

Extra credit part:

1. Finished Anti-Aliasing part including different levels of scalings.
2. Finished Line Rendering, but had some trouble making the vertices conjugate, in other words, different edges don't always intersect at their vertices. I think it's because of the Bresenham's line algorithm, which define each y-increment as either 0 or 1, yet it could cause some problem when the slope is fairly large. I tried to define the increment as either 0 or ceiling(slope), but there still exists some variance between actual result and desired result, and I haven't solved it up until now.

Help Resource:

1. 09/16 14:00pm

Searched for sort function.

<http://www.cppblog.com/mzty/archive/2005/12/15/1770.html>

<http://www.cnblogs.com/tornadomeet/archive/2012/12/08/2808923.html>

<http://www.cplusplus.com/reference/algorithm/sort/>

2. 09/16 14:35 pm

Searched for PI variable in C++.

<http://stackoverflow.com/questions/1727881/how-to-use-the-pi-constant-in-c>

3. 09/16 14:50 pm

Got a MIN ERROR: "error: no matching function for call to 'min(long unsigned int&, unsigned int&)'", got solved on this stackoverflow.com page.

<http://stackoverflow.com/questions/14508022/error-no-matching-function-for-call-to-minlong-unsigned-int-unsigned-int>

4. 09/16 15:15pm

Searched for barycentric coordinates information

<http://gamedev.stackexchange.com/questions/23743/whats-the-most-efficient-way-to-find-barycentric-coordinates>

<https://classes.soe.ucsc.edu/cmsc160/Fall10/resources/barycentricInterpolation.pdf>

https://en.wikipedia.org/wiki/Barycentric_coordinate_system

5. 09/17 12:00pm

Searched for information about C++ reference

<http://www.cnblogs.com/yanlingyin/archive/2011/12/07/2278961.html>

<http://blog.csdn.net/candyliuxj/article/details/7853938>

How do I expand / shrink a polygon with a fixed center point in MATLAB?

<https://www.mathworks.com/matlabcentral/answers/100718-how-do-i-expand-shrink-a-polygon-with-a-fixed-center-point-in-matlab>

6. 09/17 13:00pm

Searched for something about how to resize image:

<http://stackoverflow.com/questions/9578578/qt-resizing-a-qimage-with-scaled>

7. 09/17 14:00 pm

QT signal & slots system

<http://doc.qt.io/qt-4.8/signalsandslots.html>