

Basic Requirements

For the basic requirements, I implemented the anti-aliasing filter method to remove the artifact. First, I created the 3x3 filter. Compute the pixel in the input image with the inv_map function, and apply that filter to each pixel.

The anti-alising filter:

1.0, 2.0, 1.0,
2.0, 8.0, 2.0,
1.0, 2.0, 1.0

original image	"before" image	"after" image
		

original image	"before" image	"after" image
		

Advanced Extension

For advanced extension, I combined the anti-aliasing filter and adaptive supersampling method. First, I apply the filter to each pixel from the input image. Then compute the average value with a large area. If the average value is greater than the predefined threshold, then compute the average value with a smaller size area.

original image	"before" image	"after" image
		