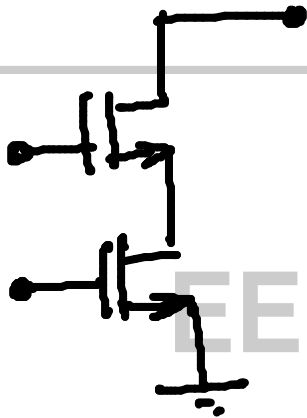


"CASCODE"



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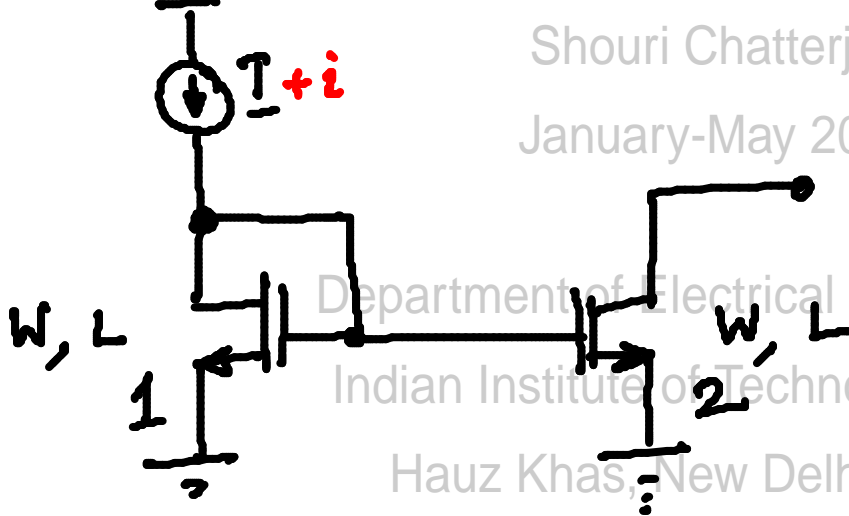
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$$V_{DS} > V_{GS} - V_T$$

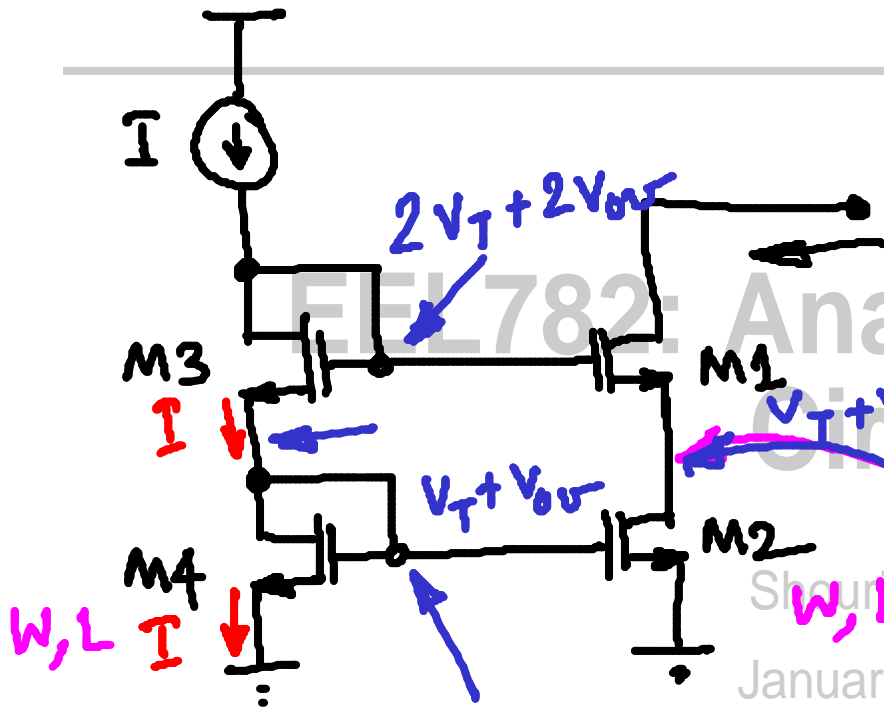
$$I_D = f(V_{GS}, V_{DS})$$

Current mirrors



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$$R_{in} = g_{m1} r_{ds1} r_{ds2} + r_{ds1} + r_{ds2}$$

