

Things to know for the midterm

- Topics you should know and understand:
- 2.1-2.8
 - converting C/Java code to MIPS assembly
 - translating MIPS assembly to machine language
 - R-format, I-format, and J-format instructions
 - what each MIPS instruction does (add,sub,slt,bne..)
 - MIPS calling convention
 - MIPS register names and uses

Things to know for the midterm

- 1.4, 1.8
 - relating performance and execution time
 - relating instruction count, CPI, and clock rate
 - Amdahl's law
 - computing average CPI for a program

Things to know for the midterm

- ALU Design (lecture notes)
 - 1-bit and 4-bit ALU internals
 - how 1-bit ALUs are connected to construct a 4-bit ALU
 - Know carry lookahead equations
- 4.1-4.4
 - understand single-cycle datapath and control signals