Brian Dinh
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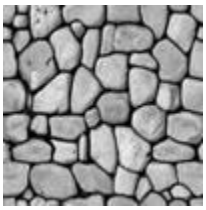
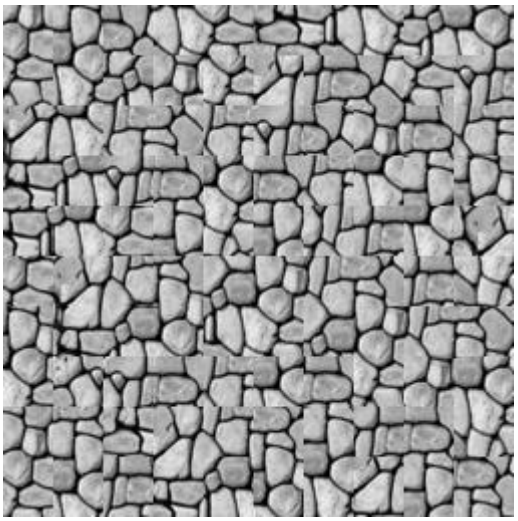
Homework 3

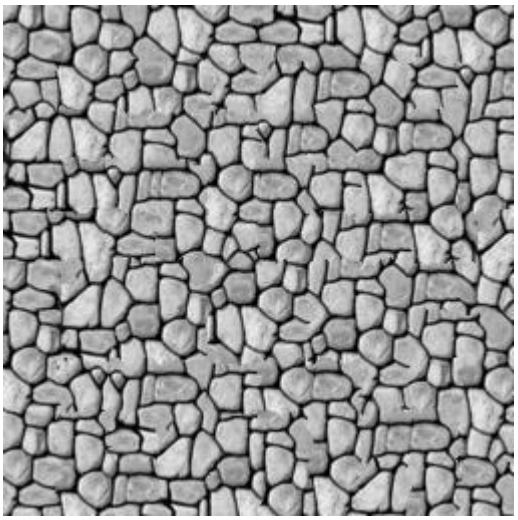
# Homework 3 Write-up

**Rock wall with default values:**


Original Texture


Paste

tile size = 30
overlap = 5
K = 5


Quilt

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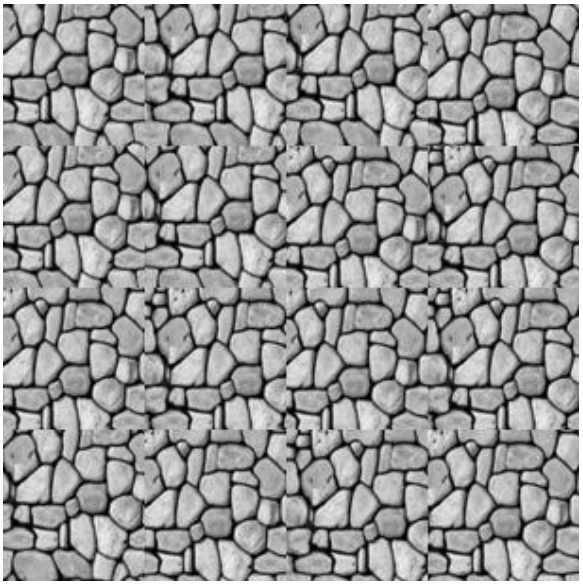
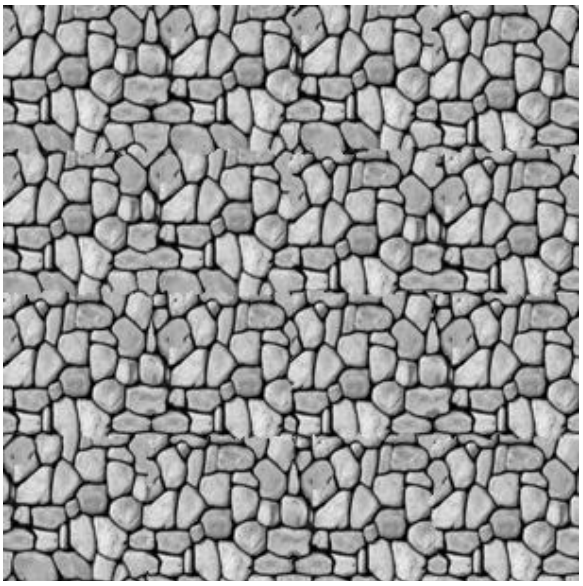
**Rock wall with increased tile size:**



Paste

tile size = 80
overlap = 5
K = 5



Quilt

Increasing the tile size leads to verbatim copying of the texture. This is because the increased tile size encompasses most of the original texture's size, which means there will not be a diverse enough sample of tile vectors to choose from when plotting down new tiles.

