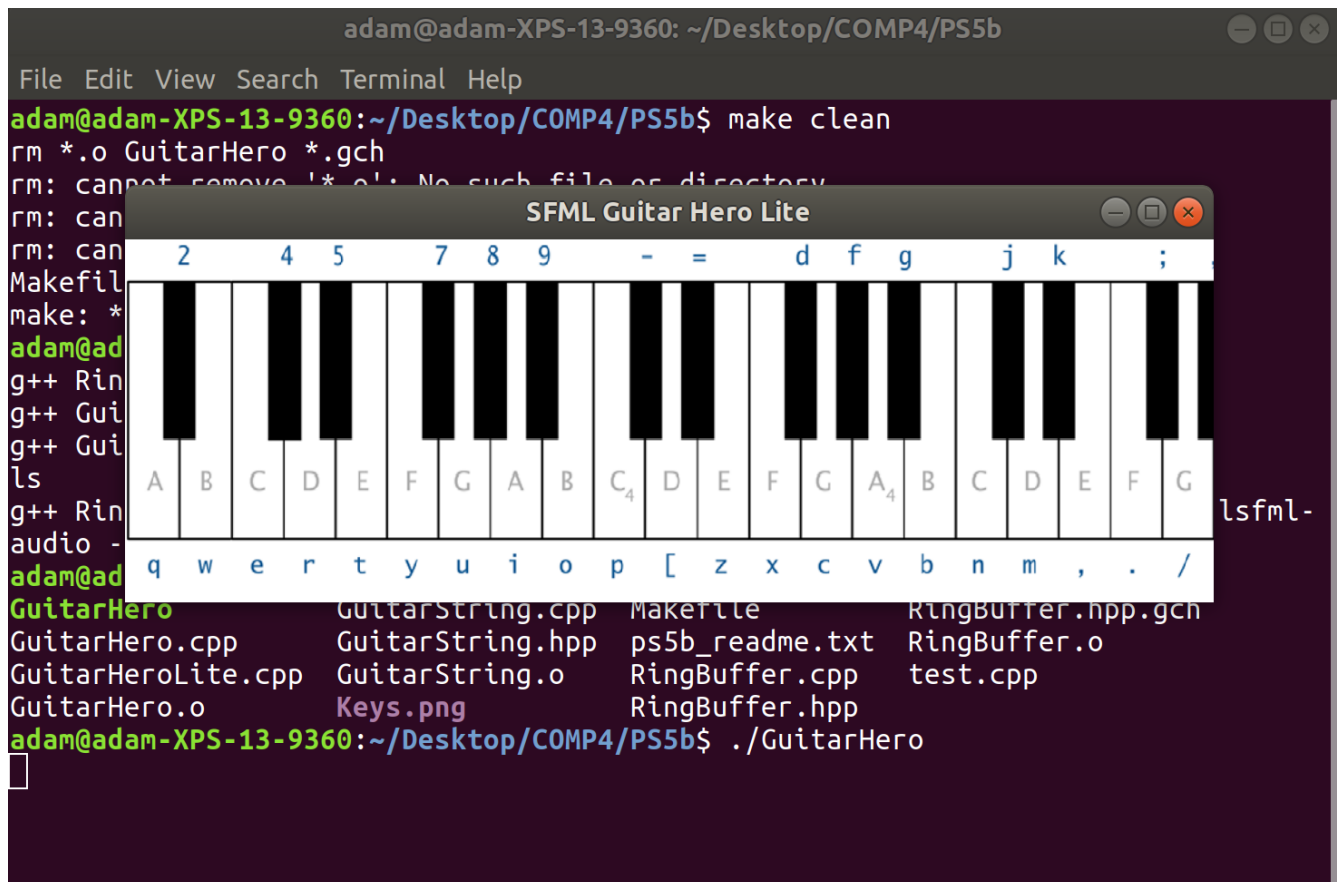


## PS5 Guitar Hero

In this assignment, I had to use the SFML library and a ring buffer to play different sounds when different keys were pressed. OO methods that were used in this assignment were classes, and data structures that were central to the assignment were vectors. Another key algorithm that was central to this assignment was queues. In this assignment I created a stack for queue, then implemented enqueue, dequeue, isfull, isempty, and peek for the queue stack. I also implemented a few other functions to help me debug my code while I was writing it such as size, print, and get.

One issue I had with this assignment was that only two of the keys on the keyboard that were supposed to create sounds did not create any sound.



The image shows a terminal window and an application window. The terminal window is titled "adam@adam-XPS-13-9360: ~/Desktop/COMP4/PS5b" and contains the following text:

```
File Edit View Search Terminal Help
adam@adam-XPS-13-9360:~/Desktop/COMP4/PS5b$ make clean
rm *.o GuitarHero *.gch
rm: cannot remove '*.o': No such file or directory
rm: can
rm: can
Makefile
make: *
adam@ad
g++ Rin
g++ Gui
g++ Gui
ls
g++ Rin
audio -
adam@ad
GuitarHero    GuitarString.cpp  Makefile      RingBuffer.hpp.gch
GuitarHero.cpp  GuitarString.hpp  ps5b_readme.txt  RingBuffer.o
GuitarHeroLite.cpp  GuitarString.o    RingBuffer.cpp  test.cpp
GuitarHero.o      Keys.png          RingBuffer.hpp
adam@adam-XPS-13-9360:~/Desktop/COMP4/PS5b$ ./GuitarHero
```

The application window is titled "SFML Guitar Hero Lite" and displays a virtual guitar fretboard. The fretboard has 12 frets and 6 strings. The strings are labeled A, B, C, D, E, F from left to right. The frets are labeled 2, 4, 5, 7, 8, 9, -, =, d, f, g, j, k, ; from left to right. The keys are labeled q, w, e, r, t, y, u, i, o, p, [, z, x, c, v, b, n, m, , ., / from left to right. The application window also shows a list of files in the background:

```
ls
GuitarHero    GuitarString.cpp  Makefile      RingBuffer.hpp.gch
GuitarHero.cpp  GuitarString.hpp  ps5b_readme.txt  RingBuffer.o
GuitarHeroLite.cpp  GuitarString.o    RingBuffer.cpp  test.cpp
GuitarHero.o      Keys.png          RingBuffer.hpp
```

```
1: CC = g++
2: CFLAGS = -std=c++11 -c -g -Wall -Werror# -pedantic
3: LIBS = -lsfml-system -lsfml-audio -lsfml-graphics -lsfml-window
4:
5: all: GuitarHero
6:
7: GuitarHero: RingBuffer.o GuitarString.o GuitarHero.o
8:     $(CC) RingBuffer.o GuitarString.o GuitarHero.o -o GuitarHero $(LIBS)
9:
10: GuitarHero.o: RingBuffer.hpp GuitarString.hpp GuitarHero.cpp
11:     $(CC) GuitarHero.cpp $(CFLAGS)
12:
13: GuitarString.o: RingBuffer.hpp GuitarString.hpp GuitarString.cpp
14:     $(CC) GuitarString.cpp $(CFLAGS)
15:
16: RingBuffer.o: RingBuffer.cpp RingBuffer.hpp
17:     $(CC) RingBuffer.cpp RingBuffer.hpp $(CFLAGS)
18:
19: clean:
20:     rm *.o GuitarHero *.gch
```