



ECE/CS 252

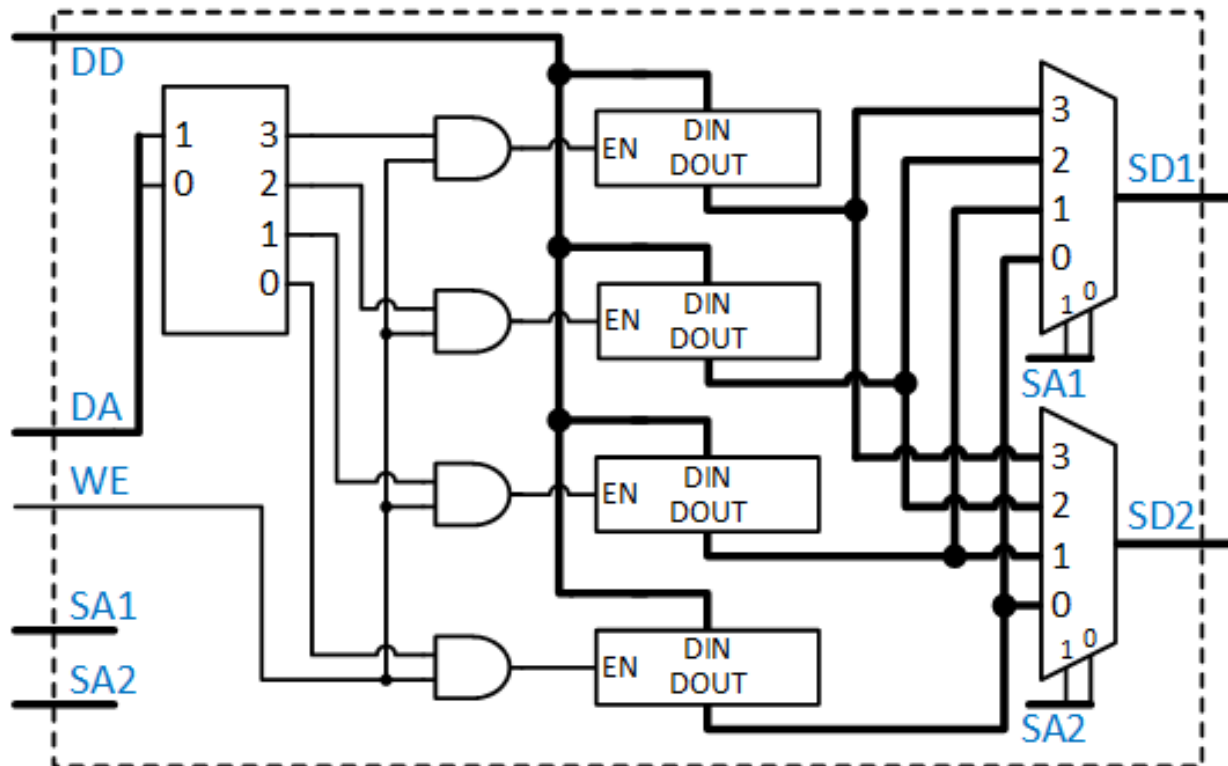
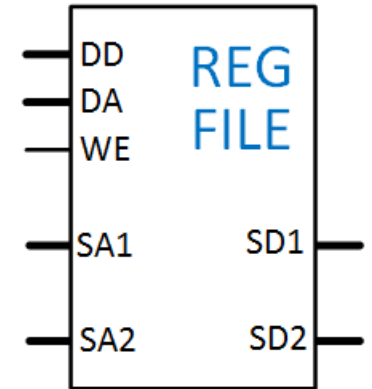
Intro to Computer Engineering

