Exam 3 Review

CSE 132

Logistics and Style

- Date and Time
  - Dec 4, 1pm to 2:20pm or 2:30pm to 3:50pm
  - Here in Hillman 70
  - Fill out top sheet when you arrive, but don't start yet
- Questions
  - Question 1 will be a collection of short answer things (e.g., true/false, multiple choice)
  - Questions 2 through N will be longer (going more in depth on a particular subject)
- Closed book, closed notes
- One page crib sheet allowed
  - 8.5" x 11" sheet, front and back, whatever you want to include (content-wise)

Scope is Assembly Language

- Not intentionally cumulative
  - Material since 2nd midterm exam is fair game
    - Modules 8, 9, and 10
  - But material can be cumulative!
    - Information representation
    - Logical operations
    - Etc.
- Similar length as previous 2 exams

Between Now and Then

- Please complete student evaluations
  - Extra credit for all if 75% of class fills it out
  - We really do value your opinions
  - I especially value specific comments on how to improve the course, e.g.:
    - Individual studios or assignments that could be clearer
    - Order, “If A were ahead of B, B would make more sense”
    - Some more background explanation of a topic
- Assignment 10 and Quiz 10B due Dec 02
  - No studio, but we will be there for help questions

Extra Credit Quiz

- Make up some points missed (for any reason)
- Excellent preparation for exam
  - All previous exam questions
- Logistics
  - On Canvas (Extra Credit Quiz 3E)
  - Available now, closes at 1:00 on exam day

Material Covered on Exam

- Fetch-decode-execute cycle
- Instruction set architecture of AVR
  - Registers, instructions, memory
- Relationship between C and assembly
  - Register usage
  - Passing parameters and return values

Assembly Language

- Basic instructions
- Data
  - Little-endian memory for multi-byte values
  - Operations on multi-byte values
- Addressing modes
  - Immediate, register, direct, indirect (X, Y, Z)
- Conditional branching
  - Condition codes
  - Signed vs. unsigned versions

Assembly Language (cont.)

- Array indexing
- Pseudo-operations
  - .global
  - .data
  - .text
  - .byte

What to expect

- Yes, you will have to write some code
- Yes, you will have to read some code
- We will not provide the complete instruction set of the AVR processor, populate your crib sheet wisely
- Exam will keep to commonly used instructions

What to expect (cont.)

- Yes, you do need to do simple conversions between hex ←→ decimal manually

- Include comments in code you write, so we can give partial credit if the actual instructions aren't what you think they are

Questions?