Assignment 8: Create a Collage

Objective

The objective of this lab is to

- Use loops
- Use conditions
- Create methods
- Practice pass by reference (an array to a method)
- Create a collage (playing with images)

What to hand in:
Submit your source code (.java files) to the dropbox no later than 11:59pm as follows: Tuesday labs are due the March 7, Wednesday labs are due March 8, and Thursday's labs are due March 9th).

- Picture.java
- Lab8.java
- Your image after modification

Note: Late submissions will be penalized at a rate of 20% per weekday. No extensions will be given for this Lab.

Exercises

Now that you've seen a bunch of image manipulation algorithms it's time to write your own!

Write a method in Picture.java that creates a collage, makeCollage(Picture[] pics). Your method should take as input an array of pictures to use in the collage. The current image (this) should be the image on which to draw the result (you can use a blank JPEG file for this). Please keep the number of pictures to 5 for the pics array.

makeCollage(Picture[] pics) should use at least one of the images in pics 2 or more times. It should draw at least four separate images on `this`, and most or all of those should be modified in some way using the algorithms from previous modules.

To complete your assignment, please add a method called drawCollage() to Lab8.java which runs makeCollage(Picture[] pics). Your drawCollage() method may set up an array of images you select. However if I provide my own array of images, your code should still run without error. This means that you need to use conditionals to check that you will not have array out of bounds errors when the instructor runs drawCollage(). You can decide what to do if an image is too small or too large, but your documentation should describe your solution.

Your collage does not need to fill the target jpg. Portions can remain white.

Hint:

- I have not provided a Netbeans project. Make a copy of a previous project and work from there.
- Start with an array of relatively small images
- You may use any of the methods that we have previously worked with.

1. Bonus: Resize the images in your array to ensure that they will all fit within the target (that is they are smaller than the target). Depending on where in the target they are drawn, some of an image may still not get drawn in the target.