Lab #3 – CAD: Pin Assignments, Download and Testing
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Car Alarm UCF

NET Alarm LOC = "R4"; # Bank = 3, Pin name = IO/VREF_3, Type = VREF, Sch name = LD7

NET Seat LOC = "L13"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW5

NET Key LOC = "N17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW6

NET Door LOC = "R17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW7

Car Alarm simulation vs. download truth table

Door	Key	Seat	Alarm_Simulation	Alarm_Download
0	0	0	0	0
0	0	1	0	0
0	1	0	1	1
0	1	1	1	1
1	0	0	0	0
1	0	1	0	0
1	1	0	1	1
1	1	1	0	0

Alarm Fan UCF

NET Fan LOC = "F4"; # Bank = 3, Pin name = IO, Type = I/O, Sch name = LD6

NET Alarm LOC = "R4"; # Bank = 3, Pin name = IO/VREF_3, Type = VREF, Sch name = LD7

NET Temperature LOC = "L13"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW5

NET Low_battery LOC = "N17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW6

NET Cord LOC = "R17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW7

Alarm Fan simulation vs. download truth table

Cord	Low_Battery	Temperature	Alarm_Simulation	Fan_Simulation	Alarm_Download	Fan_Download
0	0	0	0	0	0	0
0	0	1	0	1	0	1
0	1	0	1	0	1	0

0	1	1	1	0	1	0
1	0	0	0	0	0	0
1	0	1	0	1	0	1
1	1	0	0	0	0	0
1	1	1	0	1	0	1

Problem 2.1 UCF

F1 is the original wave form and F2 is the simplified wave form. So I just recorded the result of F2.

NET F2 LOC = "F4"; # Bank = 3, Pin name = IO, Type = I/O, Sch name = LD6

NET F1 LOC = "R4"; # Bank = 3, Pin name = IO/VREF_3, Type = VREF, Sch name = LD7

NET D LOC = "L14"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW4

NET C LOC = "L13"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW5

NET B LOC = "N17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW6

NET A LOC = "R17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW7

Problem 2.1 simulation vs. download truth table

A	B	C	D	F2_Simulation	F2_Download
0	0	0	0	0	0
0	0	0	1	1	0
0	0	1	0	0	0
0	0	1	1	0	0
0	1	0	0	0	0
0	1	0	1	1	1
0	1	1	0	0	0
0	1	1	1	0	0
1	0	0	0	0	0
1	0	0	1	1	1
1	0	1	0	0	0
1	0	1	1	0	0
1	1	0	0	0	0
1	1	0	1	0	0
1	1	1	0	0	0
1	1	1	1	0	0

Problem 2.2 UCF

F1 is the original wave form and F2 is the simplified wave form. So I just recorded the result of F2.

NET F2 LOC = "F4"; # Bank = 3, Pin name = IO, Type = I/O, Sch name = LD6

NET F1 LOC = "R4"; # Bank = 3, Pin name = IO/VREF_3, Type = VREF, Sch name = LD7

NET D LOC = "L14"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW4

NET C LOC = "L13"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW5

NET B LOC = "N17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW6

NET A LOC = "R17"; # Bank = 1, Pin name = IP, Type = INPUT, Sch name = SW7

Problem 2.2 simulation vs. download truth table

A	B	C	D	F2_Simulation	F2_Download
0	0	0	0	0	0
0	0	0	1	0	0
0	0	1	0	1	1
0	0	1	1	1	1
0	1	0	0	0	0
0	1	0	1	1	1
0	1	1	0	1	1
0	1	1	1	1	1
1	0	0	0	1	1
1	0	0	1	1	1
1	0	1	0	1	1
1	0	1	1	0	0
1	1	0	0	1	1
1	1	0	1	1	1
1	1	1	0	0	0
1	1	1	1	0	0

Anomalies

In UCF files, I got caught by an error because I didn't have '#' on which I should have had. Other than this, I didn't have much trouble. It was a fun lab !