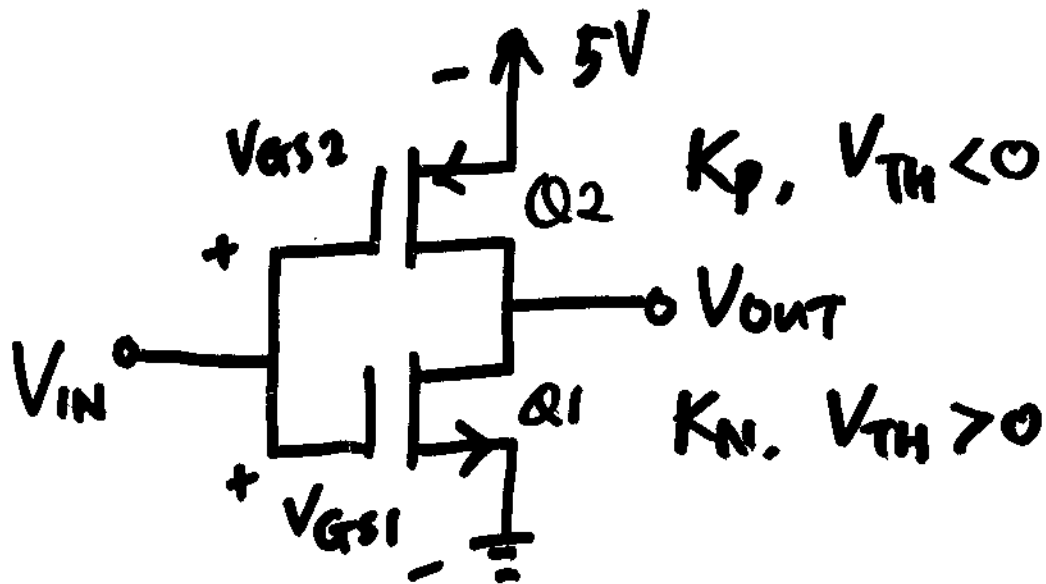


CMOS Inverter



$$V_{IN} = V_{GS1} \quad , \quad V_{OUT} = V_{DS1}$$

i) $V_{IN} = 0$, Q_1 cut-off , $I_{D1} = 0$

$$I_{D2} = 0 \Rightarrow V_{DS2} = 0$$

$$\Rightarrow V_{OUT} = 5V$$

ii) $V_{IN} = 5V$, Q_2 cut-off , $I_{D2} = 0$

$$I_{D1} = 0 \Rightarrow V_{DS1} = 0$$

$$\Rightarrow V_{OUT} = 0V$$

NO POWER DISSIPATION in steady state condition

Power Dissipation when transition