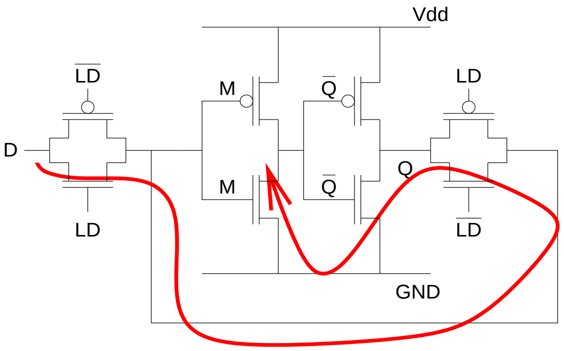
Latches and Flip-Flops

- Euler paths for transmission gate latch

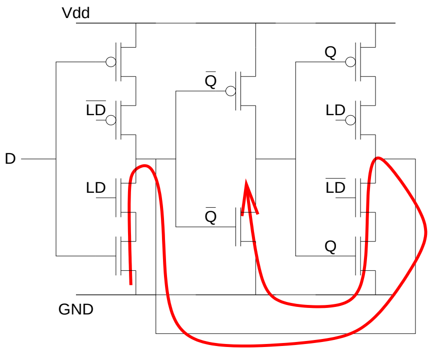


$\overline{LD} - LD - \overline{Q} - M$

$LD - \overline{LD} - \overline{Q} - M$

Latches and Flip-Flops

- Euler paths for tristate inverter based latch

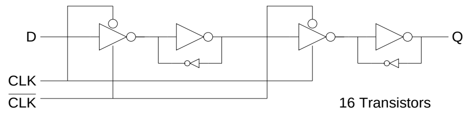


$D - \overline{LD} - LD - Q - \overline{Q}$

$D - LD - \overline{LD} - Q - \overline{Q}$

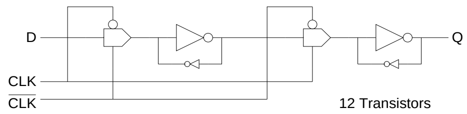
Latches and Flip-Flops

- Tristate inverter implementation based on "Jamb" latches



  - the tristate inverter must be strong enough to override the weak inverter

- Transmission gate implementation based on "Jamb" latches

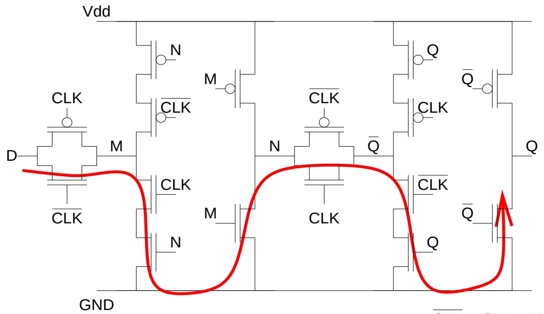


  - this is less useful since its functionality depends on the drive strength at D

Latches and Flip-Flops

- Euler paths for master slave D type

$CLK - \overline{CLK} - N - M - \overline{CLK} - CLK - Q - \overline{Q}$



$\overline{CLK} - CLK - N - M - CLK - \overline{CLK} - Q - \overline{Q}$

- Partial Euler paths for edge triggered D type