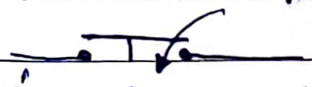
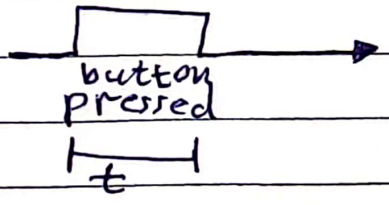
Oscillators

Monostable:



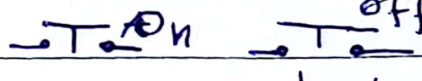
give it a pulse

& It will give you stable Vout for T time

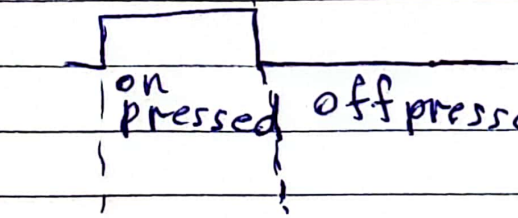


$t = 1.1 R_1 C_1$

Bistable:

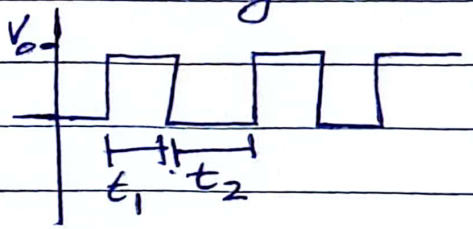


press on button & it will give you a specific voltge press off, you will get 0 Vout



Astable:

