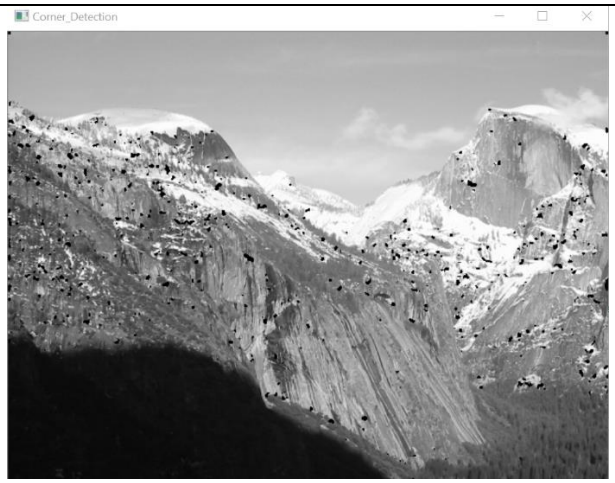
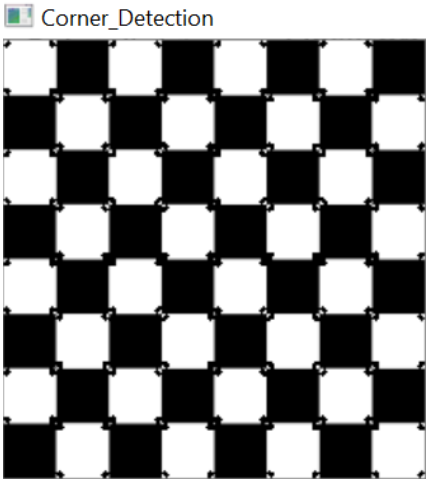
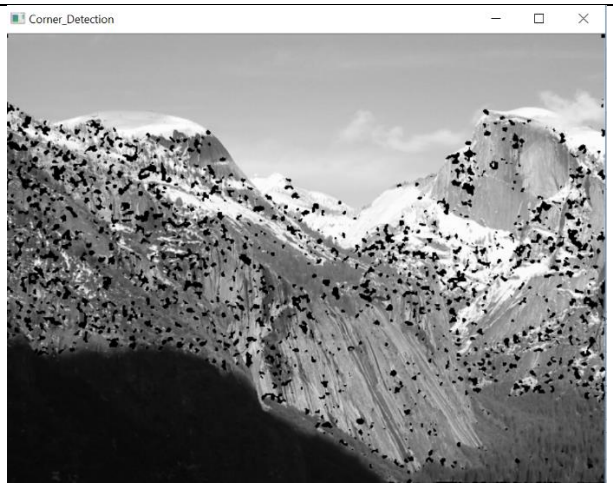
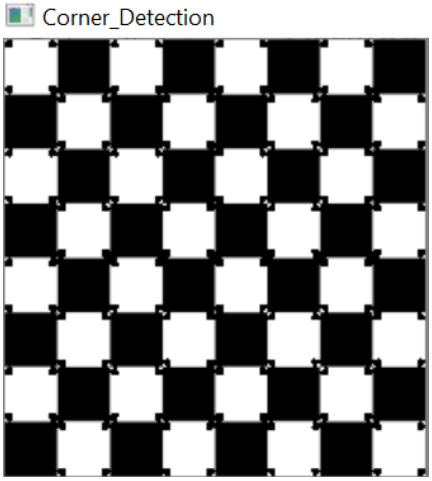
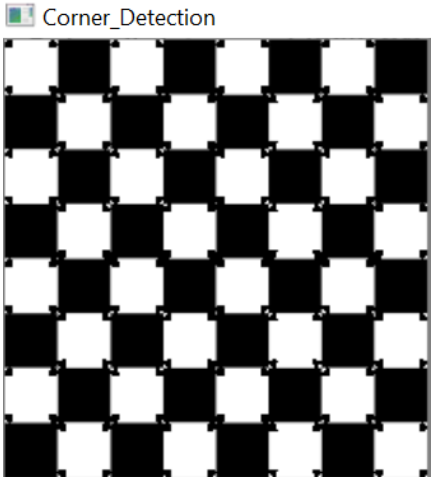
Harris Corner Detection

Th=0.01		
Th=0.001		
Th=.0001		

Th=0.01	
Th=0.001	
Th=.0001	

a).Rotate the image clockwise 90 degrees.

For threshold = 0.0001(using cv2.getRotationMatrix2D())

Original Image	**Rotated By 90 degree**
	

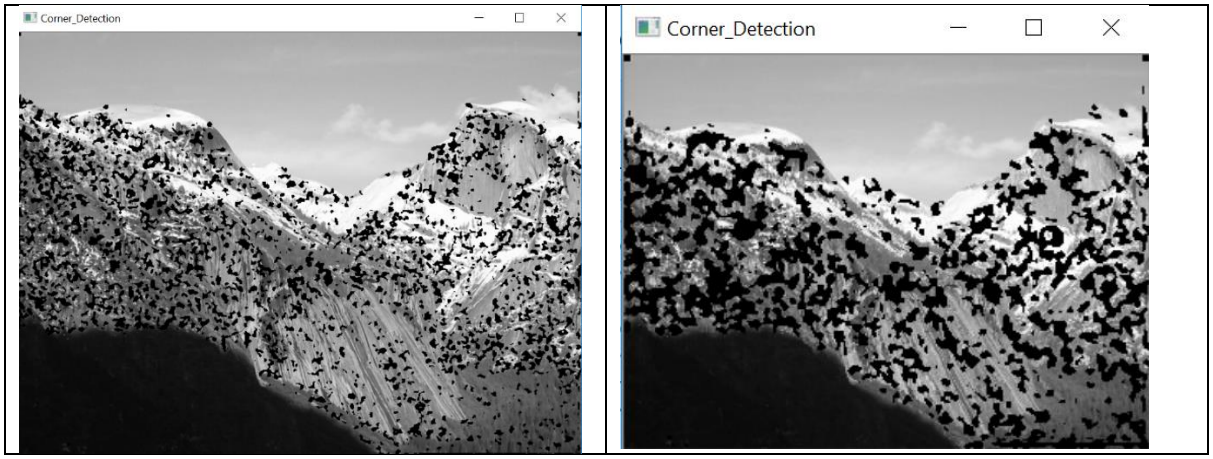
For threshold=0.0001(using np.rot90())

Original Image	**Compressed Image by 2**
	

b). Compress the image by a factor of 2.

For threshold = 0.0001(using cv2.getRotationMatrix2D())

Original Image	**Compressed Image by 2**



Observations : 1) As R>0 then corner is detected in given image where R is (det(A)-k*(trace(A)^2)) and A is determinant. If we increase the threshold then the number of corner decreases.

2).If we rotate the image by 90 degree then there will be no change in number of corners, it will detected as same as in original image. Number of corners will not be affected if orientation of image is changed.

3).If we perform compression of image, the number of corners will be decreased because if we are resizing the image by performing down-sampling, the four pixel is converted to one pixel the corners will be accumulated. After down-sampling, since corner points will come more close to each other, and so x-gradient and y-gradient will now become more than in original image. Then, the neighbourhood pixels of corner points are more likely to be corner points in down-sampled image.