Project 1.4.7: Image Artist

Spicy Portraits Inc.

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Megan Fannin & Edward Tang

3/4/19-3/22/19

Brown Period 1

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Brainstorming

Problem Definition:

- Your client is a family that would like a standard frame applied to a large number of pictures that feature one or more of the family members. They want the composite image to be memorable and to incorporate some personalized symbol, image, or silhouette that represents the interests of the family member(s). The client enjoys abstract art as well and might like to see geometric shape incorporated in the image—drawn on, as a border, or as a mask. The client enjoys participating in the creative process and will appreciate being offered a range of options (as a parameter) for one of the image operations you perform.

Client #2: A Family:

- standard frame applied to multiple pictures
    - picture can be a range of sizes
    - 1 background image
    - thickness, color, and pattern design options
- geometric designs in premade masks
- incorporate some personalized symbol, image, or silhouette
    - different locations where it can be placed

Feedback:

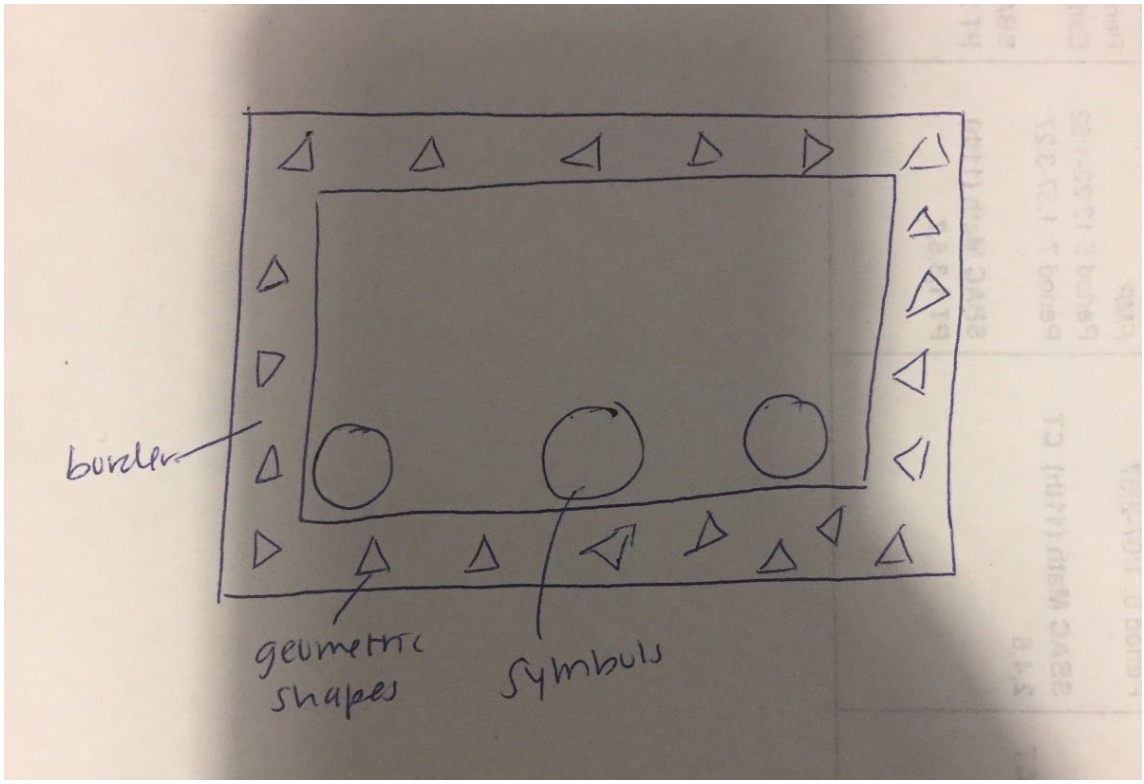
- be able to change color of geometric patterns
- only have 1 standard picture frame
- be able to implement them all at once