press the button & you will get



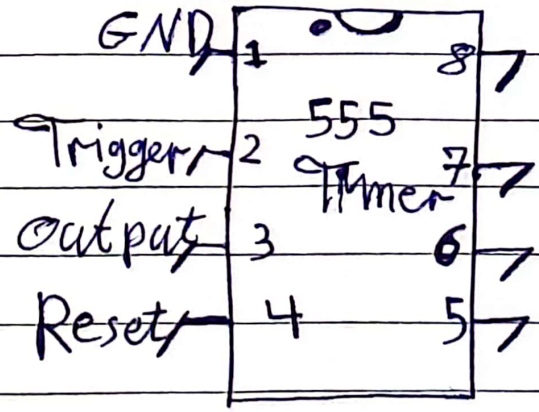
$t_1 = 0.2$

$t_1 = 0.693 (R_1 + R_2) C$

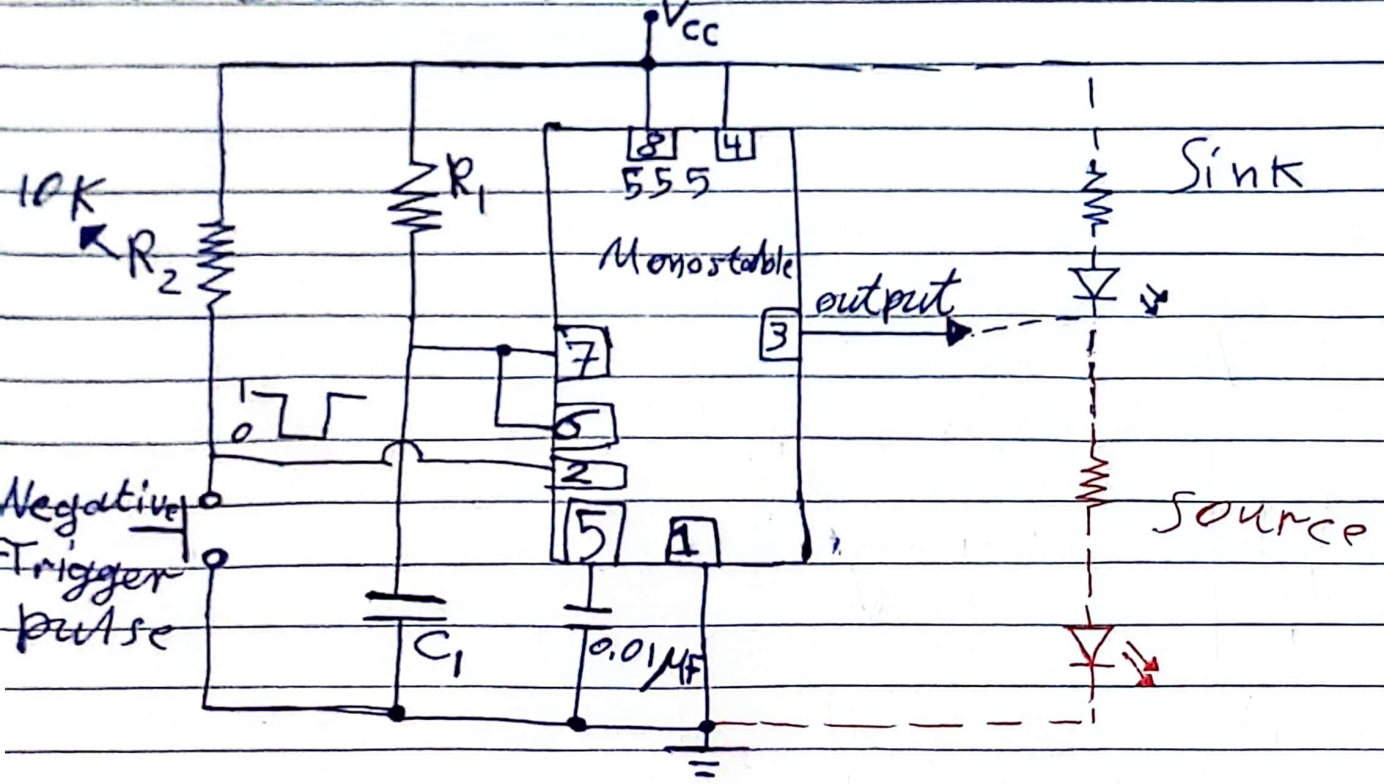
$t_2 = 0.693 R_2 C$

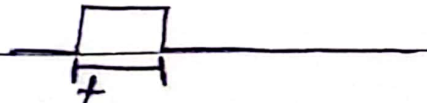
$T = t_1 + t_2$

$f = \frac{1}{T}$



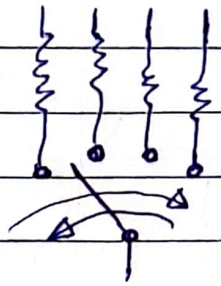
Monostable ckt





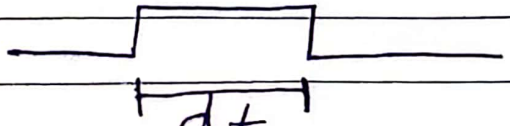
$t = (R_1 C_1)\ 1.1$

you can change R_1 with:



