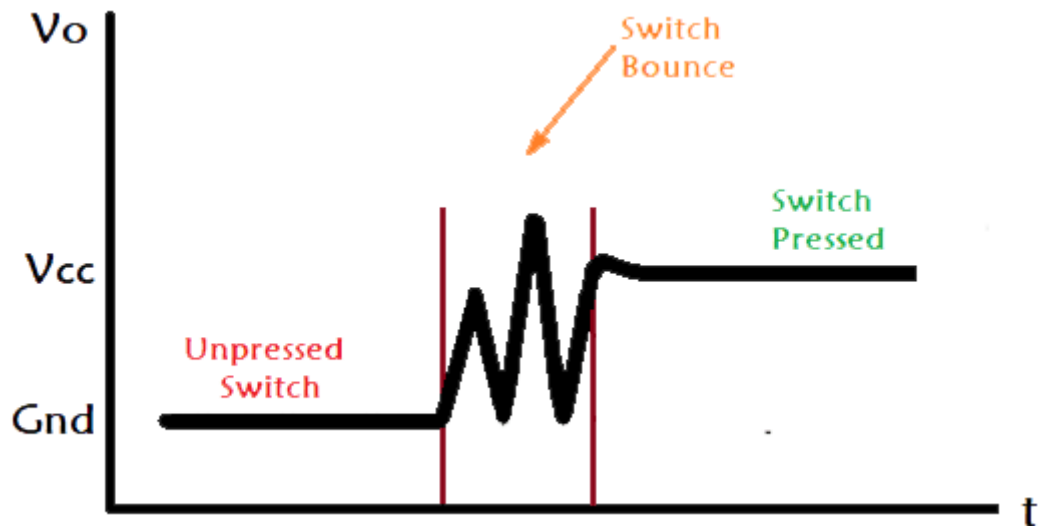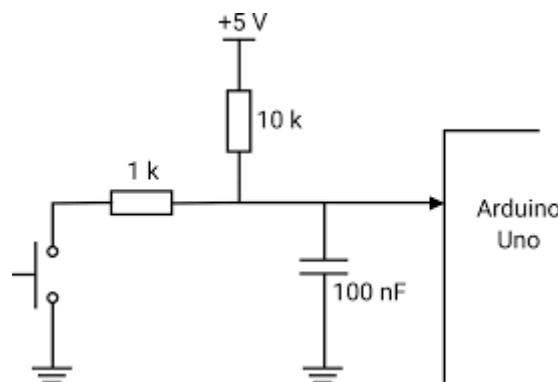Bouncig button

when a mechanical push button is pressed , the contact doesn't touch and rest but keep oscillating at first then oscillation reduces till they keep a constant contact , the oscillation tricks a reading device such as arduino to think the button was pressed and released multiple times while in fact it was only one press

over comig the problem

using a high pass filter to take out the high frequencies , inside the code we could add a delay after detecting a change in the button state to make sure the oscillation is damped