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1 Top Level

1.1 Stopwatch

1.1.1 Inputs

Name	Assigned Port	Description	Requirements
Select	switch[?]	Choose min(0) or sec(1) in adjust mode	
Adjust	switch[?]	Enter (1) of Stop (0) adjust mode	Normal increment stops in adj Selected portion blinks in adj m Select portion <i>increments</i> at 2 Unselected portion is "frozen" (
Pause	button[?]		Pause and resume counter on p Must be debounced
Reset	button[?]		Force all counters to initial sta Must be debounced
Clock	clk	Clock from Nexys 3 board	Needs to be divided into the fo
1Hz	?	To increment stopwatch	
2Hz	?	To increment in adj mode	
>2Hz	?	For pulsing 7-segment in adjust mode	
50-700Hz	?	For multiplexing the 7-segment	Need to determine proper refre
100Mhz	clk	Standard clock	

1.1.2 Outputs

Name	Assigned Port	Description	Requirements
7 Segment	seg[6:0]	7 segment display for clock output	
Common Annode	digit[3:0]	Common annode for 7 segment	Annode must be sequenc
Min-tens	digit[3]		
Min-units	digit[2]		
Sec-tens	digit[1]		
Sec-units	digit[0]		

1.1.3 State

Name	Behavior	State	Assignment
Select	Choose min or sec	0	Minutes
		1	Seconds
Adjust	Enter or exit adj mode	0	Normal behvaior
		1	Adjust mode
Pause	Pause or resume on press	0	Pause Clock
		1	Resume Clock
Reset	Reset stopwatch	0	Normal Behavior
		1	Reset Clock