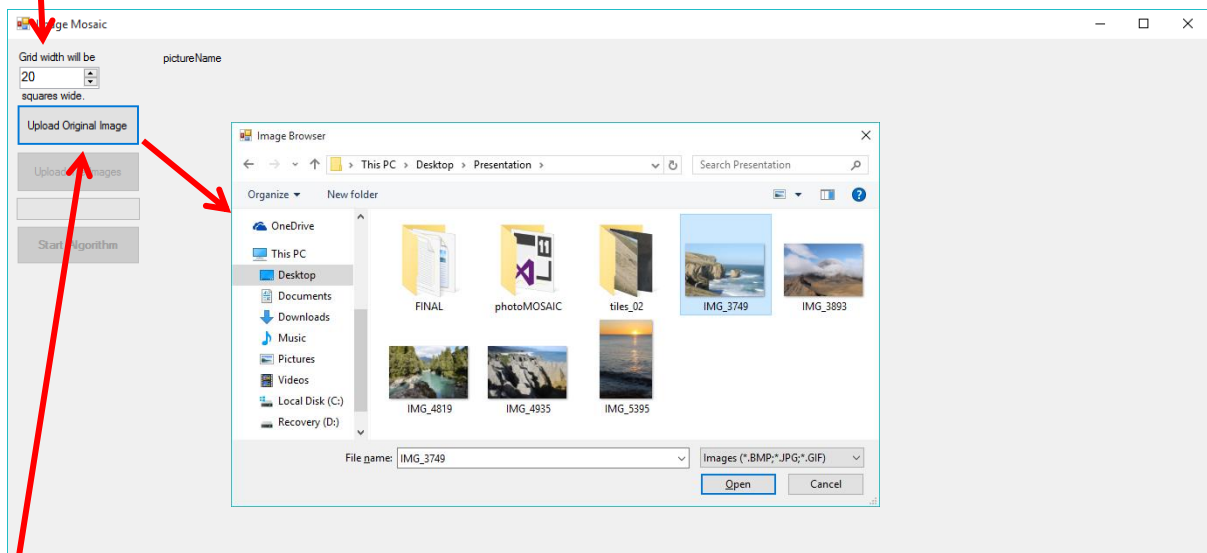**Senior Capstone 2016 – Image Mosaic – Veishea Grebin**

How to Use, Tips and Problems(at bottom)

0: This application was built in Visual Studio 12 and was only tested on a 64 bit Windows computer.

**1:** Choose how many tiles wide. The more tiles the longer it will take but the better the mosaic will match the original image. For example:


← 30   VS   70 →

2: Upload original image. Clicking the button will allow you to browse and upload your image of choice.

3: Upload tile images to use in mosaic by clicking the Upload Tile Images button which will allow you to browse and upload multiples images of choice. You have to choose all images at one time so having them all in one folder makes them easier to upload. After closing the browsing screen a pop-up will tell you how many images you chose and then a progress bar will let you know what percent is complete. (tip: to make the algorithm faster pick images that have similar colors to the original image, also if there is more blue then green in the original image you should upload more blue than green pictures)