* yellow highlight = final design choice

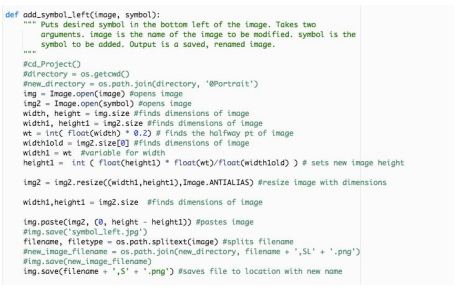
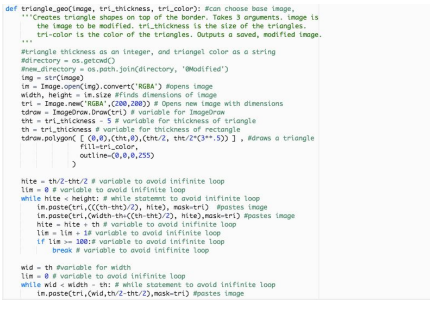
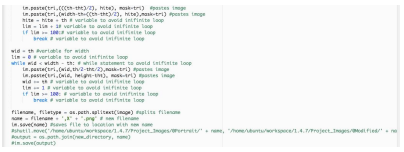
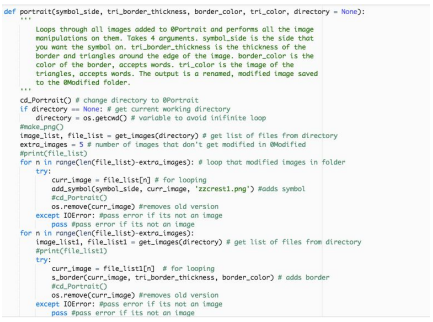
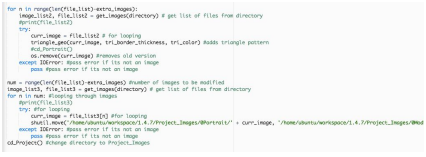
Tier 1	*Tier 2*	*Tier 3*
1 rectangular picture frame color options 1 location for family symbol	2 rectangular picture frames color options geometric or abstract patterns in frames 3 locations for family symbol	4 rectangular picture frame different frame shapes color options geometric or abstract patterns in frames Make patterns in the image Turn pictures into abstract art 4 locations for family symbol

Options for family symbol:

Complete Sketch Idea:



Visual Display

Original Image	*Code*	*Modifications*
		
		
	 	
	 	

Explanation:

Through the code we created, you are able to input a family portrait and output the portrait with a border, triangular shapes, and a symbol of your choice. The client can choose to incorporate all of these features, or just one. To make them more customizable, each feature can be modified to fit a personal preference. For the border, the client can change the thickness and color of the border. The symbol can be whatever image they like, and they have 3 options of placement: bottom left corner, bottom right corner, or bottom middle of the original family portrait. The geometric shapes are only triangles that are laid out on top of the border, but the client can change the color of these triangles. The way we have made this code work is by creating a single function that takes the input of the original family portrait and possibly the symbol they want and creating an output with all of the desired features placed on top of the portrait. We have designed our code so that the features will be implemented on differing image sizes (we have only tested rectangular images). However, we do have some constraints within our code. For example, if a picture has both a border and family symbol, the border will overlap on the outer edges of the symbol. Another small issue we have is that depending on some of the image sizes, the triangles on the border will be slightly off-set at the edge.

Gallery Walk

Click here to access the slideshow

Instructions:

1. Be in the directory Project_Images
2. Type "%run ../Fannin_Tang_1.4.7_vfinal.py"
3. Copy the images that you want modified into the folder 0Portrait
4. Call the portrait function
    a. portrait(symbol_side, <-- left/middle/right
    b. tri_border_thickness, <-- thickness of border pattern (number)
    c. border_color, <-- color of border
    d. tri_color, <-- color of triangles
    e. directory = None)
5. Try this → portrait('middle', 25, 'blue', 'red')
6. Modified files will appear in the folder 0Modified

Pros	Cons
1. Love the organization 2. I like how you can put images into a folder and then only those images in the folder will be edited 3. I like how you made the image simple and had geometric and normal colored borders 4. The options are clean and professional, with interesting choices 5. I like how you made a lot of options for the client to choose such as border and symbols. 6. The geometric pattern for the border is very creative 7. The different features allow for numerous combinations of images, which makes it very adaptive.	1. Kind of confusing for following instructions 2. Maybe add a transparent symbol a. or a symbol with a different color background 3. You should add a function which allows you to adjust the transparency of the border, triangles, and logo 4. Avoid repetitive comments so that the code is more clear and easier to understand. 5. Use more appropriately named variables to make the code easier to understand 6. You can try to make the triangles in the images more neat and well arranged.

