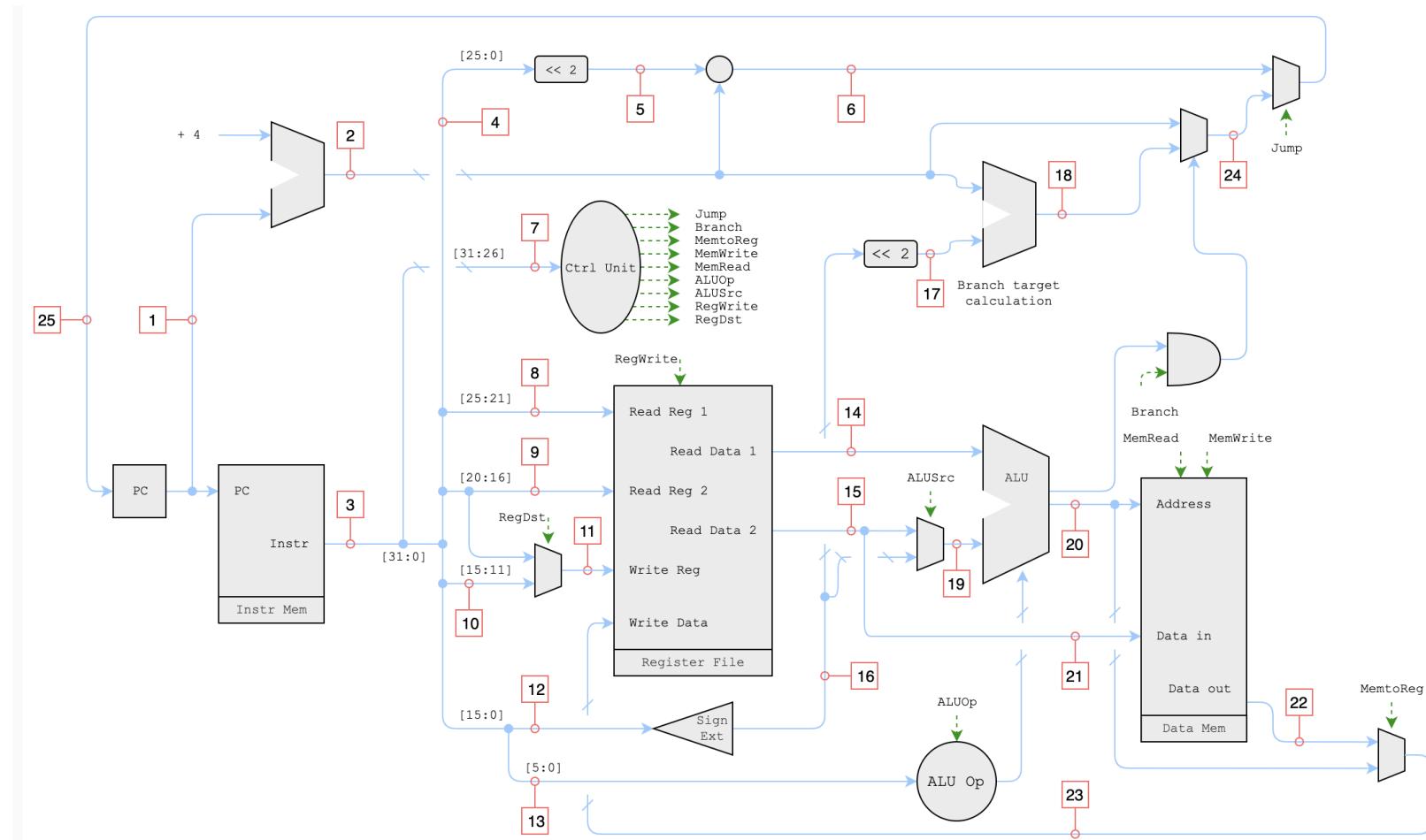
Initial Conditions



