1. Write code to generate and display a series difference of Gaussian images of an input image.

2. Write code to generate and display a series difference of scale images of an input image.

3. Write code to generate the HOG descriptor of a region in an image. Your code should receive an image (or array), the top-left and bottom-right corners of the region to be processed, and the number of bars to include in the histogram of gradients.

4. Repeat the previous question, but now compute the HOG in constant time, independently of the region size (with some pre-processing). Hint: Build as many integral images as your histogram has bars.