BSCS 1-A

2023-03-13

MIDTERM EXAM IN CCS221

DOCUMENTATION

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Torre, Jephone Israel Jireh
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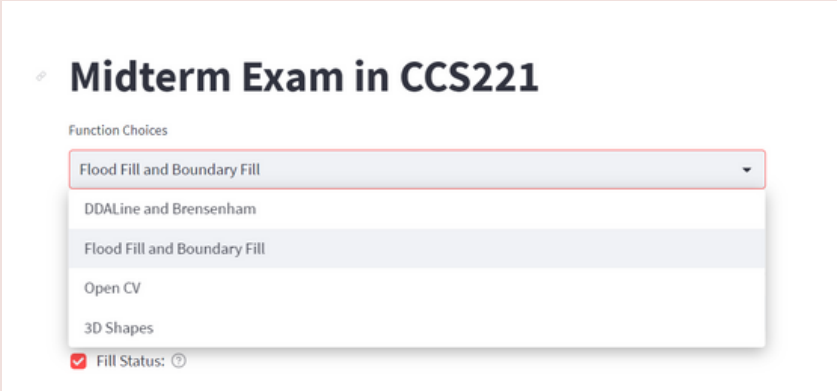
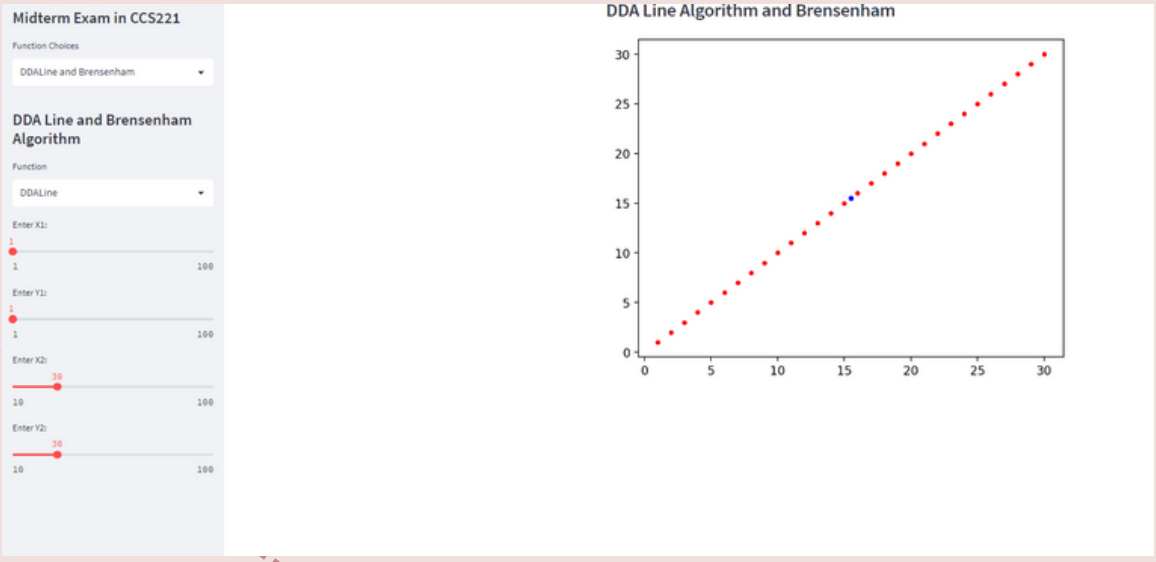
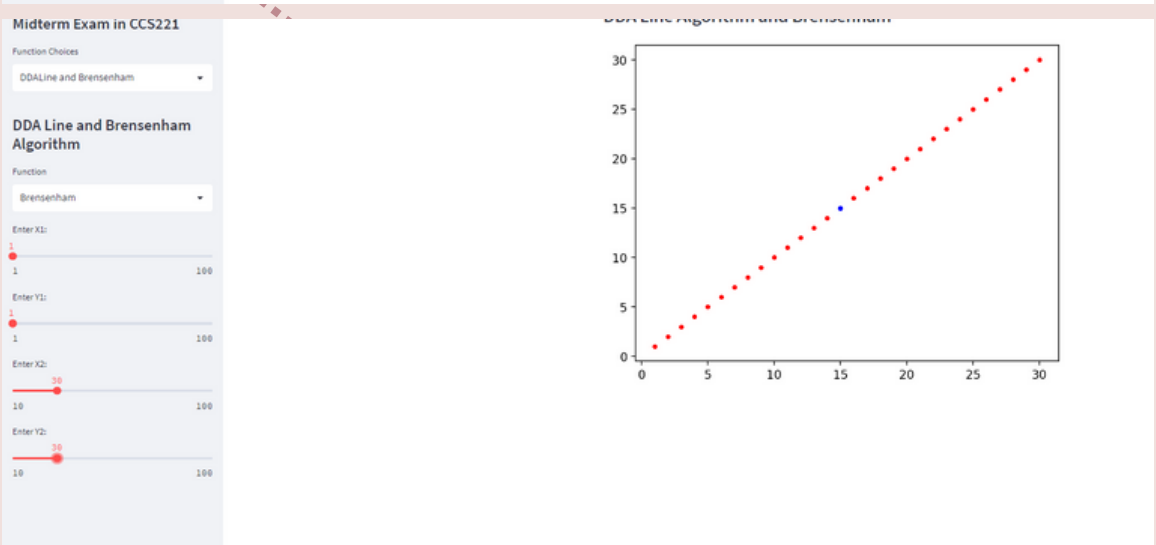
Constantino, Els Dave