I Type



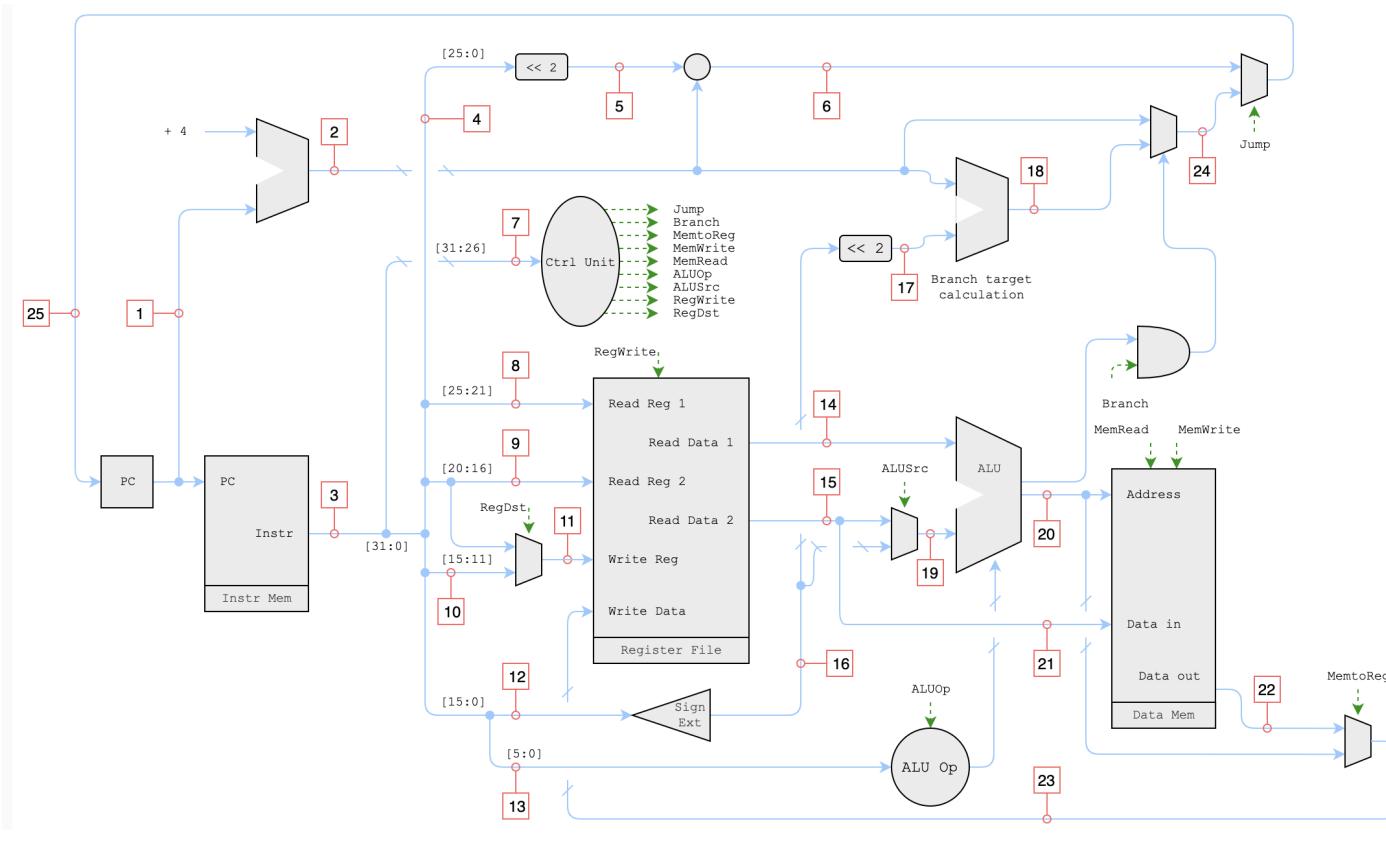
e.g.