Week 06 Discussion



Register File

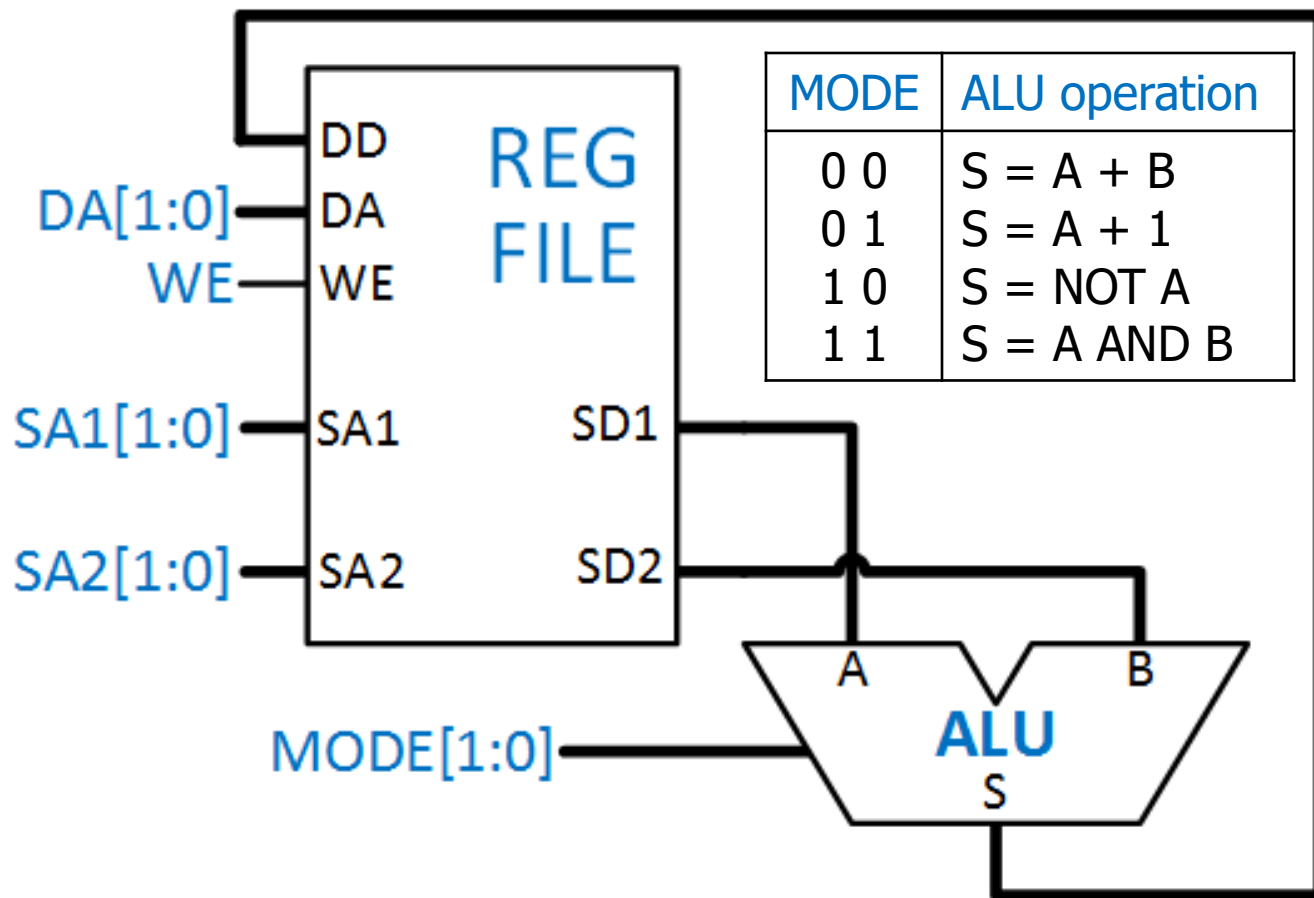
- What bitwidth are **SA1**, **SA2**, **DA**?
- Which register is which?
- How do we read from R2 and R3?
- How do we write to R1?





