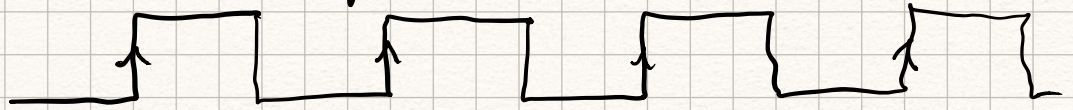


Clocks

- All MCUs & components require a clock.



MSP430FR5739 — Max. 24 MHz

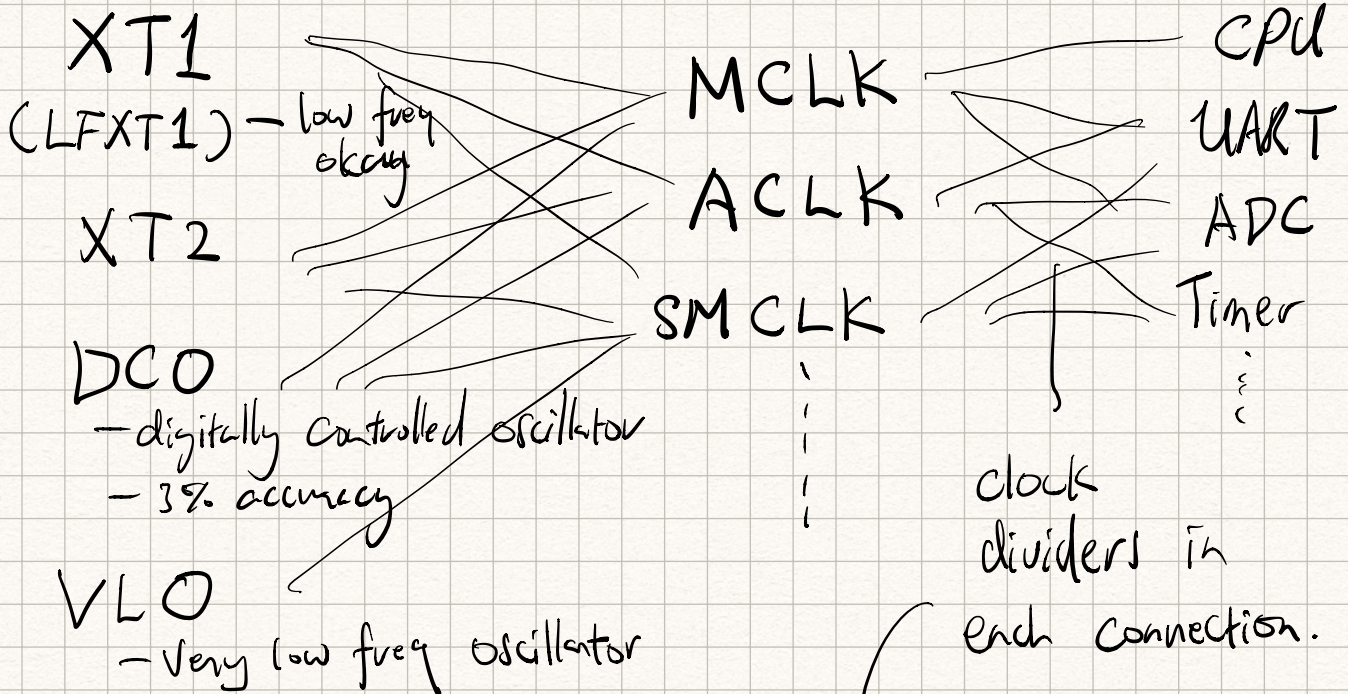
Most popular clock freq: 32.768 kHz

Xtal = Crystal $2^{15} = 32768 \rightarrow$ Timer overflow at 1s

Clock Sources

Intermediate Clocks

Peripherals

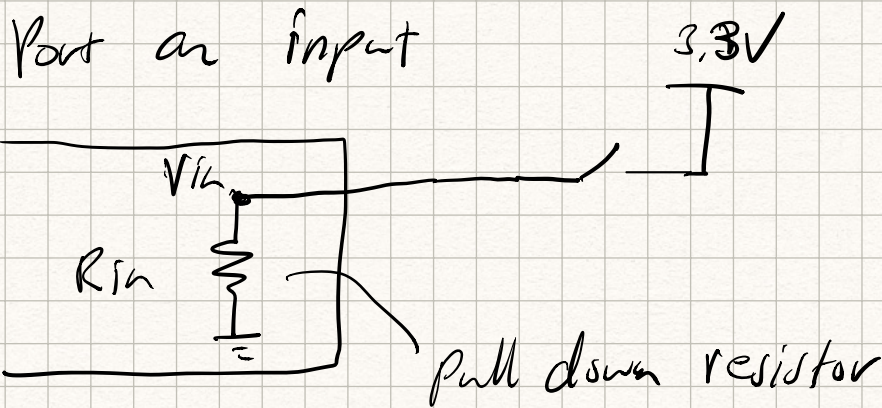
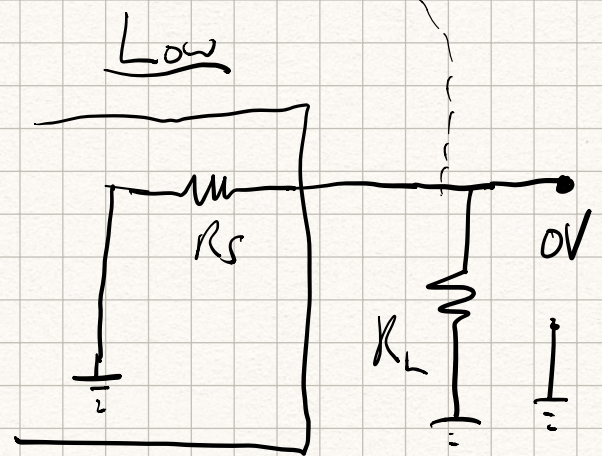
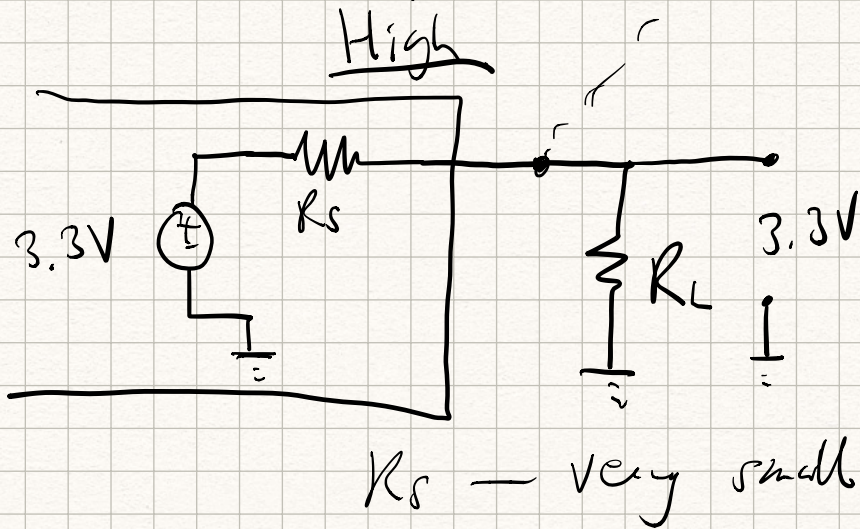


divide in freq.