Arithmetic Example: _____



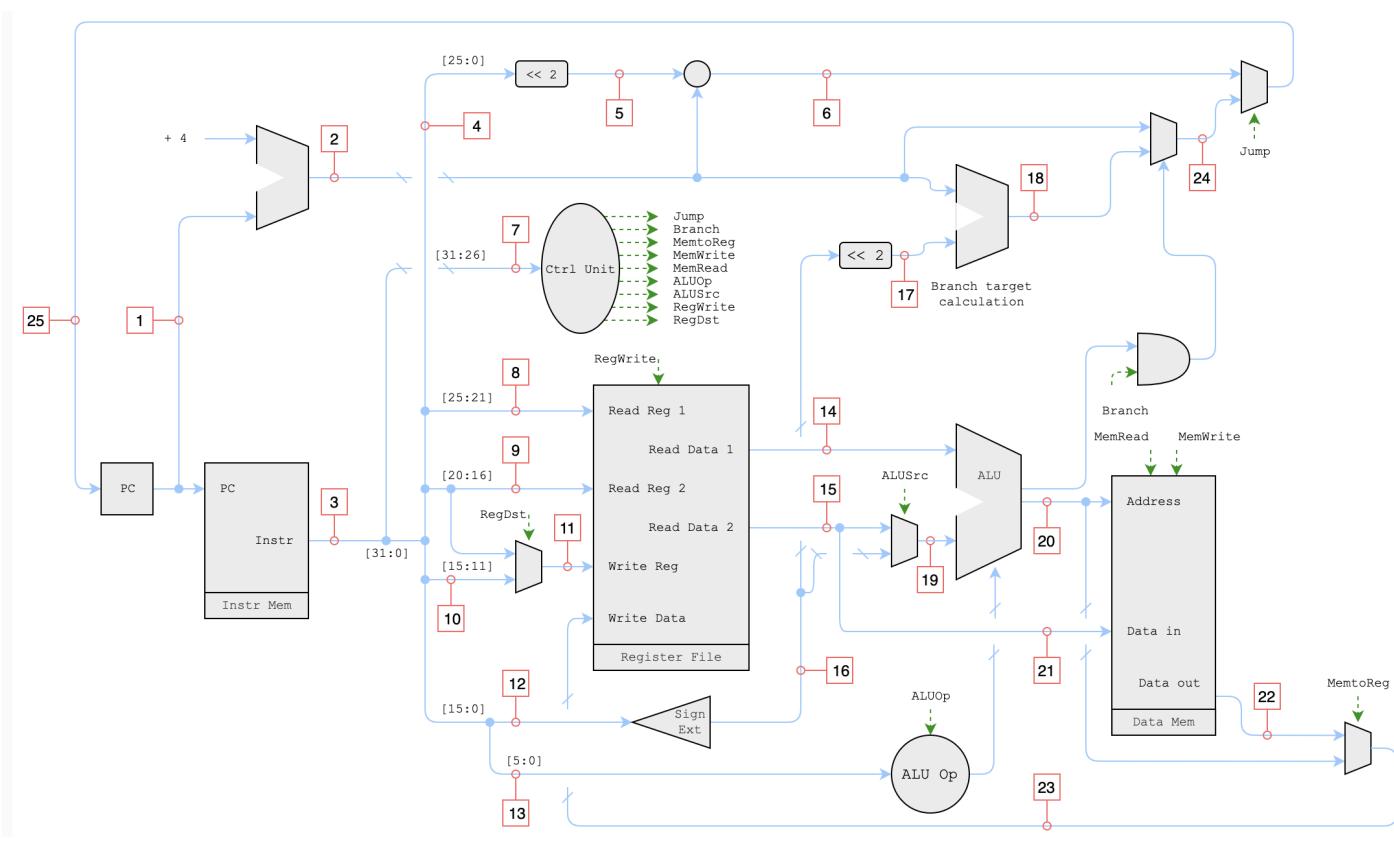
Initial Conditions



Load Example:



