ESE3002 In Class Assignment (Technical Plan)

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system-level description

power
management
subsystem

checkout pp. 166-168 in
Exploring Beaglebone, 2nd Ed.,
for more information on
debouncing

MCU

momentary
pushbutton

debouncer

GPIO

GPIO

LED driver

LED
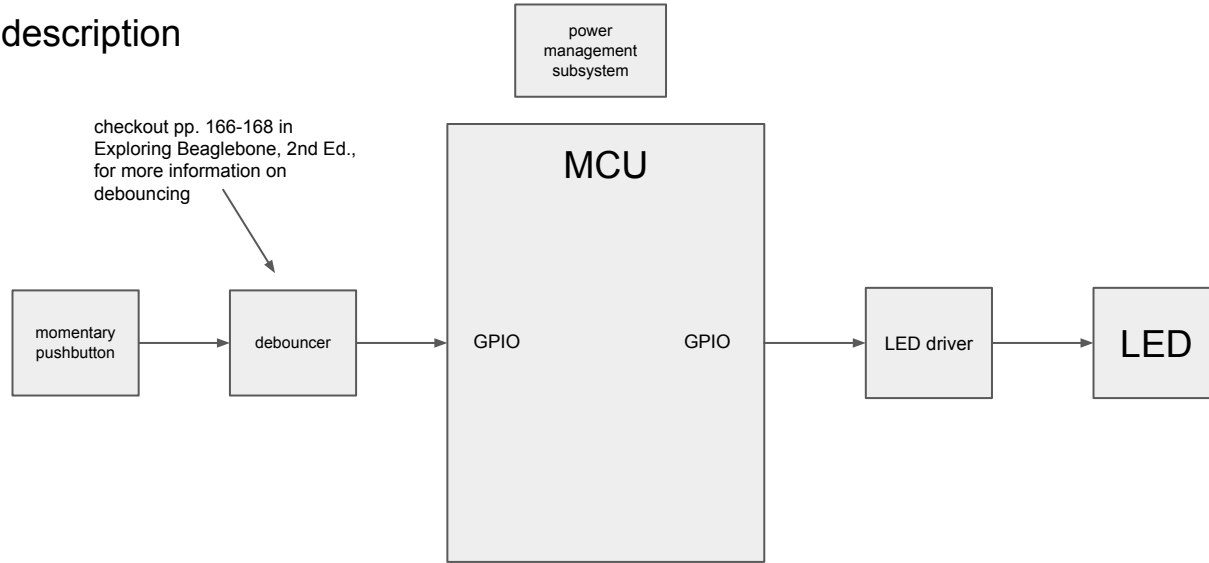
Operation:
- initial condition: on power up, the LED is OFF
- if user presses the button, the LED begins to flash brightly at 2-Hz
- if user presses the button again, the LED stops flashing, and stays ON
- if user presses the button yet again, the LED turns OFF
- any subsequent button press, starts flashing the LED again, and the same
  operation continues

your in-class assignment

provide as a group the detailed technical plan for this system

1) hardware-level description
2) software-level description

criteria for knowing if you are finished:

- anybody who is an electronics engineer can take your plan and build the system for real!
- your document is **beautiful**

what makes a design beautiful?

- "proper" integration; (choice of components to meet requirements)
- readability
- detail
- what does "beauty" mean to you?
- B. Allen: "beauty as the anticipation of experience"