Conclusion

Reflect on the team dynamic and on the design process. What were areas for improvement? What steps could you take next time to make those improvements?

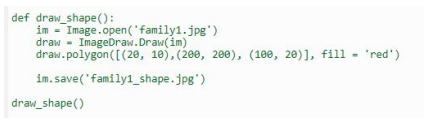
Megan:

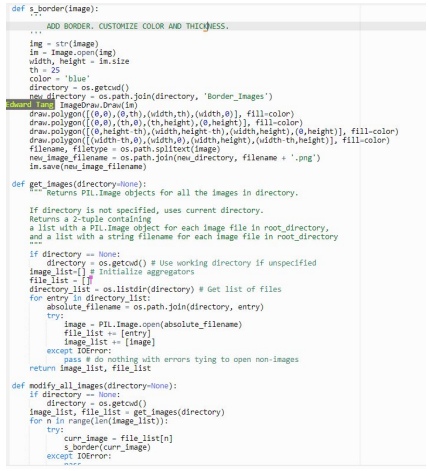
Overall I thought the team dynamic was pretty good. We were able to stay on task throughout the project and delegate responsibilities while still discussing each step of the project. Although we did run into some obstacles, the design process went pretty smoothly because we were communicating about our ideas and issues that we were having. Even if I wasn't at school, I would still talk to Edward over text to make sure we were on the same page. I think the only thing we'd need to improve on would be going through the code together more frequently. Sometimes each of us would work on separate parts of the code on different versions and that made it harder to compile it in the end because each of us wasn't sure which code was the best. We would fix this in the future by communicating even more about where we were writing code and commenting more frequently.

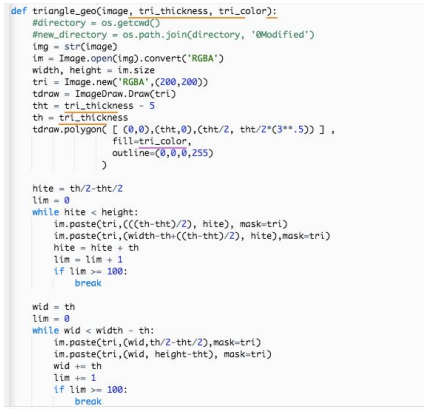
Edward:

Megan and I had a very efficient team dynamic. We were able to visualize what we wanted our final product to be on the first day and get to coding quickly. During class we divided the task and worked separately, but often came back together to check on each other's progress. Every day in class was used productively to work towards accomplishing the goals that we brainstormed. We also communicated a lot outside of class to stay on the same page. However due to the difficult nature of the task, each person had to do their own research. This made it harder to combine the code together at the end because there would be differences in the code. We had to take a lot of time trying to understand each other's code. A way this could be fixed is by adding more comments. This will allow us to work more efficiently even when one partner is absent.

Daily Project Log

Day	*Megan Fannin*	*Edward Tang*	*Daily Progression*
Day 1 3/4/19	Today was the first day we began the project. We decided to choose Client 2 which was a family. We started brainstorming by creating some sketches and laying out the 3 tiers that we wanted to complete. I think Edward and I worked well together to try and formulate our ideas.	Partner and I decided to do Client 2. We brainstormed ideas for a product and created sketches for 3 tiers of finished product. Exchanged contact info to communicate outside of class	N/A
Day 2 3/5/19	We continued to brainstorm today and came up with some new ideas on what type of border, shapes, and symbols we wanted to incorporate. Additionally, I chose some stock images that we could use throughout the code as our main input. I put their links and credits in the documentation.	Brainstorm more product ideas and image manipulations. Some ideas were border, shapes, and symbols. We also found some images to test the manipulations on.	N/A
Day 3 3/6/19	Today we began writing the first version of our code. We decided to begin writing the code for our border and we got it to work. I got some inspiration from online and got a solid black border to work. However, this border is much thicker than we wanted so we plan to modify the code later.	We began coding, starting to work on getting a functioning border. Researched online for possible ways to do this. Experimented with making polygons and rectangles.	
Day 4 3/7/19	Today we decided to try and write the code for the abstract part of the project that includes geometric shapes. Edward and I pair coded during this part where	Experimented with adding geometric shapes on the border. We researched usable functions on PIL documentation. The main challenge is making the	

