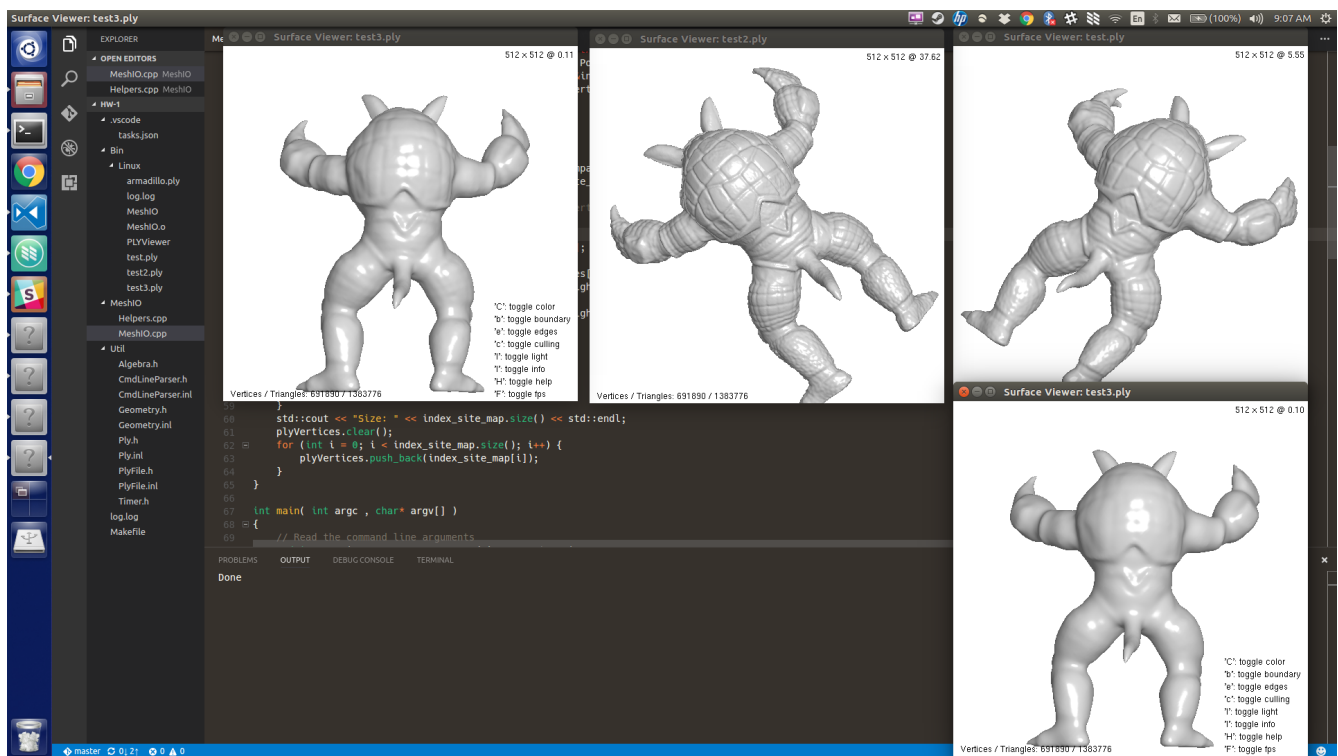# Mesh Refinement and Smoothing

Implemented both Mesh refinement and smoothing

Some Key points

- I used openmp for multi threading, but unfortunately I couldn't debug some race conditions that occurred when using more than 1 thread.

- Blending weight does not affect run time

Above you can see an unsmoothed model in the center surrounded by various degrees of smoothing

[top left – weight:0.9 iterations: 50, top right – weight:0.9 iterations: 10, bot right – weight: 0.9 iterations: 100]

Weight: 0.9 Iterations: 500

Description of Output Times

Output time did not vary with blending weight.

Iterations vs Time

1 – 12s	100 - 9m
2 – 15s	500 - 40m
10 – 45s	[with parallel threads I noticed significant performance improvements but the
50 – 4m	resulting ply was slightly clobbered]