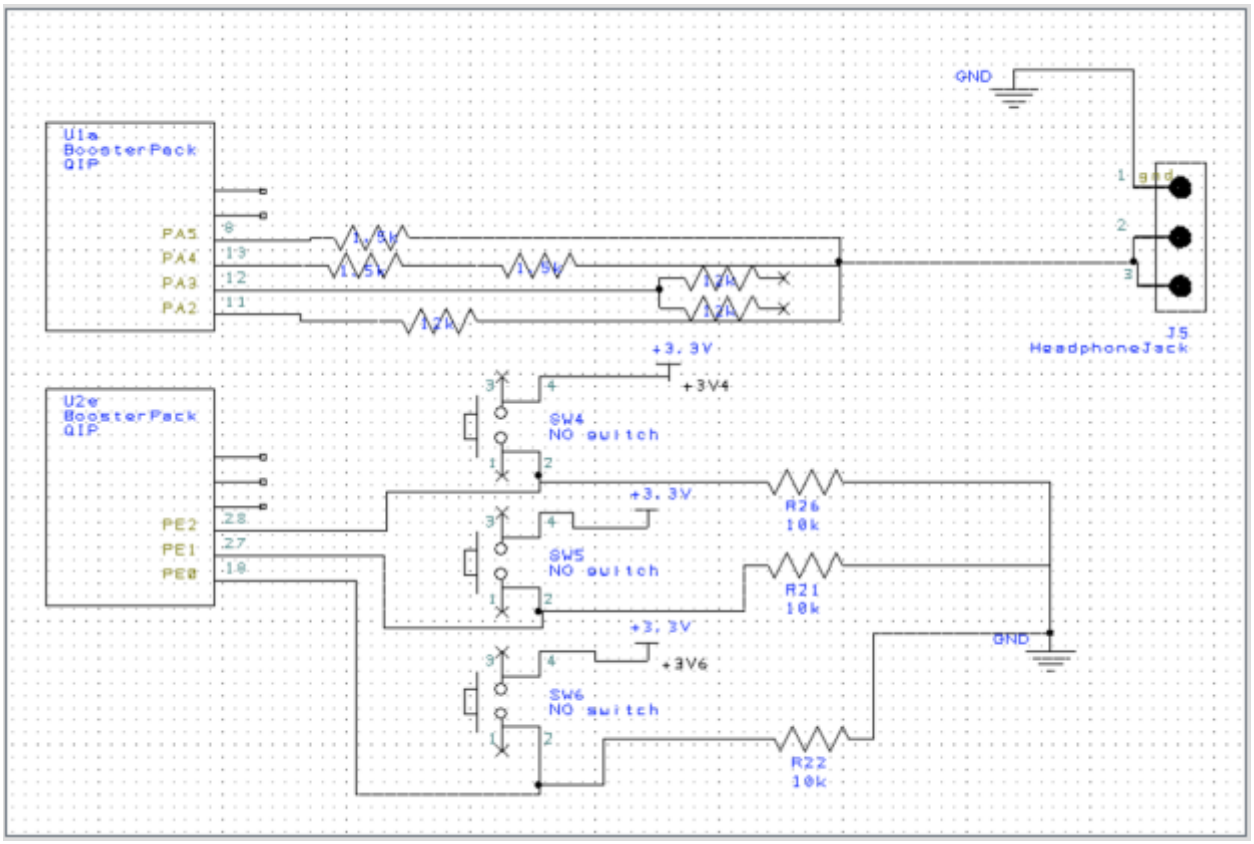
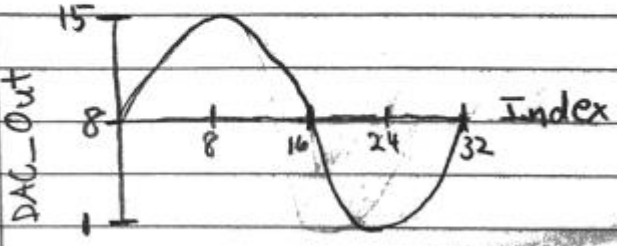

GND
U1a
BoosterPack
QIP
PA5
PA4
PA3
PA2
8
13
12
11
1.8k
1.5k
1.8k
1.2k
1.2k
1.2k
1
grd
2
3
J5
HeadphoneJack
+3.3V
+3V4
U2e
BoosterPack
QIP
PE2
PE1
PE0
28
27
10
SW4
NO switch
+3.3V
R26
10k
SW5
NO switch
R21
10k
+3.3V
GND
+3V6
SW6
NO switch
R22
10k



SineWave[32] = {8, 9, 11, 12, 13, 14, 14, 15, 15, 15, 14, 14, 13, 12, 11,
9, 8, 7, 5, 4, 3, 2, 1, 1, 1, 2, 2, 3, 4, 5, 7}

Index	DAC_Out
1	8
2	9
3	11
4	12
5	13
6	14
7	14
8	15
9	15
10	15
11	15
12	14
13	14
14	13
15	12
16	11
17	9
18	8
19	7
20	5
21	4
22	3
23	2
24	1
25	1
26	1
27	2
28	2
29	3
30	4
31	5
32	7

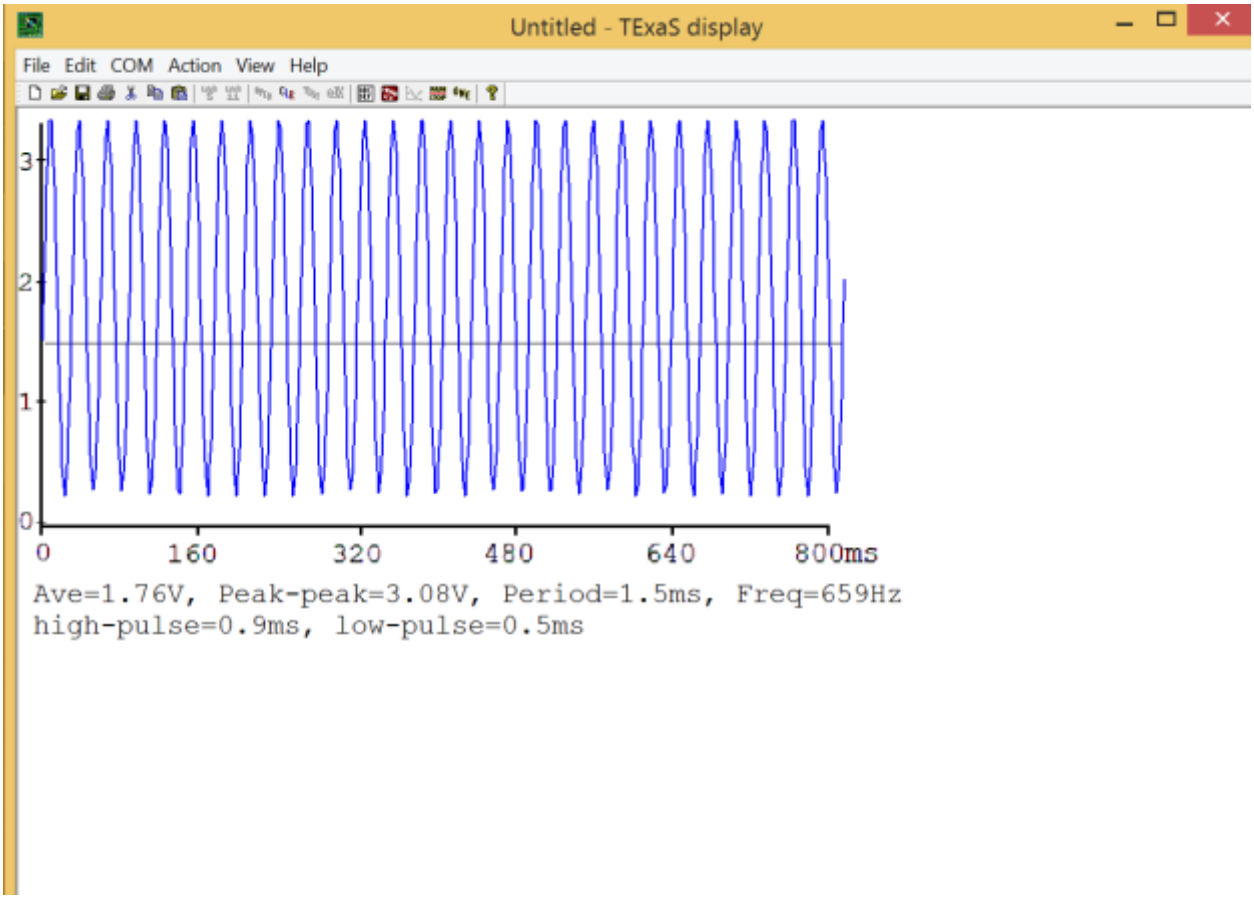
Questions:

