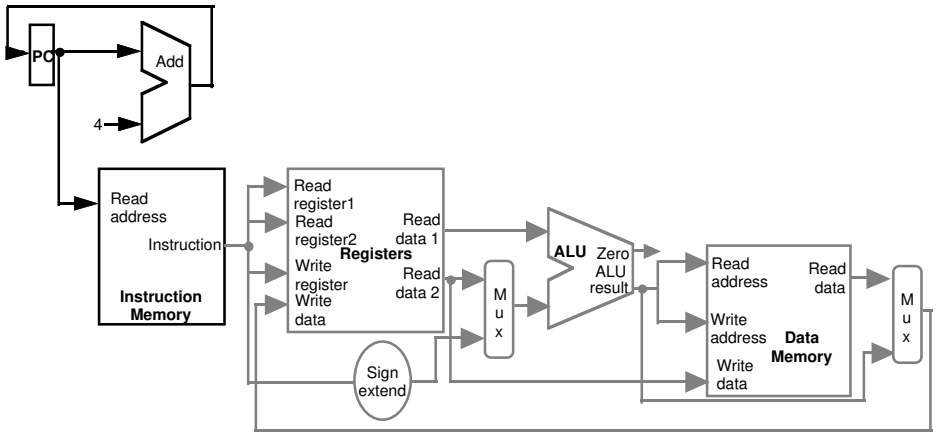
The Operation Of The Data Path

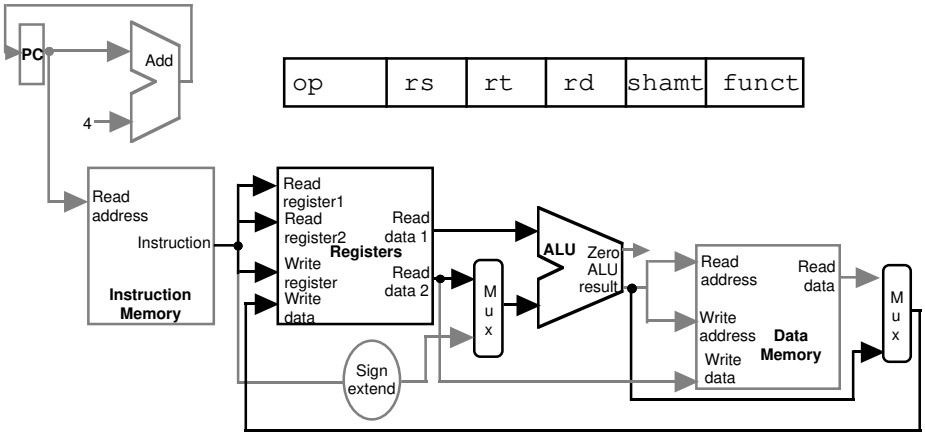
The data path implements the fetch execute cycle, fetching instructions, decoding, executing and incrementing the PC