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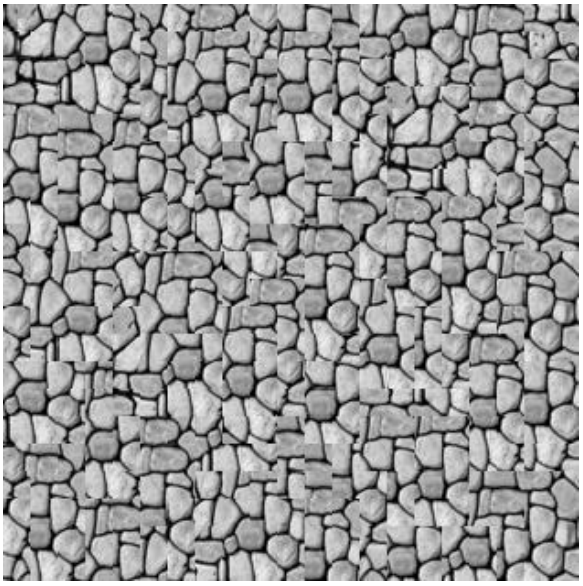
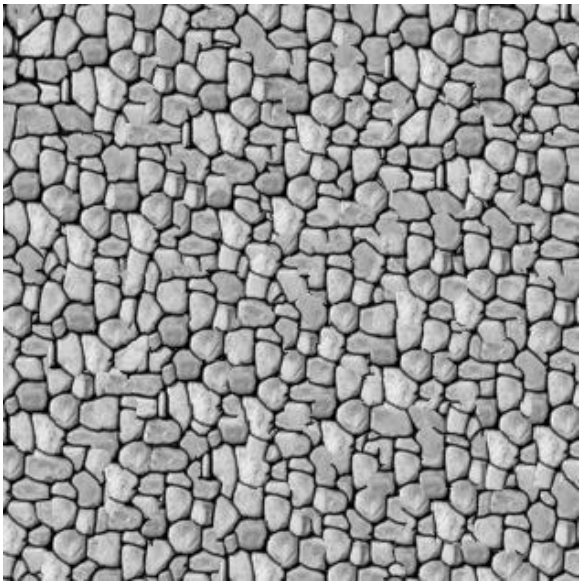
**Rock wall with increased overlap:**



Paste

tile size = 30
overlap = 15
K = 5



Quilt

Increasing overlap leads to the output image featuring more small textures. In this case, there is a lot of smaller pebbles. This is because the overlapped area covers more of the two stitched images. The longer edges and lines get hidden away.

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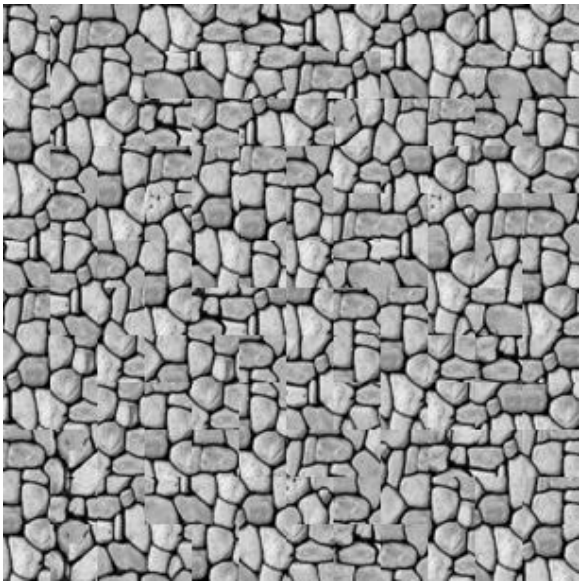
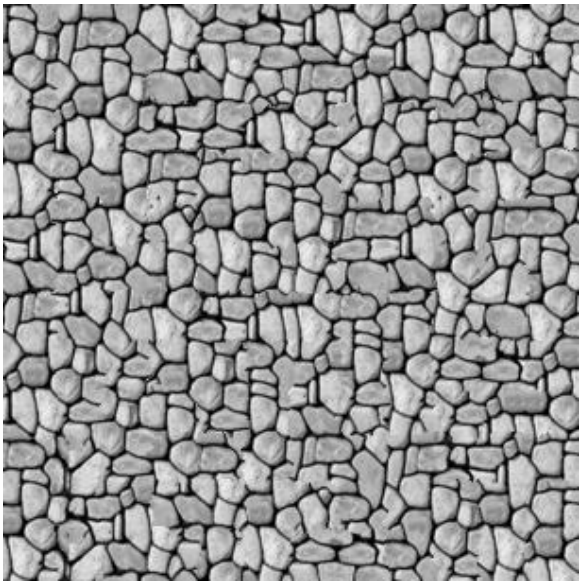
**Rock wall with decreased K:**



