Test Outline:

After Running all the automated tests, the hardware for this project can be tested by carrying out following tests:

for this project we use keyboard matrix of 2X4

Key1-C4	key2-D4	key3-E4	key4-F4
(row1,col1)	(row1,col2)	(row1,col3)	(row1,col4)
Key5-G4	key6-B4	key7-A4	key8-C5
(row1,col1)	(row1,col2)	(row1,col3)	(row1,col4)

--> Connect DAC output to speaker

-->Press Key 1 make sure you here C4 note for half of a second

-->Press Key 2 make sure you here D4 note for half of a second

-->Press Key 3 make sure you here E4 note for half of a second

-->Press Key 4 make sure you here F4 note for half of a second

-->Press Key 5 make sure you here G4 note for half of a second

-->Press Key 6 make sure you here B4 note for half of a second

-->Press Key 7 make sure you here A4 note for half of a second

-->Press Key 8 make sure you here C5 note for half of a second

-->Next keep key one pressed u will hear C4 played twice for half a second , it would sound like a beep

-->Repeat and check for all keys

-->Next you can press two keys at a time, as the functionality of playing two tones is not added in the code,the key that was initial pressed would be detected first,and the key pressed later would be detected second

Record and Play function for this Project is such that, if after 50 keys the buffer resets so the 50 keys saved are lost.

Keys recorded once can be played any number of times before recording next set.

This functionality was heavily tested , by recording 55 keys.

- The buffer did reset and only 5 keys got recorded
- They could be played many times till user pressed record again