3 / 21 / 2014

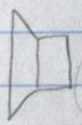
Simon Board: 2 clock cycles / instruction

$7.373 \cdot 10^6$ Hz

1000 Hz .1 s } this is the sound f & duration (for rolling over)

P2.4 P0.5 P2.7

3 2



P1.7 P0.6 P1.6 P0.4

P2.5 P0.7 P2.6

1 0

R0 (bits 0-4 track button values)

R1 } loop count

R2 }

P2.0 P0.1 (R0.0) P2.3

inc

P0.2 (R0.2) P1.4 (R0.3) P0.0 (R0.4)

Vince (1s) Sam (note) Dakota

P2.1 P0.3 (R0.1) P2.2

dec

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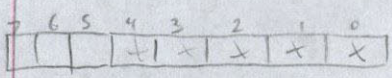
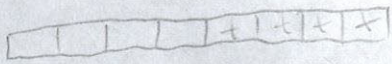
R0



R3



If P0.1 is 1 :

(Pressed) set R0.0 to 1

Else :

(Released If R0.0 is 1 :

~~increment~~ R3

~~do stuff~~

~~set R0.0 to 0~~

If P0.3 is 1 :

set R0.1 to 1

Else :

If R0.1 is 0 :

decrement R3

~~do stuff~~

set R0.1 to 0

set LED's to match R3

if rolled over,

set P1.7 to 1

set R1, R2 for delay

P2.4 P2.7

P2.5 P2.6

If $R_1, R_2 > 0$:

decrement ; the sound continues

Else :

set P1.7 to 0