

Tetris - Basic Implementation Practice for Android

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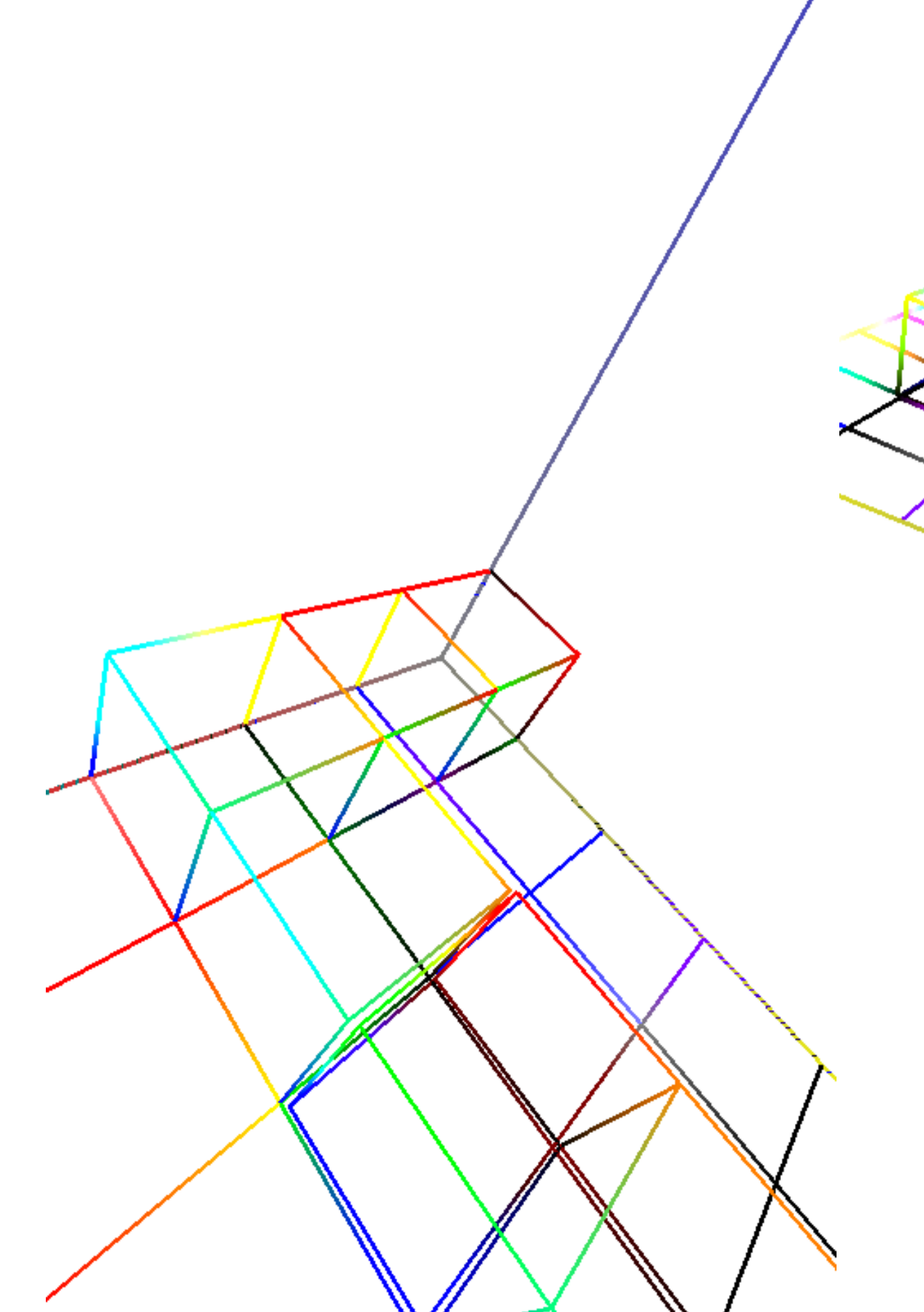
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1 Upgrading versions, pretty good