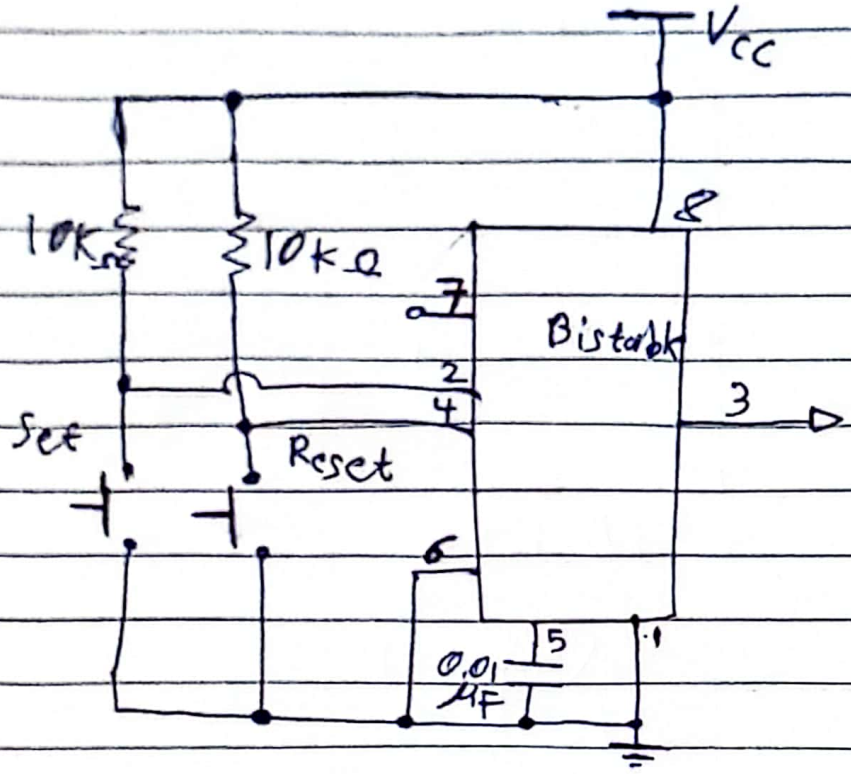
So you can Generate differen

time constant V_o

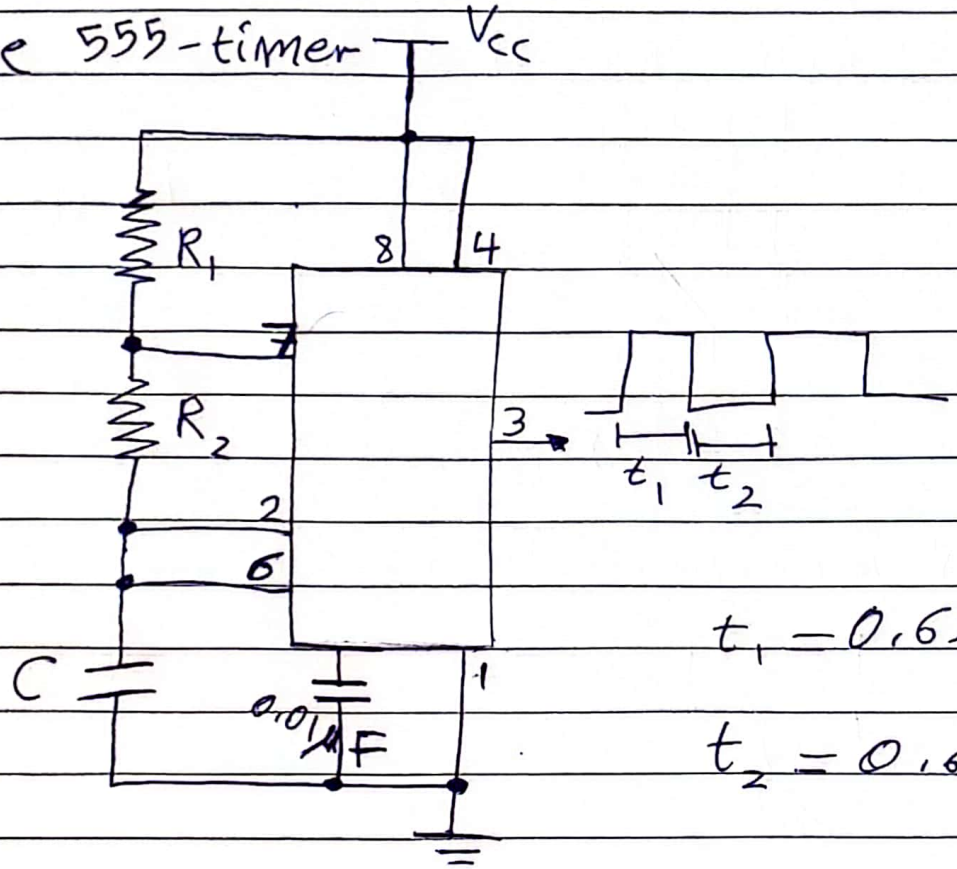


$\frac{dt}{dR}$

Bistable 555-timer



Astable 555-timer



$t_1 = 0.693 (R_1 + R_2) C$

$t_2 = 0.693 (R_2) C$

If you want $t_1 \simeq t_2$

make $R_1 \downarrow\downarrow$