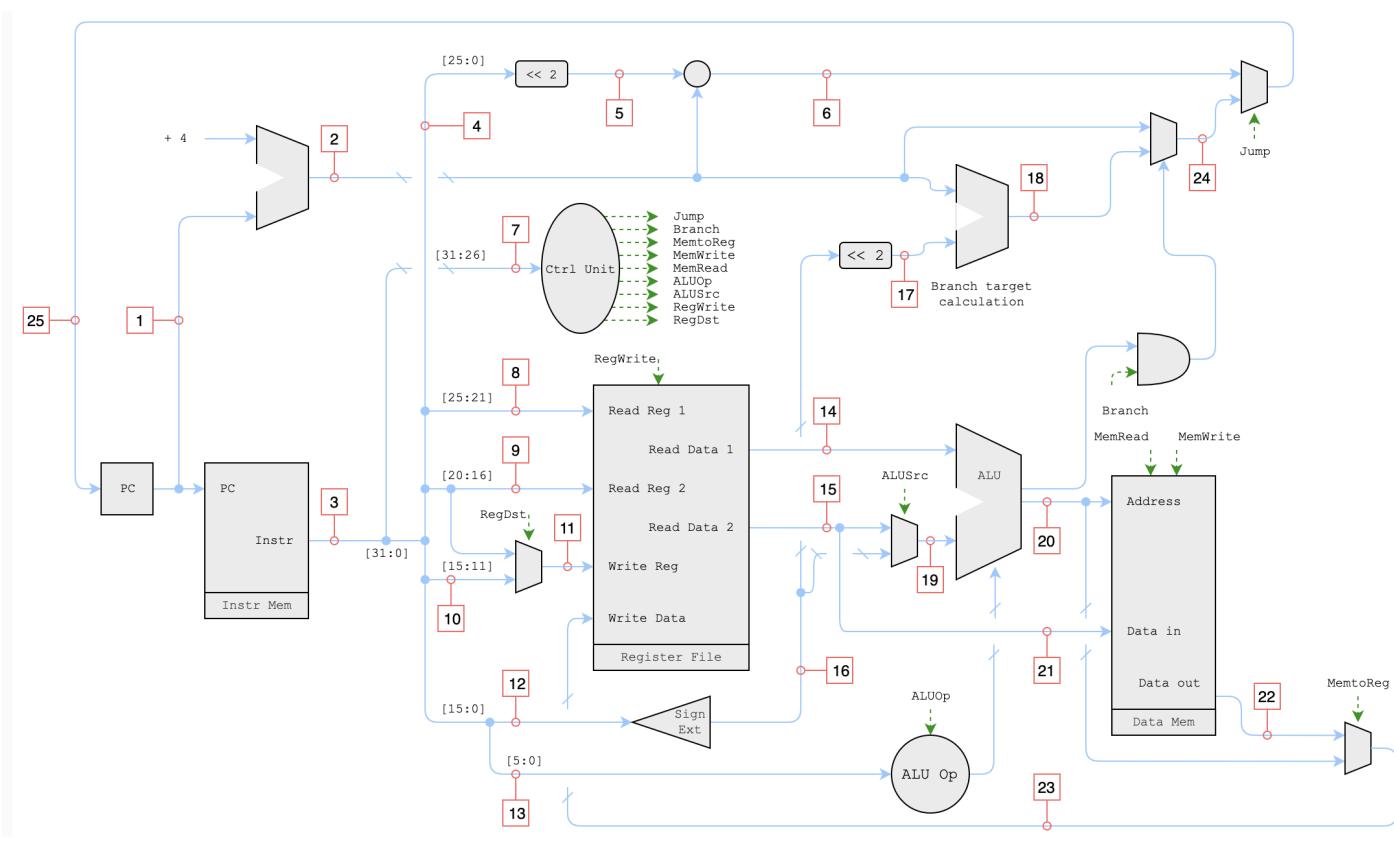
Initial Conditions



Store Example: _____



