

Electronics II

Exercise 2

Deadline Wed 7.2.2018 12:00

1. Use an active buzzer to make a one second beep when a tilt switch is tilted. Realize this by attaching the switch to an interrupt. (1.5p)
2. Made an LED change its brightness in response to the ambient light. (1.5p)
3. Make an RGB LED cycle through red, green, blue, yellow, purple, and aqua. Use an interrupt attached to a timer instead of the delay() function. (1.5p)
4. Make a water level indicator which shows green in the absence of water, yellow if there's some and a flashing red with a beeping buzzer if it's flooded. (1.5p)

There are many ways to achieve the described functionalities but in tasks 1 and 3 we want you to familiarize yourself with interrupts and timers. These enable fast response times and free processor resources in more demanding applications.