

## Homework 3 Write Up

**Student Name:** Hoi Wing Tang

**Student ID:** 85778631

### **1.Increase the tile size**

When I only increased the tile size, the size of the sampling becomes smaller and smaller. It means that we need a larger number of the sampling images with smaller size to construct the result image. Since we increased the tile size, the number of the sampling images is also increased. As a result, the resolution/size of the result image is also increased. However, when we output the image to the screen, these images are fixed in their size. So, the enlarged image is narrowed into a smaller size image. Thus, we can see a high density of sampling image in the result image when we increased the tile size.

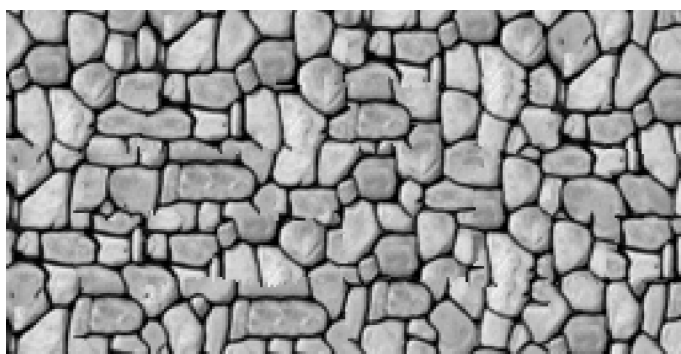
### **2.Increase the overlap**

When I only increased the number of pixel overlap between neighboring tiles, I observed that the resolution of the result image and the number of sampling images are both decreased. As a result, the image seems like zoom in. The reason is that there are many details in the image are removed when I increased the number of overlapping pixels. The overlapping part covered the details a lot, it only remains the most significant part of the image. Thus, the resolution is decreased.

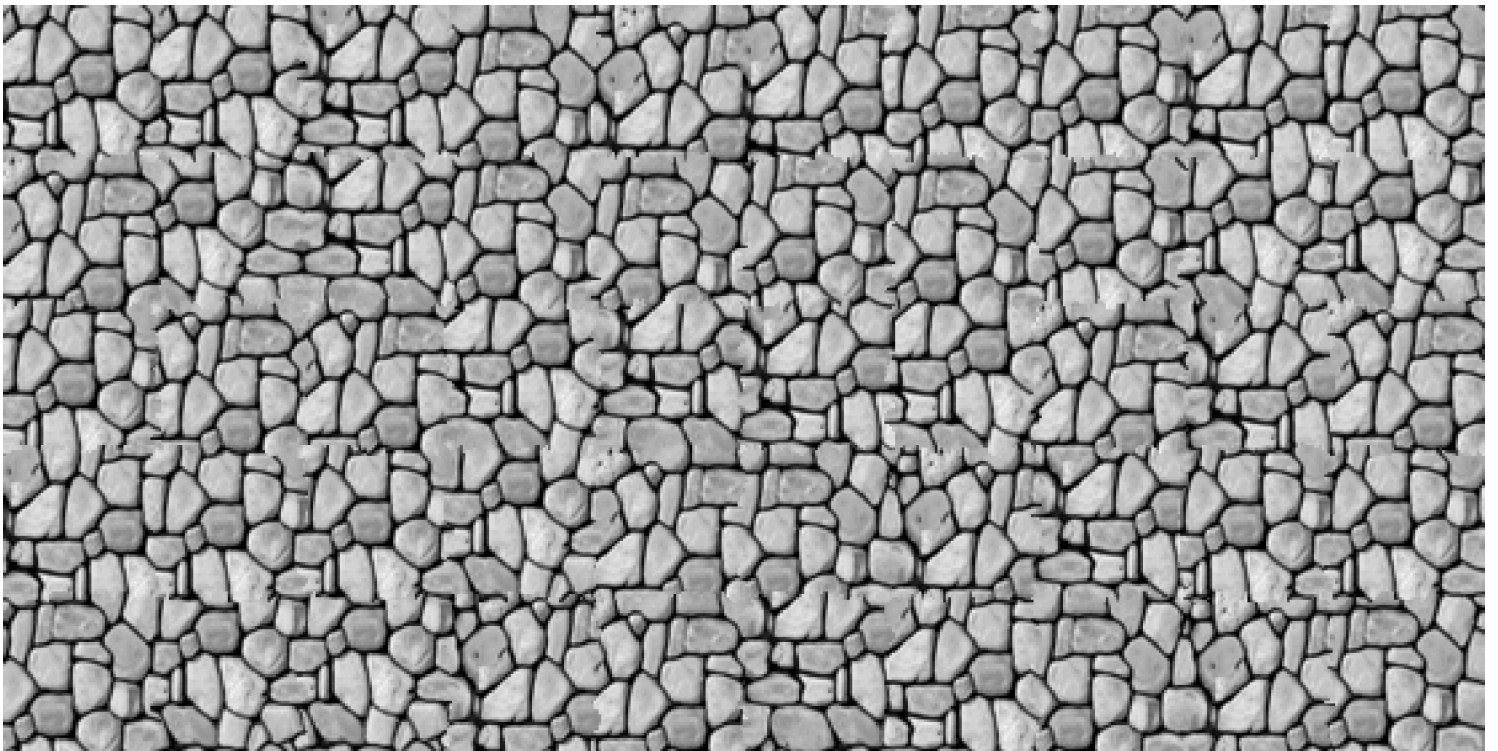
### **3.Decrease the value for K**

The result image remains unchanged when I decreased the K value. Since K value represents the number of top nearest neighbors that matches in the list of tiles, there are more nearest neighbors can be matched together if K value is large. However, if the image has not many nearest neighbors, the result image cannot be affected too much even it has a larger/smaller K.

