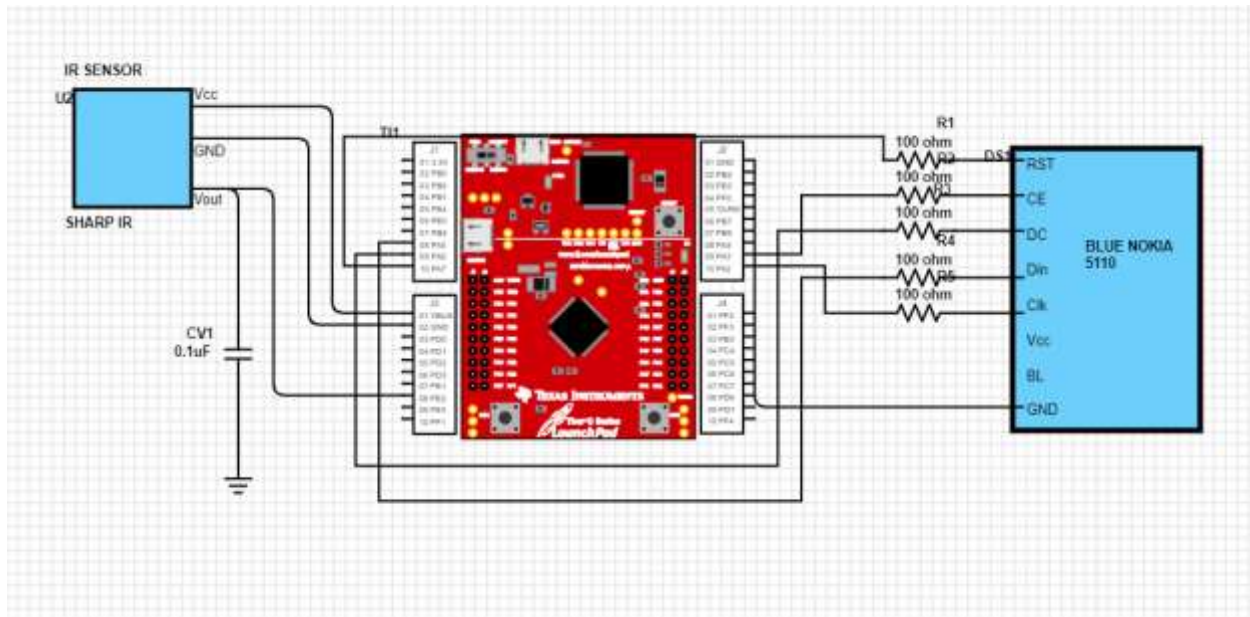
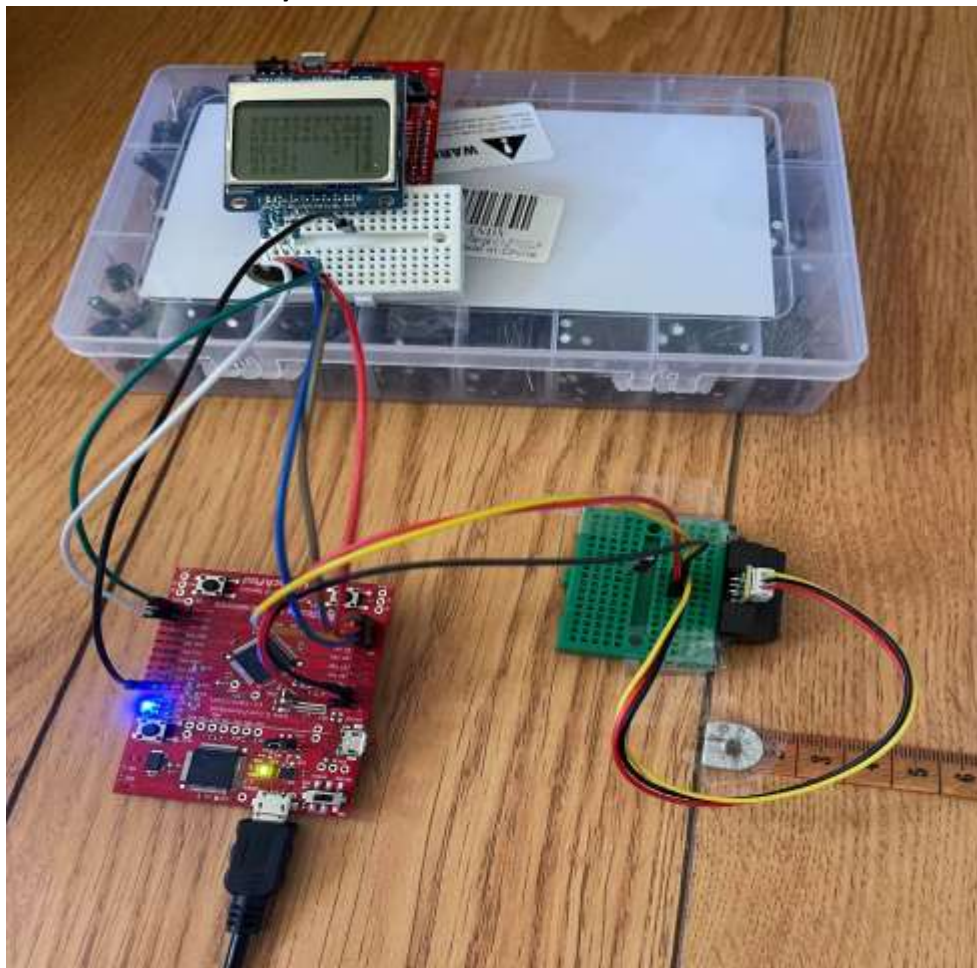


Schematic:



Picture of embedded system:



Video link to my demonstration: <https://youtu.be/kZNhijmR55s>

Table 1 – Lookup table obtained in step 2

Distance (in cm)	Sensor Output (v)	ADC Output Values	Estimated Sensor output (ADCvalue * 0.8mv)
10	2.45	3060	2.45
15	1.68	2094	1.68
20	1.30	1625	1.30
25	1.00	1308	1.05
30	0.89	1101	0.88
35	0.81	1003	0.80
40	0.72	899	0.72
45	0.66	828	0.66
50	0.63	781	0.62
55	0.59	730	0.58
60	0.55	695	0.56
65	0.50	628	0.50
70	0.45	567	0.45

Table 2 – Equation obtained in step 4 and test results

Distance (in cm)	Table Estimation	Equation Estimation
10	11	9
15	17	15
20	21	19
25	27	25
30	33	31
35	35	32
40	41	38
45	45	40
50	47	53
55	51	46
60	59	57
65	59	55
70	61	59