Introduction to CSED311 Lab

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Lab Information

- **TAs**
  - Sungjun Cho (allencho1222@postech.ac.kr)
  - Hyunuk Cho (gusdnr9779@postech.ac.kr)
  - Jeongmin Hong (jmhhh@postech.ac.kr)

- Use the group email alias (csed311-ta@postech.ac.kr) to contact TAs

- Use PLMS to submit the assignments and reports.

- **Use the Q&A board on PLMS to ask questions.**

Lab Coverage

- **Verilog (Lab 0 ~ Lab 1)**
    - Hardware Description Language
    - ModelSim: Design & Simulation Tool

- **CPU Design in Verilog (Lab 2 ~ Lab 6)**
    - Register
    - Datapath
    - Control Unit
    - Pipelined CPU
    - Cache
    - DMA

Lab Schedule

Week	Date	Topic
1	2/22	Lab 0: Lab intro, ModelSim, Verilog
2	3/1	Lab 1a: ALU, Vending machine
3	3/8	Lab 1b:Vending machine
4	3/15	Lab 2a: Single-Cycle CPU
5	3/22	Lab 2b: Single-Cycle CPU
6	3/29	Lab 3a: Multi-Cycle CPU
7	4/5	Lab 3b: Multi-Cycle CPU
8	4/12	**MID-TERM EXAM**

Week	Date	Topic
9	4/19	Lab 4a: Pipelined CPU
10	4/26	Lab 4b: Pipelined CPU
11	5/3	Lab 4c: Pipelined CPU
12	5/10	Lab 5a: Cache
13	5/17	Lab 5b: Cache
14	5/24	Lab 6: DMA
15	5/31	
16	6/7	**FINAL EXAM**

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Grading

- **Labs account for 35% of grading in this course**
  - Report: 20%
  - Demonstration: 80%

Lab	Topic	Weight
1	Vending Machine	5
2	Single-cycle CPU	10
3	Multi-cycle CPU	20
4	Pipelined CPU	35
5	Cache	20
6	DMA	10
Total		**100**

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Evaluation method

- You can test your implementation using testbench provided to students.

- Grading will be done with a testbench that is not shared with students.
  - You are encouraged to test your implementation with different testbenches you created.

Rule

- Each team has a **1-day late submission token**
  - You can use the token to avoid the late submission penalty for one day.
  - If you want to use it, let TAs know at the time of submission.

- For late submission (when the token is not used)
  - 1 day late: -10%
  - 2 days late: -20%
  - 3 days late: -50%
  - **4 or more days late: -100%**
    (you would still need to finish it to work on the remaining labs.)

- Cheating will be taken very seriously. Refer to the first lecture note.

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Team

- Form a team to work on the labs
  - Single-student (10% additional points) or two-student team

- Send an e-mail to TA by 2/27, 23:59 (Sun)
  - TAs (csed311-ta@postech.ac.kr)