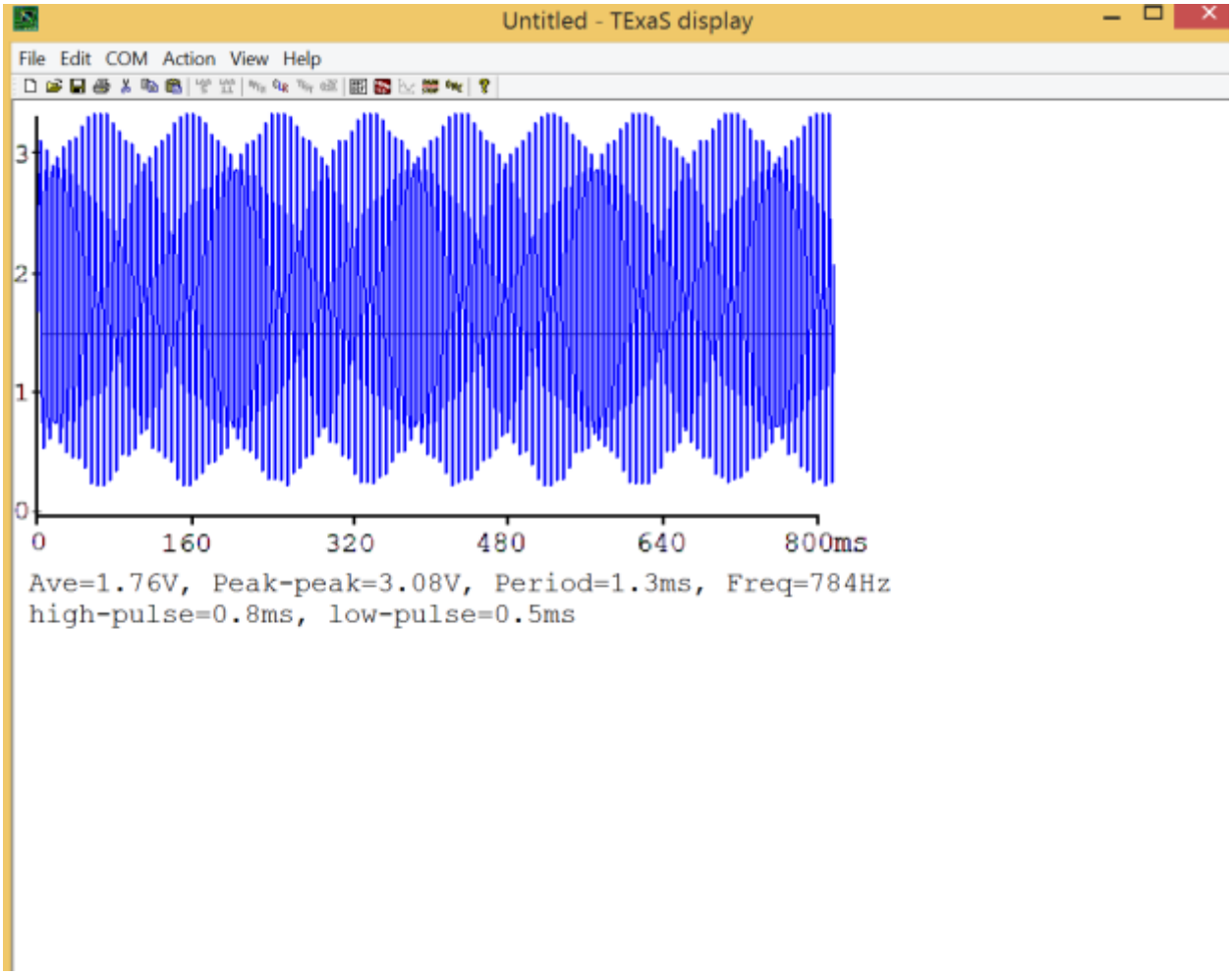
a) When the NVIC_ST_CURRENT_R value goes to 0 after getting the RELOAD value.

