CMSC 405: Project #1

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CMSC 405: Computer Graphics

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**Class Description**

**Constants.** I set constants for the number of frames in the animation, the maximum size of the shape after all transformations have been completed and the number of shapes desired.

**TransformHolder.** I created a static inner class called TransformHolder in order to keep track of the previous iterations and avoid reusing code. I also created a reset method for it in order to reset it to default after each loop.

**drawImage.** I created a method called drawImage that applies the current translate, rotation and scale stored in TransformHolder to the passed image with the Graphics2D target and offsets the image based on how many images came before it this loop.

**Shapes and Colors.** I created ImageTemplate with 25x25 and then a shape of T and added O and C. For colors I added 0 giving white and 1 giving black, 2 gives pure blue, 3 gives pure red, and 4 gives pure green. I then made the T black and blue, the O blue and red, and the C red and green.

**Test Cases:**

|  |  |  |  |
| --- | --- | --- | --- |
| Purpose | Expected Result | Actual Result | P/F |
| Test initial position | Each image will be displayed in order diagonally from each other |  | P |
| Test translate | The images will all shift up and to the left. |  | P |
| Test rotate counterclockwise | The images will all rotate 45 degrees counterclockwise. |  | P |
| Test rotate clockwise | The images will all rotate 90 degrees clockwise |  | P |
| Test scale | The images will squish together across the top and stretch out toward the bottom. |  | P |
| Test reset | The images will return to their initial position |  | P |