1.1 3d tetris status

- Critical thinking: the block current rotates just as I need. now the next steps, rotate current active block around it's own center, or identify frame, current block by ray picking, depends on which one I have better intuition to start with.
- Organizing ideas how should I implement matrix manipulation, use rotating current active block as the starting point.
- need to set eye position better so that the (Frame + Grid) layout can be at the position that I want for the 3d game.
- I want yellow grids, together with white background, red-x yellow-y, but I fail get such effect. Currently using black grid, but I will change it to be better looking.
- Cleaned files for 3d && glar3d, for later convenience.
- Emacs is such a powerful tool for me for coding considering and accepting the facts that occasional it would produce some minor troubles for me so that I would have to google for solutions. This morning the parenthesis don't autopair for `() [] {}` for java-mode, after having googled for few minutes, I have used and trust autopair for so long and realized actually sometimes he gets tired, and once I close and restart it, he works perfectly. I am looking forward to the day that my beloved cousin would be able to help and guide me with emacs debugging.
- I had NOT have any design experience nor confidence for game/larger project design, but since tetris 2d which was based on an incomplete design of a undergraduate student thesis when I successful redesign and implemented it, I think now I am in the process of thinking and building my own design (as well as confidence if I could succeed this time) now. Step by step, I could make this simple 3d completely out of my own ideas.
- 3d tetris layout structure:



- a video for this Tetris game can be directly watched at <https://www.youtube.com/watch?v=Ht4N0rEUtFk>
- A video for the previous DrawingFun Android App can be watched at <https://www.youtube.com/watch?v=YV78Tk>, or by searching deepwaterooo Wang.

1.2 folders

- lame2d: the very first version of the game.
- 2d: SurfaceView rednering 2d Implementation.
- 3d: will work on a simple opengl 3d version first. Currently working on this one, will spend a few of following days on this one as well.
- glar3d: upgraded opengl 3d version adapted from tetrisglar app with textures and music, and real 3d instead of any pseudo one, will implement this one when simple 3d version is done. (After having understood texture and lights better, tried to debug this one for a while, but still complicated design and layout still make this one to some extend difficult for me for now.)

2 References

2.1 youtube designs

- shader: http://blog.csdn.net/tom_221x/article/details/38458021
- 旋转三角形 <http://www.hanshuliang.com/?post=6>
- fancy effect: <http://m.oschina.net/blog/147033>

2.2 Activity.runOnUiThread()

- <http://stackvoid.com/introduction-to-Message-Handler-in-Android/>
- <http://m.oschina.net/blog/97619>
- AssetManager: <http://m.jb51.net/article/57341.htm>
- A 3d reference: <https://github.com/kdomic/android-3d-tetris>

2.3 3D design

- c++ version: <https://github.com/matachi/tetris-cpp>
- refer 6 http://www.oschina.net/question/614942_62370
- http://www.oschina.net/question/565065_67280
- triangle: <http://stackoverflow.com/questions/9945321/triangle-opengl-in-android>
- <https://gist.github.com/SebastianJay/3316001>
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- <http://www.flakor.cn/2014-05-15-384.html>
- shader util: <http://blog.csdn.net/shulianghan/article/details/17020359>
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- <http://mail.cfanz.cn/index.php?c=article&a=read&id=270244>
- one example: <http://www.apkbus.com/blog-99192-39498.html>
- ex2 for shader matrix: http://www.voidcn.com/blog/peanut__love/article/p-2891341.html
- 西蒙 iPhone-OpenGL ES 中文教程专题: <http://www.cocoachina.com/special/2010/0126/404.html>
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- rotation: <http://stackoverflow.com/questions/13480043/opengl-es-android-matrix-transformation>
- glsl example: <http://cse.csusb.edu/tongyu/courses/cs520/notes/android-es2.php>
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- separate file: <http://stackoverflow.com/questions/30345816/splitting-a-text-file-into-multiple>

2.4 GLSurfaceView

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- Graphics architecture: <https://source.android.com/devices/graphics/architecture.html>
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- 真正的 3D 图形: <http://www.imobilebbs.com/wordpress/archives/1554>
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- OpenGL ES 2.0 Sample Code: <http://androidbook.com/item/4254>
- intros: 详解 http://blog.csdn.net/niu_gao/article/details/7566297
- 画线: <http://www.cnblogs.com/lhxin/archive/2012/06/01/2530828.html>
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- draw a ball http://shikezhi.com/html/2015/android_1022/561912.html
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2.5 eventQueue vs SurfaceView threads

- Deeper summary, android graphics architecture: <http://hukai.me/android-deeper-graphics-architecture/>
- 2 threads, load, read, <http://blog.csdn.net/hellogv/article/details/5986835>

2.6 SurfaceView

- Surface runnable <http://android.okhelp.cz/surfaceview-implements-runnable-android-code/>
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- <http://www.jcodecraeer.com/a/anzhuokaifa/androidkaifa/2012/1201/656.html>
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