Fetching Instructions



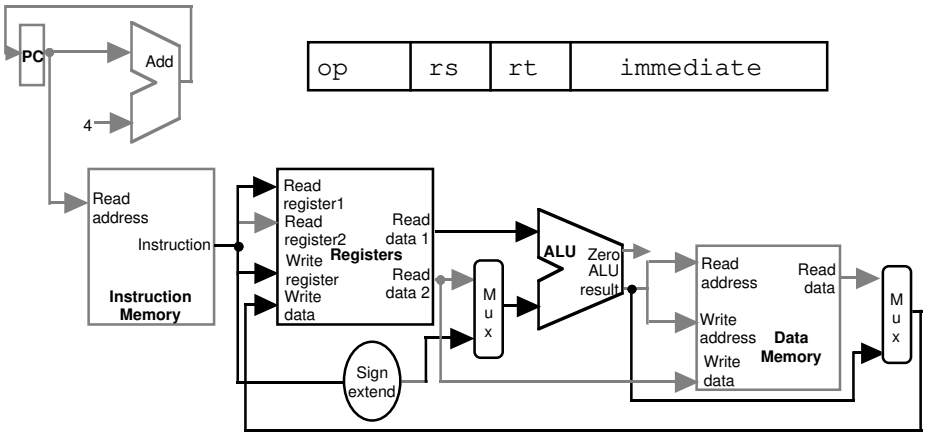
R-type Instructions

3 registers are referenced, 2 for reading, 1 for writing



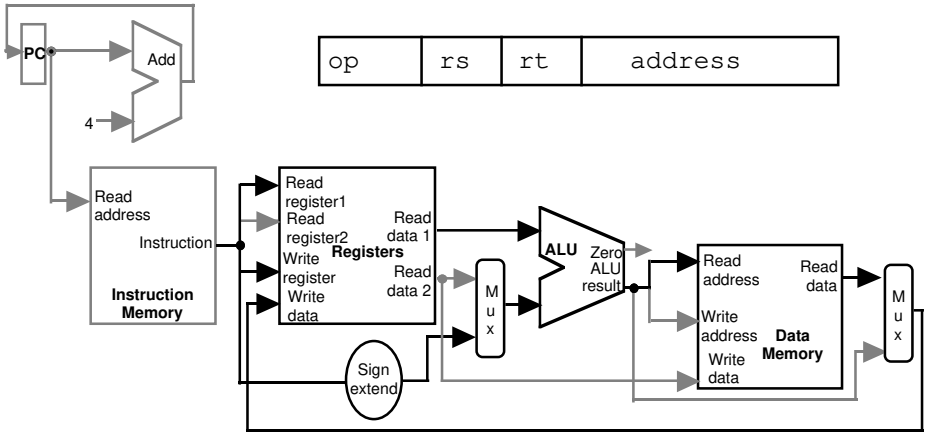
I-type Instructions

The immediate field must be sign extended



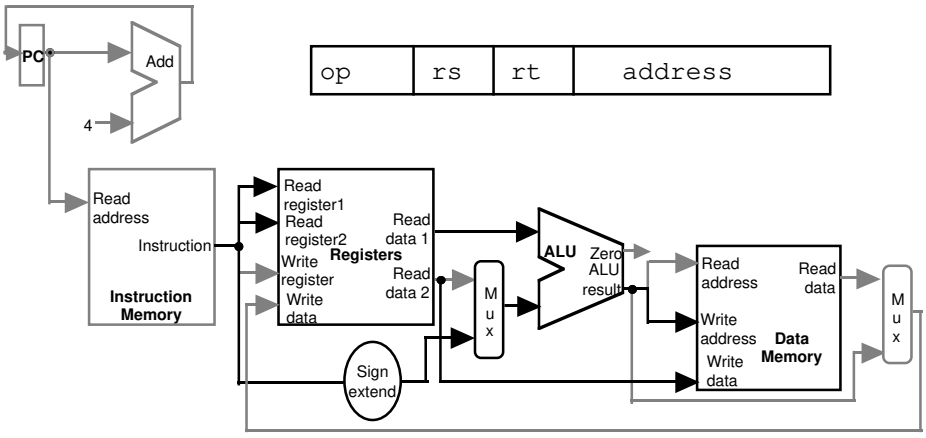
Load Instructions

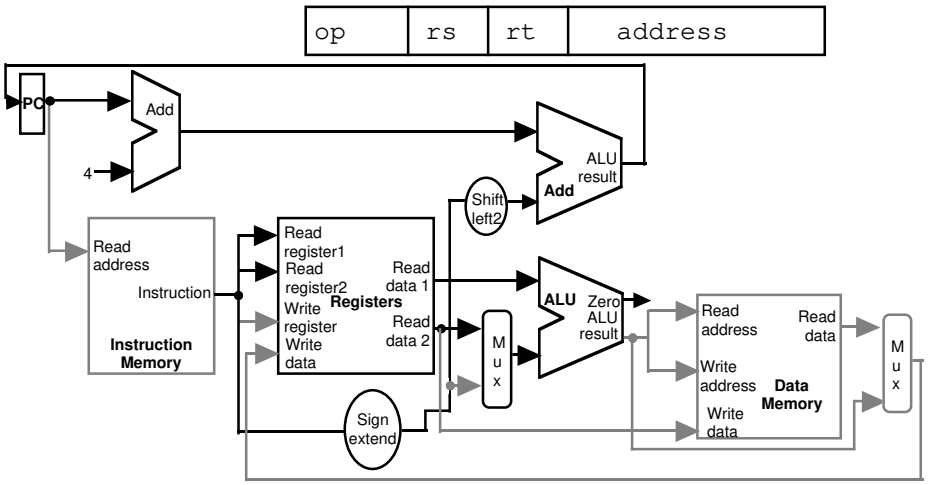
ALU output references data memory



Store Instructions

Write-back is not required



Branches

Test and compute effective address