divide by 2 clock

Digital I/O

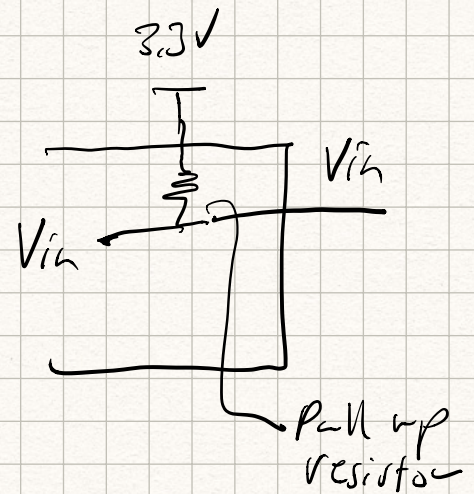
Port an output:

Kaboom!
Short circuit



V_{in} default to low
if there is no connection

$$R_{in} \sim > 10M\Omega$$



V_{in} defaults to
high if no
connection

I/O Ports are 8 bits

$P1.0 \dots P1.7$ \curvearrowright $PA.0 \dots PA.15$
 $P2.0 \dots P2.7$

$P3.0 \dots P3.7$ \curvearrowright $PB.0 \dots PB.15$
 $P4.0 \dots P4.7$

$P11.0 \dots P11.7$
 $PJ.0 \dots PJ.7$