Minimum voltage = $V_T + 2V_{ov}$

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$M4 \rightarrow V_{GS4} = V_{DS4}$
 $I = f(V_{GS4}, V_{DS4})$

more or less fixed

G of $M1 \rightarrow$ fixed

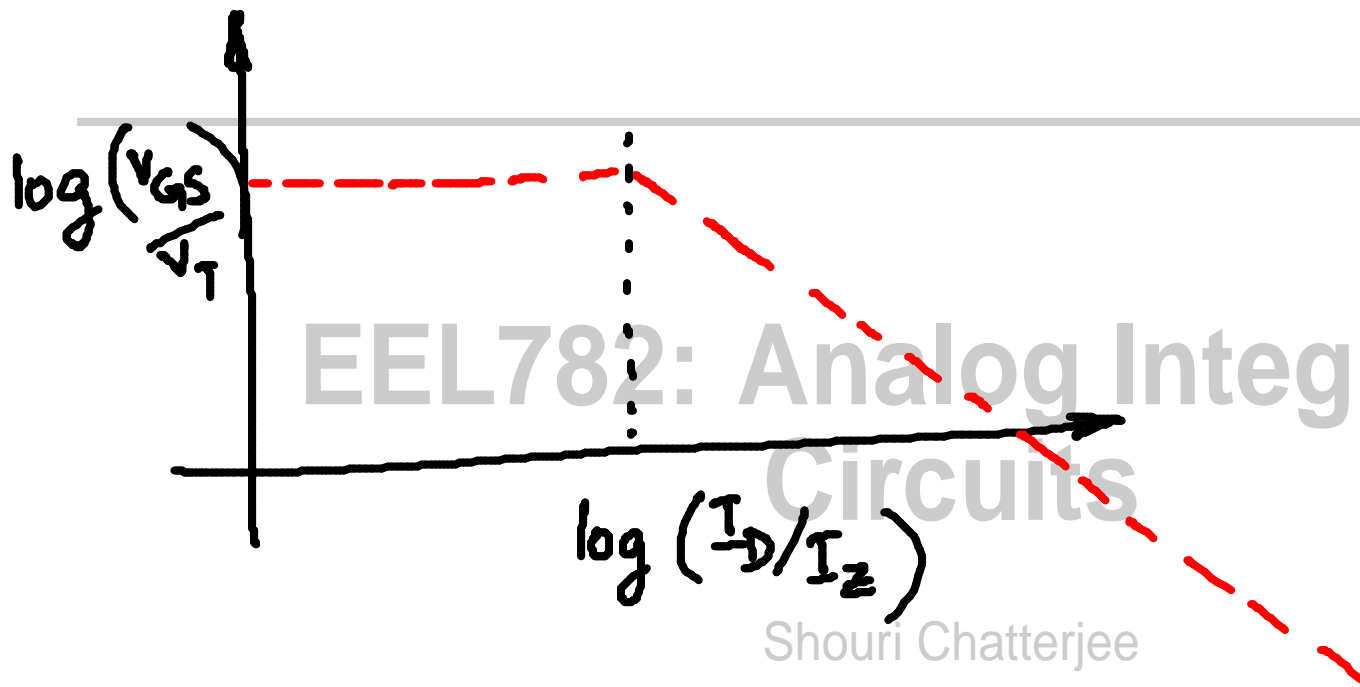
I thru $M2 \rightarrow$ approx $\approx I \rightarrow$ current thru $M1$

$M4, M3 \rightarrow$ in sat

$V_{DS} > V_{overdrive}$



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Hauz Khas, New Delhi 110016