	Edward searched up functions of the PIL library online while I typed the code. The code that we finished with was able to draw a triangle on the image, but we had to specifically type out the coordinates. We hope to change this code so it will work for any image size.	triangles scale appropriately and be placed correctly in the border.	
Day 5 3/8/19	Today we actually completely modified the code for the border by creating rectangles that would outline the edge of any image size. However, it still is not working correctly so we need to modify it again tomorrow.	Trying to put the border code didn't work. It seems like the order of the coordinates need to be changed. Created some variables that will help make the border change dimensions.	
Day 6 3/11/19	Today we got the border to work and began the code for adding symbols in different locations. This took a while to complete because we had to add and subtract different height and width variables to get the symbol to be placed perfectly in the frame. We now can place the symbol in 3 different locations, but it still a little too big.	Fixed the code for the border and began code for adding customizable symbols into the image. Spent some time trying to get the image to go into the correct positions with different size images. It roughly works in left, middle, and center locations.	
Day 7 3/12/19	Today we just added onto our code for the border by allowing it to go through the entire original folder and add borders to every image. This worked out the way we intended.	Created code that loops through a folder and modifies all images inside by adding a border. Planning to do the same for the other functions and then finally combining them in one function.	

Day 8 3/14/19	Today we continued working on the code for adding symbols because it was not working correctly. Although we modified it more, the symbols don't always line up correctly with the right size for any size image.	Refined the function for adding symbols. We need to get the symbol to have the correct size and position according to different sized images.	
Day 9 3/19/19	Today we were trying to work on getting the geometric shapes to work. Although we know how to paste individual shapes, we want to try and add a variety of different shapes on top of the border of the image by creating a universal code. We also got the symbols to work on any image size by making the size a percentage of the base image.	We figured out how to paste shapes onto an images. Now we need to combine this with the border code so that it will make a pattern within the border. I worked on creating a loop that will create triangles all along the border. Megan worked on the symbol code some more.	
Day 10 3/21/19	I wasn't here during class today, but I texted Edward and worked on parts of the code and documentation at home. I mainly tried to set up the slideshow so we could present our ideas to the class. We also finished up the geometric shapes so they lay perfectly around the edges of the border.	I focused on refining the code for patterned border. Mostly I am trying to get the triangles and border to be aligned correctly with different sized images. I have to remember geometry and how triangles are supposed to work.	
Day 11 3/22/19	I again wasn't at school, but I communicated with Edward over text. We finalized our code and combined it into one function that would go through and add all the different features at once. Now we will work on finishing up the	I finished coding the patterned border and spent time testing the symbol, border, and pattern functions together with different images. I am having difficulty getting the code to access different file locations and saving images correctly. Over the weekend	

	documentation over the weekend.	I created a function that combines all of the image manipulations into a single function. The purpose of this is so that our code can be easily used and understood by other people. I spent a lot of time figuring out how to get files to save correctly, and created a lot of test functions in the process. Border thickness, color, symbol location, and triangle thickness are customizable from within the function when it is called.	  

Credits for Images

Image	*Link*
	https://www.google.com/url?sa=i&source=images&cd=&cad=rja&uact=8&ved=2ahUKEwiUy9CLtOvgAhXiJTQIHfsEDbAQjB16BAgBEAQ&url=https%3A%2F%2Fwww.news.com.au%2Fentertainment%2Fcelebrity-life%2Froyals%2Fthe-hidden-meaning-in-new-royal-family-portrait%2Fnews-story%2Fa4fa37ce30f00642161400e2ebbad9bb&psig=AOvVaw0LyD2CJIh1Qrau4QZYKiav&ust=1551889238197486
	https://upload.wikimedia.org/wikipedia/commons/thumb/9/98/Royal_Coat_of_Arms_of_the_United_Kingdom.svg/2000px-Royal_Coat_of_Arms_of_the_United_Kingdom.svg.png
	https://photos.smugmug.com/Family-portraits-cork/i-gLvXkDf/0/3b6c14ff/L/family-Wm%20Healy%2002-L.jpg

https://us.123rf.com/450wm/pashabo/pashabo1707/pashabo170700010/82149759-stock-vector-coat-of-arms-heraldic-royal-emblem-shield-with-crown-and-laurel-wreath-heraldic-vector-template-.jpg?ver=6

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