Assignment 1: Squarified Treemaps (Appendix)

Squarified Treemap Subdivision Algorithm (by Remco)
1. Compute the area of the canvas (call it canvas_area)
2. Compute the total values of items (call it total_value)
3. Compute the ratio of total_value vs. canvas_area (call it VA_ratio)
4. Sort the values in a tree node.
5. Compare the width and height of the canvas, choose the side that is shorter (call that side short_side)
6. Choose the largest value from all the values
7. Represent this value as a rectangle and call this rectangle c1. The area of c1 is computed based on VA_ratio.
8. Place c1 on short_side.
9. Compute the aspect ratio of c1. Call this aspect ratio ratio_c1.
10. Choose the next largest value (call it c2)
11. Try adding c2 to short_side. Compute the aspect ratio of c2. Call this aspect ratio ratio_c2
12. If ratio_c2 is better than ratio_c1 (in that c2 is more square than c1), then we accept adding c2 on the short_side. Goto line 10 (but replace the old c1 with c2).
13. If ratio_c2 is worse than ratio_c1 (in that c1 is more square than c2), then go to line 5. The new canvas is the remaining empty space.