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Method:

I took a fairly linear approach to this assignment, the first step was to find the homography from my starting points to the mosaic final output, as I wanted to guarantee scale and warp I decided not to let a user pick these and rather found them in GIMP to precisely locate the four corners of the picture. This then used some basic math to determine how many pixels to scale it to as the image size was provided.

I then looped over each image in my directory to find ORB points between the two. This provides a huge amount so I had to filter them down to inliers and from there I was able to calculate the homography from current to prior. This gave me an intermediate image that I could then use the global priviosu to mosaic homography to convert this intermediate image to mosaic. These mosaic warped images were saved and then iterated over two at a time to create a new image that is the composite of them all. This was done with an averaging masking approach.

Input images (In order of fed through program left to right, top to bottom)






Output Images: