ECE455 Lab 2
Finite State Machines

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Please email through Learn

General Hints

- Quickly go through the manual
  - Hint: Focus on sections needed only for Lab 2.
- Requirements can be verified independently.
- Understand what is a “key debounce“ ?
- Understand what is a “hysteresis“ ?
- Debugging through printout will be important, i.e., current FSM state, set-point values, press type, ..
- Generic FSM means no logic to change if the FSM changes, just some configuration or hardcoded values.

Lab 2 Requirements

- Refer to the lab manual – not this slide !
- Part1 – Mandatory
  - FSM to accept a specific pattern.

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  - FSM should handle incorrect patterns.
  - Once accepted the pattern, stop.
  - FSM should handle key debounce.

Lab 2 Requirements – cont'd

- Refer to the lab manual – not this slide !
- Part 2 – Optional (extra 10%)
  - Thermostat with hysteresis – what is it ?
  - Hysteresis value is up to you.
  - Dot/dash press increase/decrease set-point.
  - LED indicates the "furnace" status.
  - All Info displayed on screen.

Lab 2 Deliverables

- A zip file that have your KEIL uVision project folder(s) that should have source files for implementation(s).
  - Don't submit 2 main.c files in the same project folder
- The binary file(s) you used to test your code. (.axf)
- Short pdf report of maximum 2 pages that briefly discuss your design decisions.
  - ✓ Please write your name and ID in the report.

Lab Deadlines

- Posted to LEARN:
  - ~~Lab 1 is due on May 20th~~
  - Lab 2 is due on June 10th
  - Lab 3 is due on July 4th
  - Lab 4 is due on July 22nd
- E2-2363 Lab is reserved for ECE455 all Thursdays 9.30-11.30am.

TA Contact

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- Learn announcement if I will be in the lab.
- If needed, will announce office hours.