

Lecture 12

◆ Logistics

- HW4 will be assigned on Wednesday, due 10/29
- Lab4 continuing this week
- Midterm1 in class on Wednesday this week
- Review session Tomorrow (Tuesday) 6pm in TBD
- Lots of office hours: M 5:30-6:45, T 12:45-2:30, 4:00-5:30

◆ Today

- Quick review of materials covered in midterm 1
- Logistics of midterm 1
- Questions
- Going over some problems

Topics covered

◆ Combinational logic basics

- Binary/hex/decimal numbers
- Ones and twos complement arithmetic
- Truth tables
- Boolean algebra
- Basic logic gates
- Schematic diagrams
- Timing diagrams
- de Morgan's theorem
- AND/OR to NAND/NOR logic conversion
- K-maps (up to 4 variables), logic minimization, don't cares
- SOP, POS
- Minterm and maxterm expansions (canonical, minimized)

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+ 34532

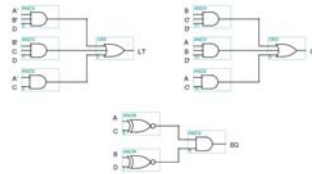
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I like Pink and Blue but not Yellow...

Topics covered (continued)

◆ Combinational logic applications

- Combinational design
 - ✎ Input/output encoding
 - ✎ Truth table
 - ✎ K-map
 - ✎ Boolean equation
 - ✎ Schematics
- Multiplexers/demultiplexers



Midterm 1 logistics

- ◆ 45minutes long (starts 10:35)
- ◆ Materials covered up to Lecture 10
- ◆ Closed book/notes, no calculator
- ◆ Scratch papers provided
- ◆ Just have your pencil/pen and eraser
- ◆ Raise hand for questions (don't walk to get help)