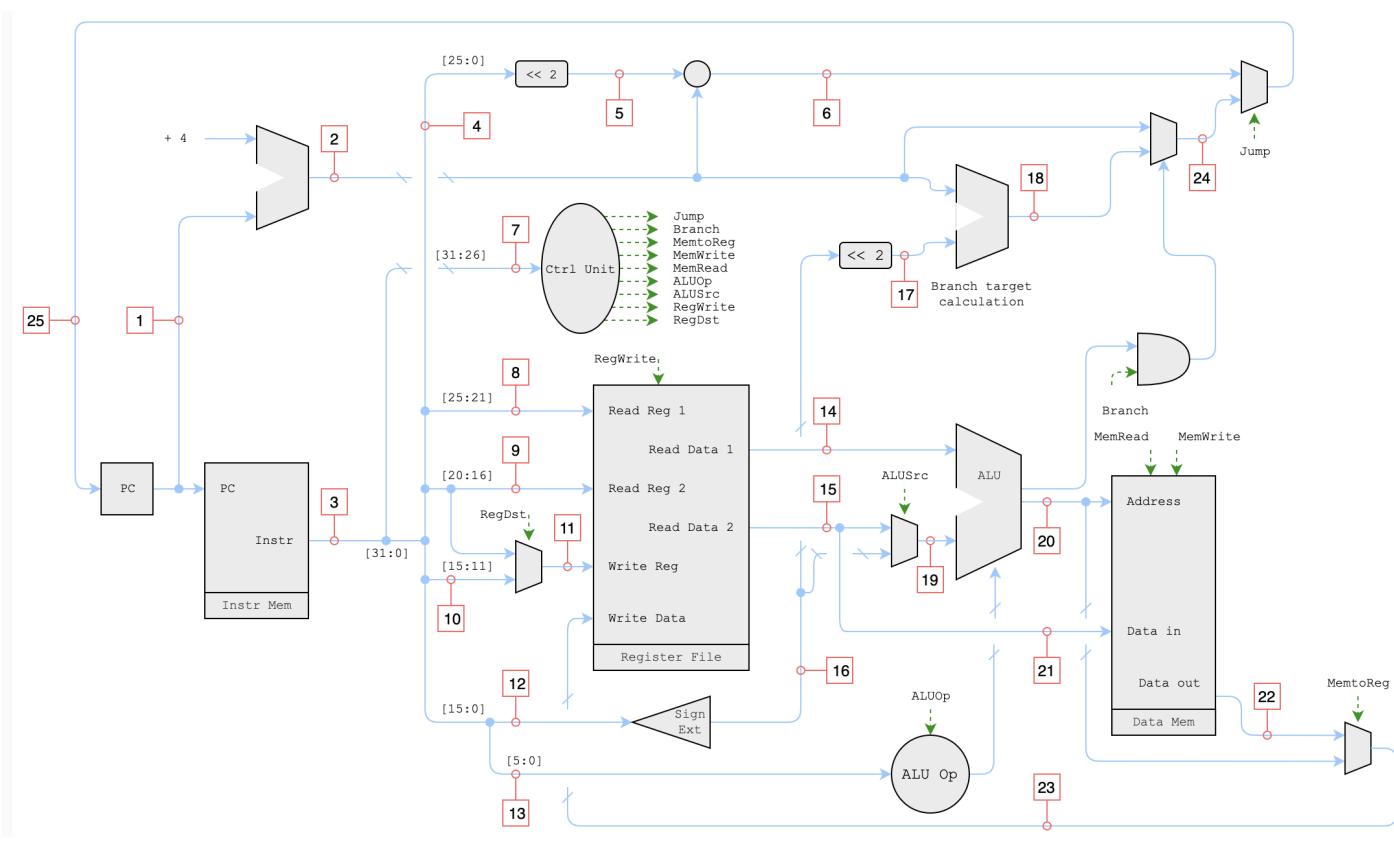
Initial Conditions



Branch Example:



Initial Conditions



J Type