Paste

tile size = 30
overlap = 5
K = 2



Quilt

Decreasing K leads to less variation in the output image. There are a couple areas that have the same texture / pattern throughout. This is because there is a smaller pool of images to choose from when stitching together tiles, so the output ends up featuring the same sample tiles over and over.

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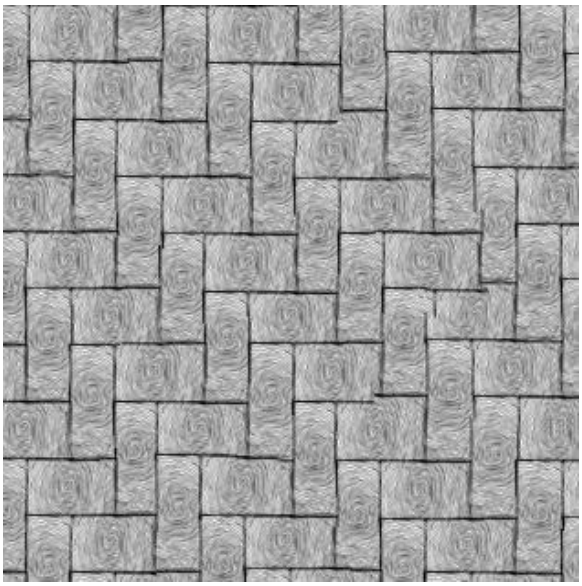
**Wood blocks:**

tile size = 35, overlap = 15, K = 5

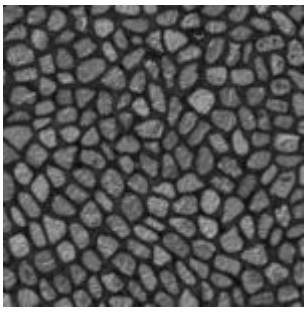
Original Texture



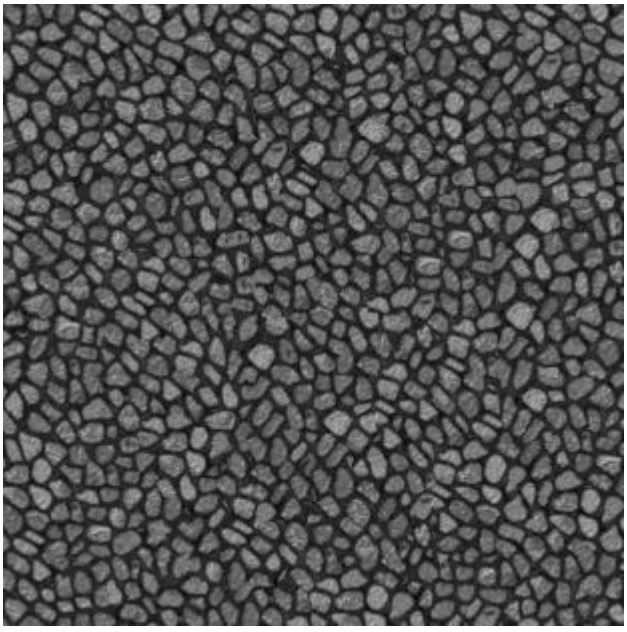
Synthesized Texture

**Cobblestone:**

tile size = 25, overlap = 10, K = 10



Original Texture



Synthesized Texture