Simple Processing Unit

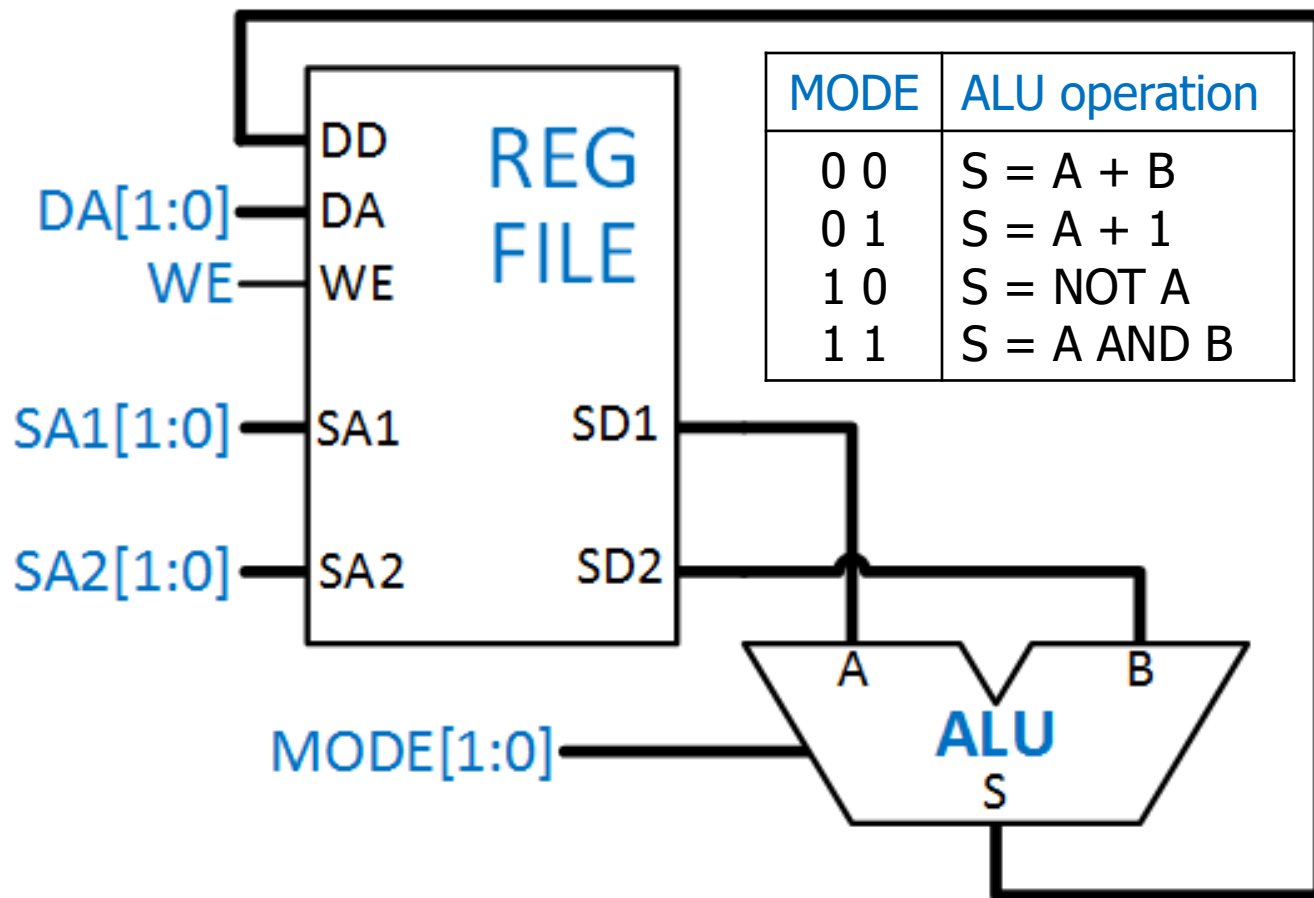
- How would we do $R1 \leftarrow R2 + R3$?