Shown on next page
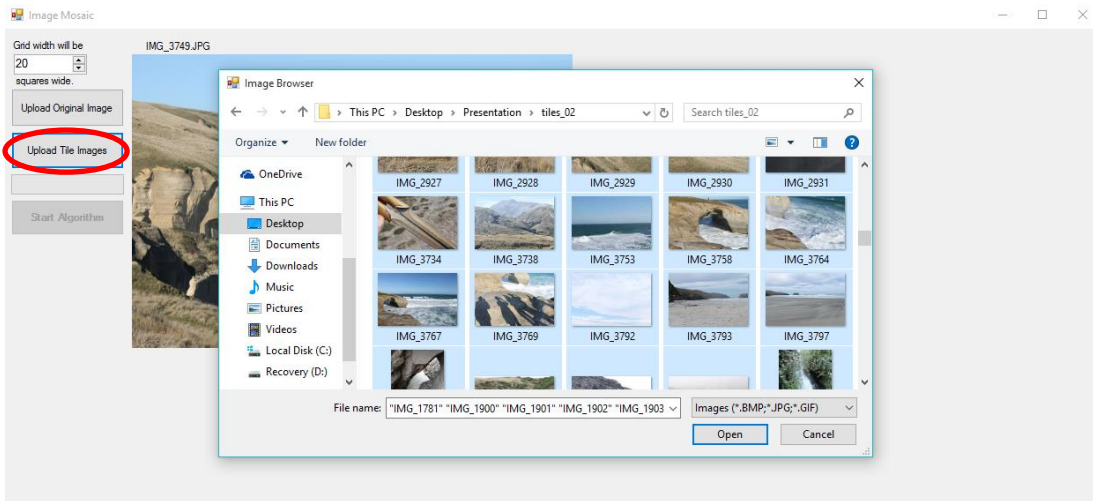
4: Click Start Algorithm to start making the mosaic.
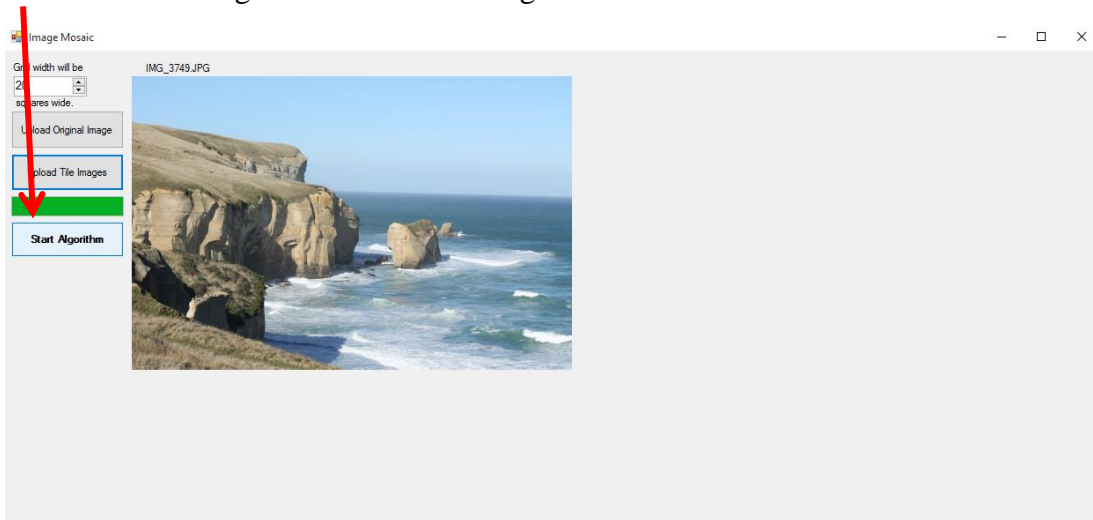
5: After one generation has been generated a small window will show up and display the current generation the algorithm is on. This window allows you to decide how often you want to see the progress of the algorithm. In the example below it says the window will show up every 1 generation execution. The two button options allow you to continue running the algorithm or to stop the algorithm which will then ask if you want to save the image.
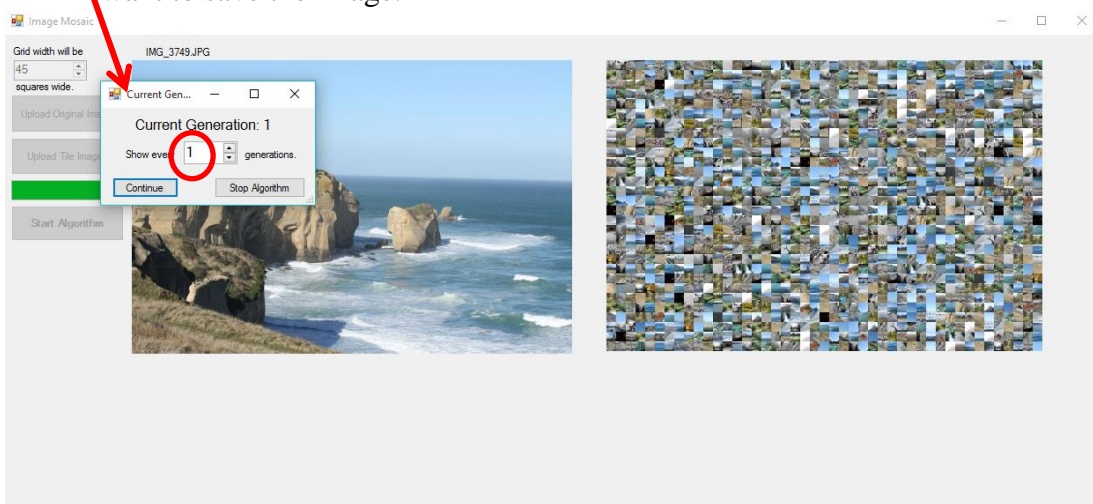
6: If you click Stop Algorithm(1) the window below it will appear(2) and ask if you want to save the image. Clicking No will return you to the main form where you choose to start the algorithm over again with the same tile images, let you choose new tile images and run the algorithm, or completely start over. Clicking Yes will open a browser screen(3) that will allow you to save the image mosaic.

