

PLEASE DON'T OPEN THIS USING WINDOWS NOTEPAD, THE LINES ARE BROKEN!

Brief Report of Programming Assignment 1

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This program is called Qingxiang Jia's Magic Piano. When you open the program, use W, A, S, D, I, and O to navigate (I = zoom in, O = zoom out). Press key 1 to 7 will cause the piano's keys been pressed, and by doing this you can make nice music! The idea is totally original. The music sound is create by GarageBand, legally obtained by me, and then processed by Audacity. All the objects except the spiral, are created by me using blender. The spiral is obtained from the Turbo Squid, by Will_LaPuerta, free of charge.

The Face.java, Shape.java, and ShapeLoader.java are created by me learning the LWJGL official tutorial. However, I did not copy the exact code from the tutorial, instead, I built my own code from scratch.

I have tested that the sound DOES NOT work on the CLIC linux machines. The reason is that Linux uses PulseAudio to handle the code, and however, the supoort is not concrete on Linux. As Professor Zheng suggested, I have made sure that my program runs just fine without sound (I mean, yes, there will be some warining on terminal output telling you there is some problem with the audio.), but the program will not be interrupted and all the graphics are rendered as expected. To have the sound, please test the program on OS X. Thank you for grading!

Compiling instructions:

On CLIC Linux machines, use the following lines for compiling and running:

```
javac -cp "../../lwjgl-2.9.1/jar/lwjgl.jar:../../lwjgl-2.9.1/jar/lwjgl_util.jar" MainProgram.java
```

```
java -cp "../../lwjgl-2.9.1/jar/lwjgl.jar:../../lwjgl-2.9.1/jar/lwjgl_util.jar:../../lwjgl-2.9.1/native/linux" -Djava.library.path=../../lwjgl-2.9.1/native/linux MainProgram
```

Becasue Professor Zheng said he (or the TA) will run the program on OS X just to test the sound, so I also

include here the comamnds for compilling and running the program on a mac:

```
javac -cp ".../lwjgl-2.9.1/jar/lwjgl.jar:./lwjgl-2.9.1/jar/lwjgl_util.jar" MainProgram.java
```

```
java -cp ".../lwjgl-2.9.1/jar/lwjgl.jar:./lwjgl-2.9.1/jar/lwjgl_util.jar:./lwjgl-2.9.1/native/macosx" -Djava.library.path=./lwjgl-2.9.1/native/macosx MainProgram
```

Some potential bonus:

I think my program has some features that others don't have. For example, the music is. Also, the objects' color will change as you press different keys on the keyboard. Also, others may not try to disable the lighting as it renders the code, and turn it back on so that only a specific object will have no lighting.