Simple Processing Unit

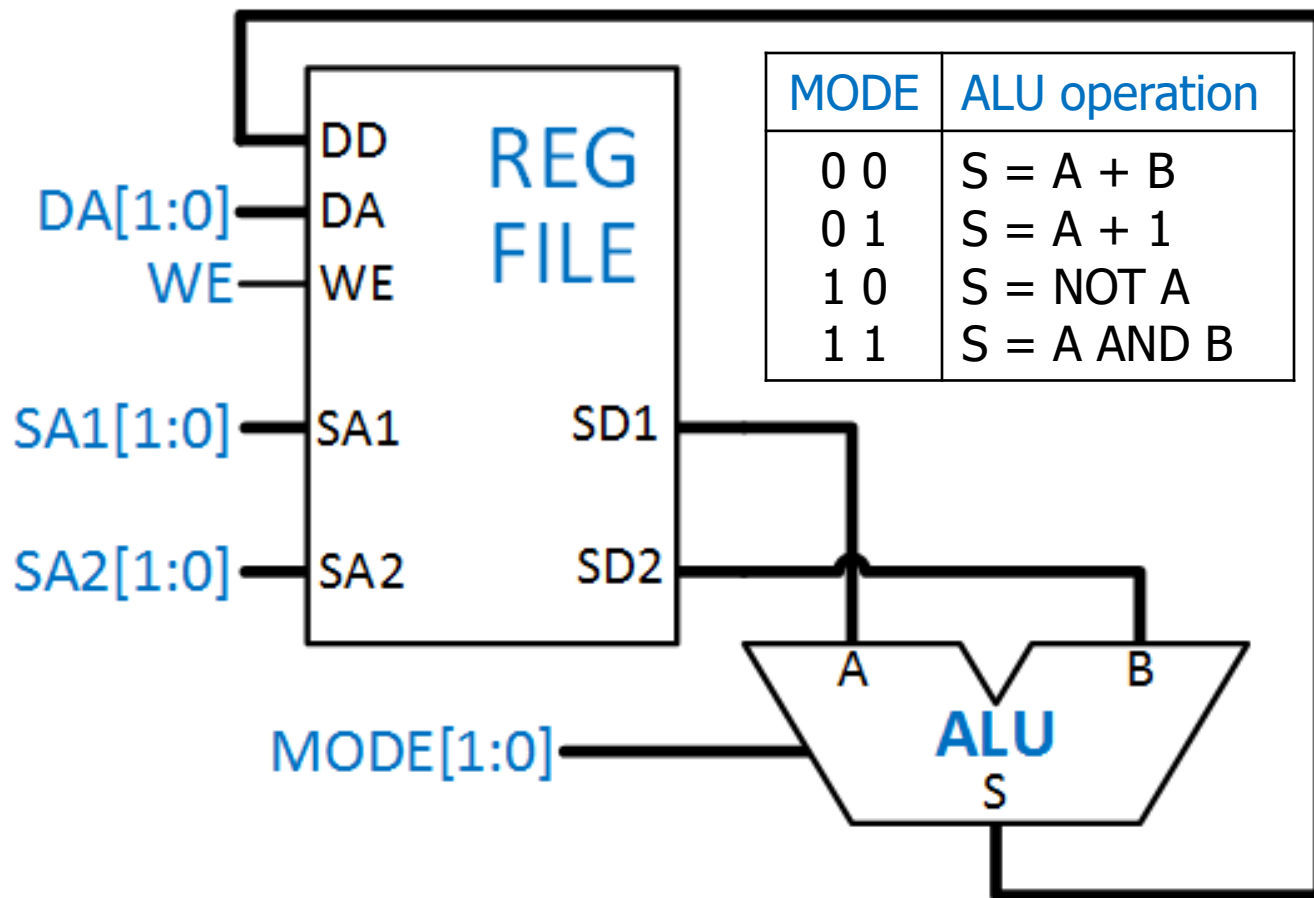
- How would we do $R1 \leftarrow R2 - R3$?





Simple Processing Unit

- What happens if we do $R1 \leftarrow R1 + R1$?
 - Assume R1 initially contains the value 5





von Neumann Model

- FETCH
- DECODE
- EVALUATE ADDRESS
- FETCH OPERANDS
- EXECUTE
- STORE RESULT



Wrapping Up

- Up Next:
 - LC-3 Instruction Set Architecture and Processor
 - LC-3 Operate Instructions
 - Basic LC-3 Programming
- HW06 contains the start of the tutorial for the simulator we'll use for all programming
 - Take your time...read for understanding
 - You'll be using this tool a lot from here on out!
- Remember your videos and reading
 - Including the video quiz!
- Questions?