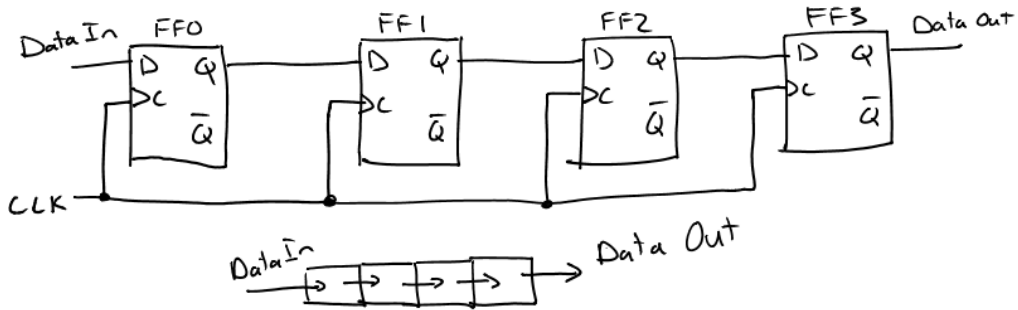


Registers

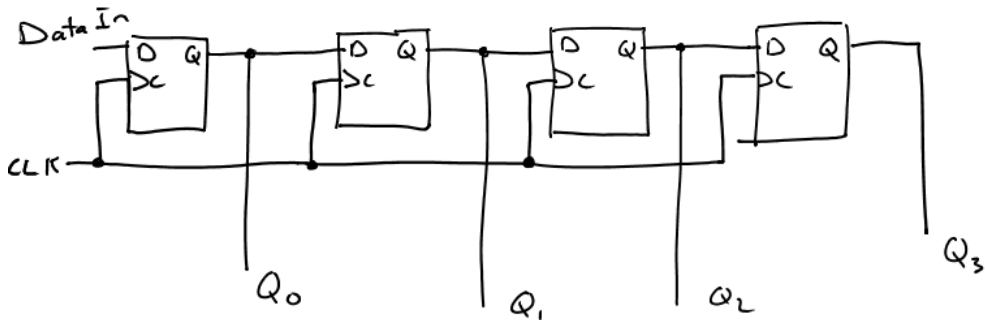
- Used for data storage
- Made up of Edge-Triggered D Flip-Flops

Serial In/Serial Out Shift Register

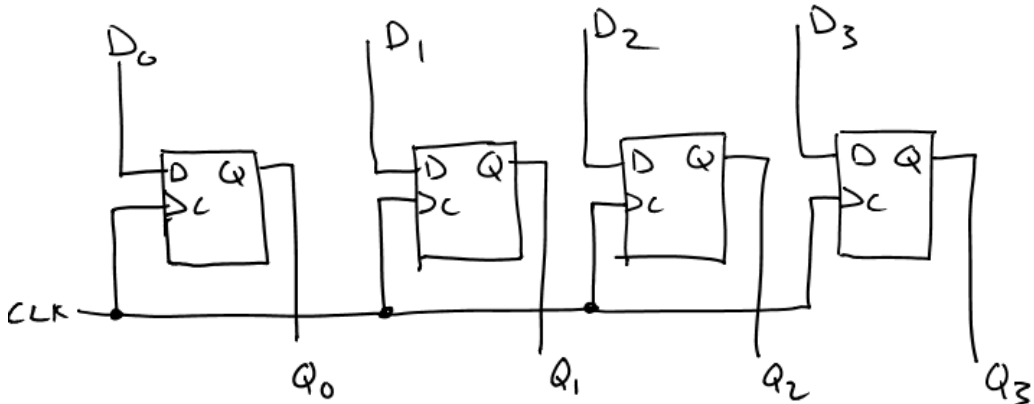
D Flip-Flop $\Rightarrow Q = D$ at the edge trigger



Serial In/Parallel Out Shift Register

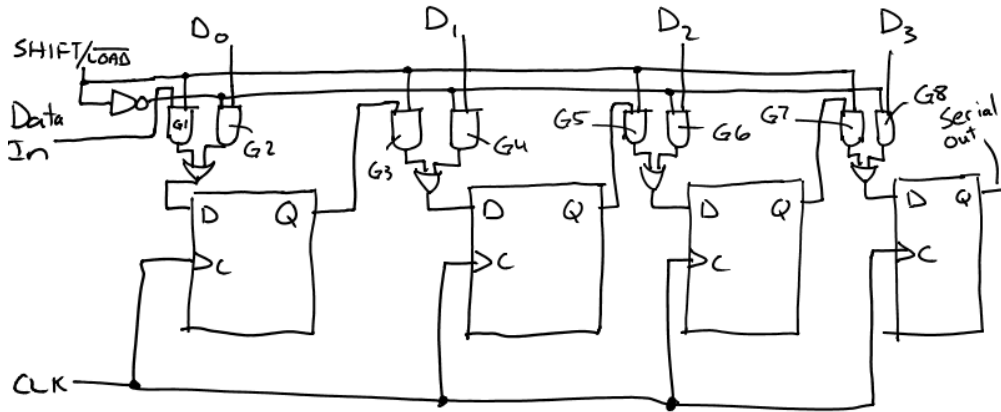


Parallel In/Parallel Out Shift Register



ENGR 2218 – Digital Logic
Registers

Parallel In/Serial Out Shift Register



$$\text{SHIFT}/\overline{\text{LOAD}} = 0 \Rightarrow G_1, G_3, G_5, G_7 = 0$$

$$G_2, G_4, G_6, G_8 \Rightarrow D_0, D_1, D_2, D_3$$

$$\text{SHIFT}/\overline{\text{LOAD}} = 1 \quad G_1, G_3, G_5, G_7 \Rightarrow Q_0, Q_1, Q_2, Q_3$$

$$= \quad G_2, G_4, G_6, G_8 = 0$$