(1)

(2)

(3)
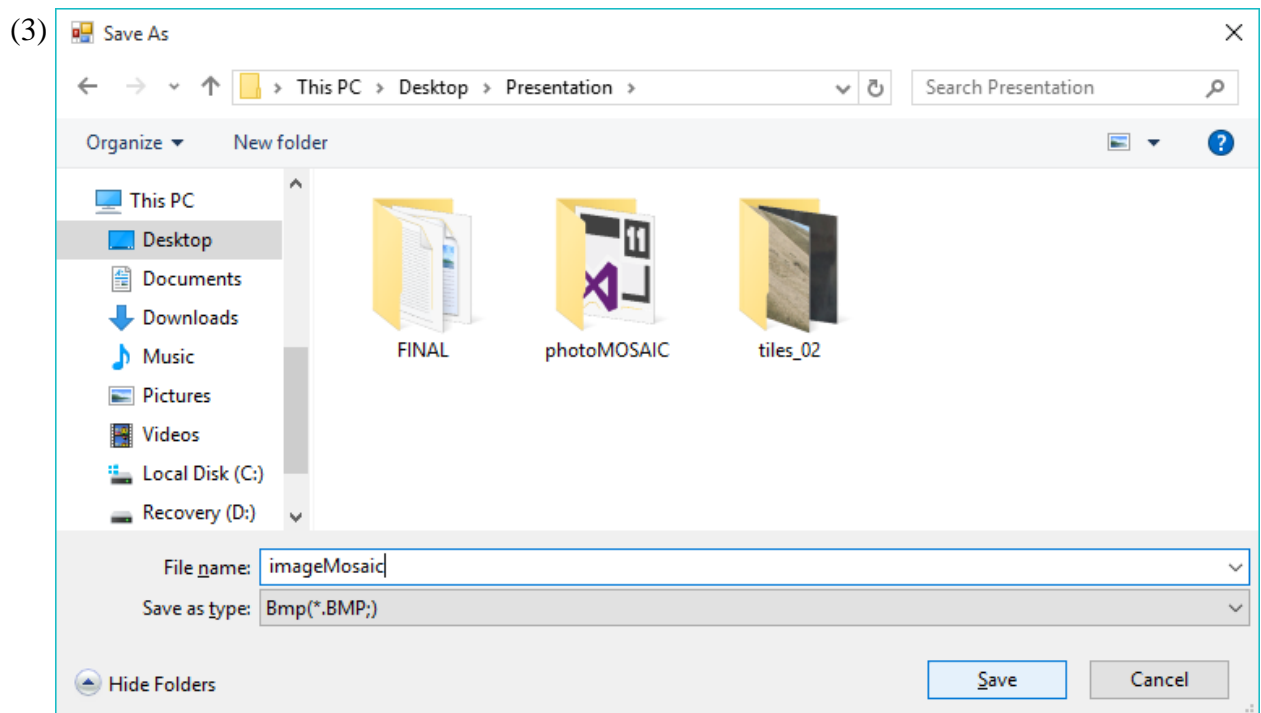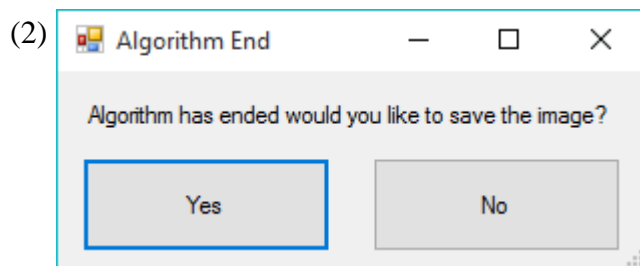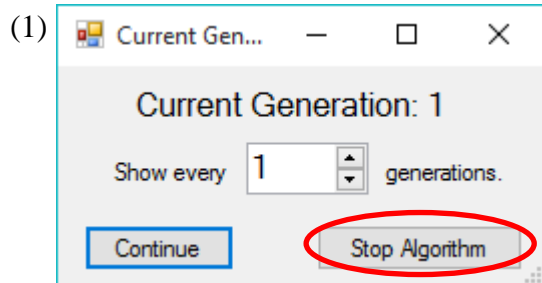
Problems