Original



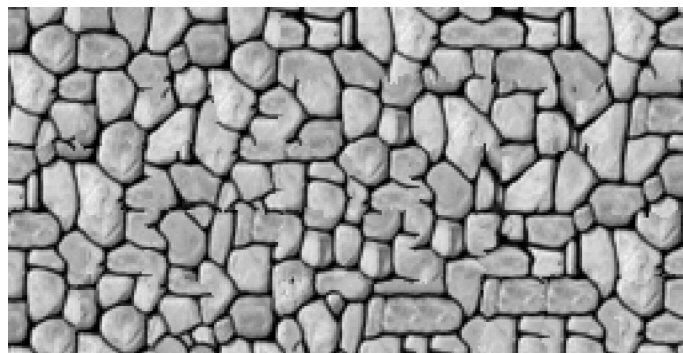
Tile Size = 60, overlap = 5, k = 5



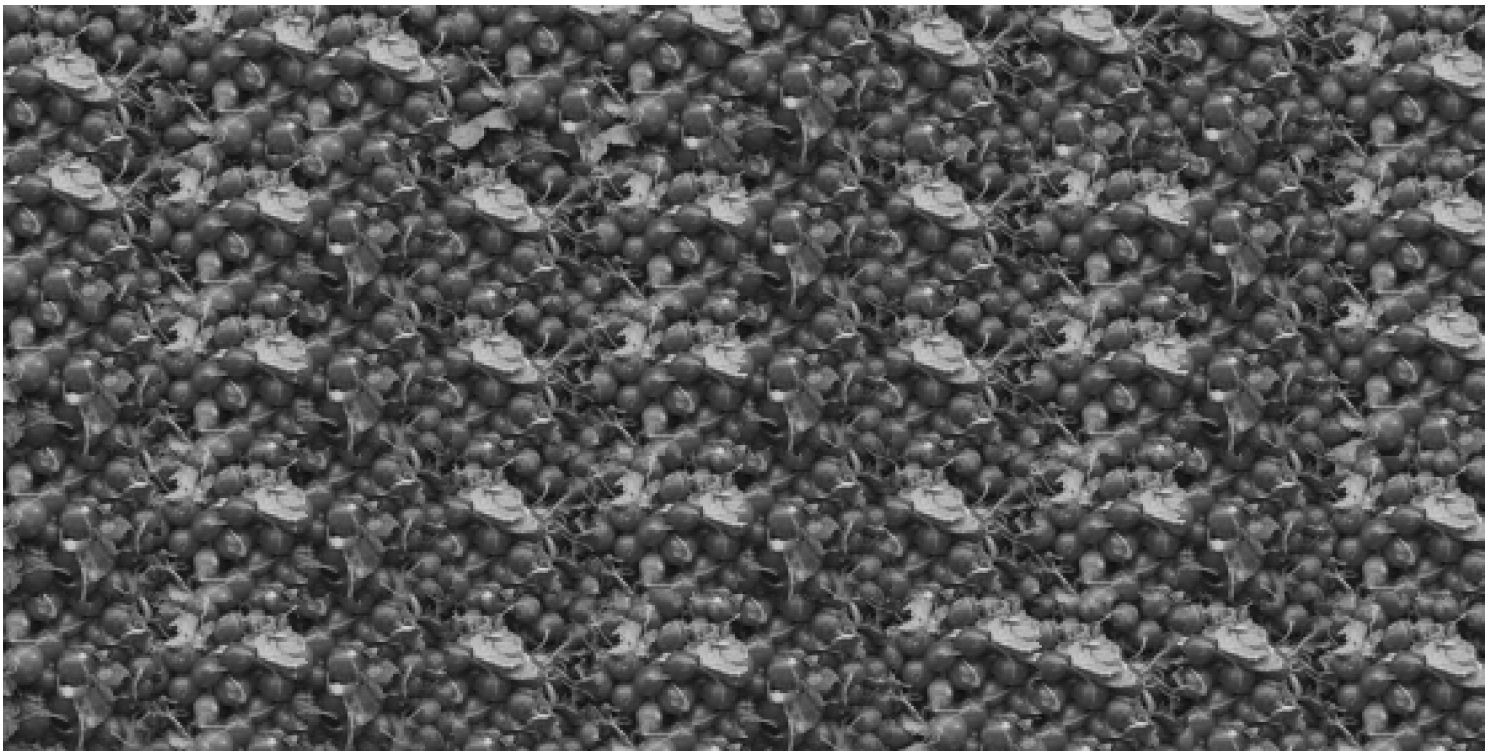
Tile Size = 30, overlap = 30, k =5



Tile Size = 30, overlap = 5, k =1



Tile Size = 60, overlap = 5, k =5



Tile Size = 60, overlap = 5, k =5