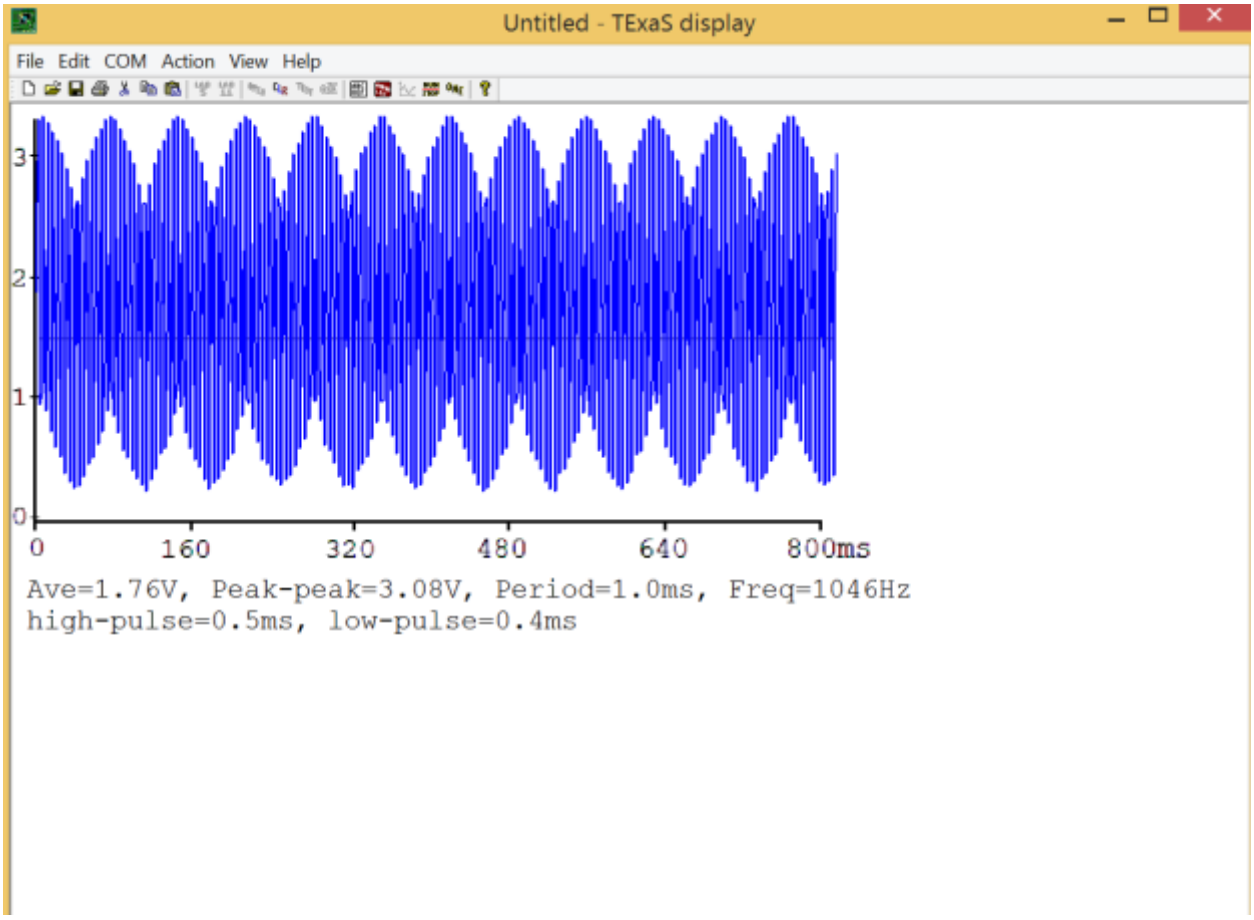
b) Sound.c file

c) ① Current instruction completes
② R0, R1, R2, R3, R12, PC, LR, PSR pushed onto stack.
③ LR set to 0xFFFFFFF9
④ IPSR set to interrupt number
⑤ PC ← starting address of ISR

d) BX LR checks if LR = 0xFFFFFFF9. If so, pops the 8 pushed registers from the stack.


Untitled - TExaS display
File Edit COM Action View Help
3
2
1
0
0
160
320
480
640
800ms
Ave=1.76V, Peak-peak=3.08V, Period=1.5ms, Freq=659Hz
high-pulse=0.9ms, low-pulse=0.5ms


Untitled - TExaS display
File Edit COM Action View Help
3
2
1
0
0
160
320
480
640
800ms
Ave=1.76V, Peak-peak=3.08V, Period=1.3ms, Freq=784Hz
high-pulse=0.8ms, low-pulse=0.5ms


Untitled - TExaS display
File Edit COM Action View Help
3
2
1
0
0
160
320
480
640
800ms
Ave=1.76V, Peak-peak=3.08V, Period=1.0ms, Freq=1046Hz
high-pulse=0.5ms, low-pulse=0.4ms

	A	B	C	D
1	Bit3 bit2 bit1 bit0	Theoretical DAC voltage	Measured DAC voltage	Accuracy
2	0	0	0	0
3	1	0.22	0.23	0.04545455
4	2	0.44	0.46	0.04545455
5	3	0.66	0.67	0.01515152
6	4	0.88	0.9	0.02272727
7	5	1.1	1.13	0.02727273
8	6	1.32	1.32	0
9	7	1.54	1.55	0.00649351
10	8	1.76	1.77	0.00568182
11	9	1.98	1.99	0.00505051
12	10	2.2	2.2	0
13	11	2.42	2.43	0.00413223
14	12	2.64	2.62	-0.0075758
15	13	2.86	2.87	0.0034965
16	14	3.08	3.06	-0.0064935
17	15	3.3	3.2	-0.030303
18				
19			Accuracy	0.00853393
20			Precision	16
21			Resolution	0.21333
22			Range	3.2