1. Out of Memory: This appears while uploading the tiles images and is because the application is trying to use more memory than it has been allocated. Until this

problem has been fixed you will have to either resize the images before uploading them(smaller resolution or dimensions) or upload less images.

2. The mosaic does no turn out very well. This depends a lot on the tile images that were uploaded. For example if there is green in your original image and none of your tile images are close to green in color that position will not have a match and have a picture that did not fit anywhere else.

← Uploaded Images, Result Below
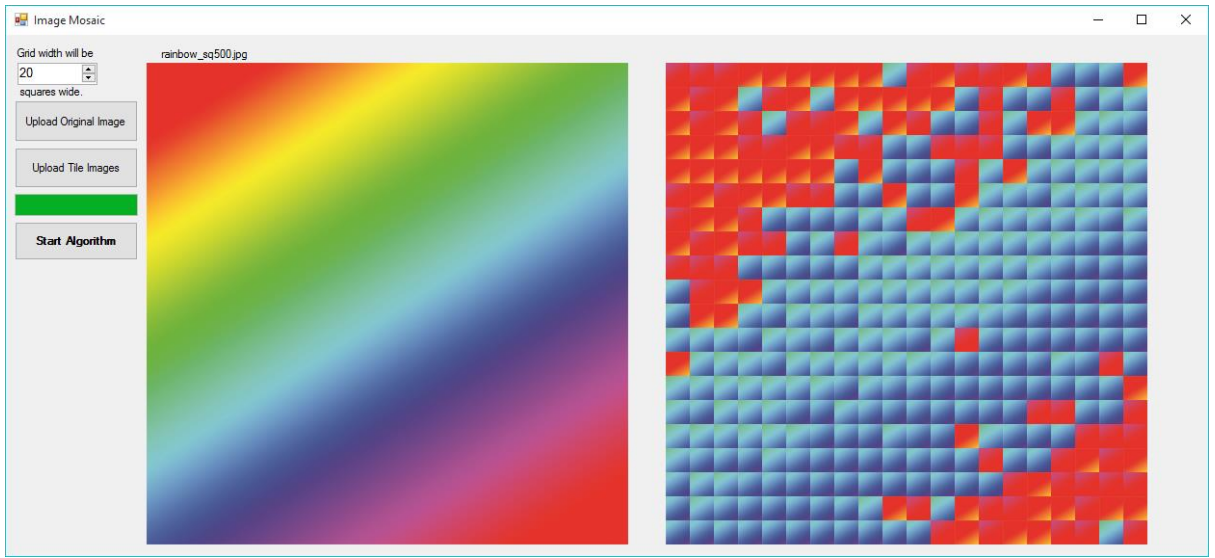
Another aspect that will help improve the image mosaic is having images that are about the same color throughout the whole thing. For example the first image will work better than the second:

VS

Mostly dark green/brown

Half light blue and half dark blue/brown