THE APP CHOICES



DDA LINE BRENSENHAM ALGORITHM



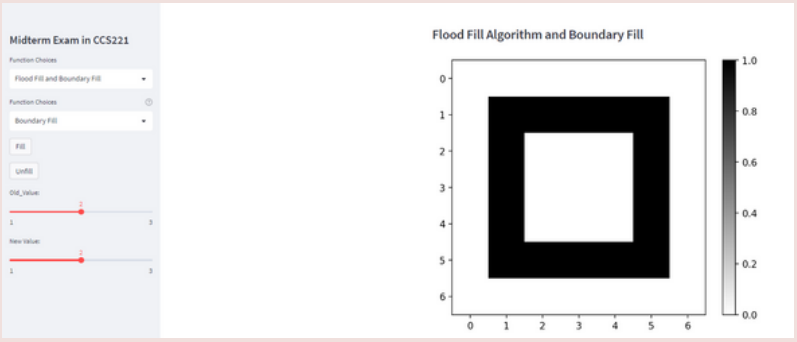


We learned that downloading and using matplotlib library allows us to create plotting graphs in the form of images and creating a sequence of plots using for loop functions. We also learned about declaring variables, creating and using functions in python

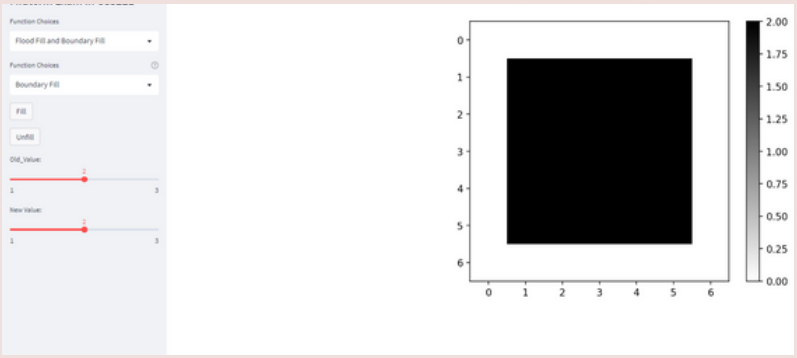
Flood Fill Algorithm and Boundary Fill

BOUNDARY FILL

Unfilled

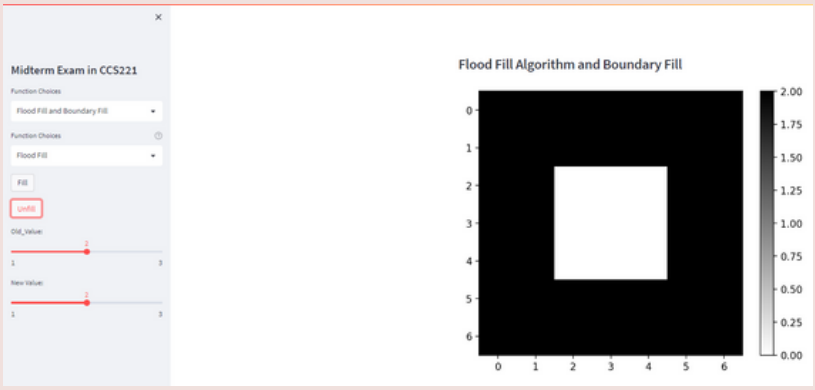


Filled

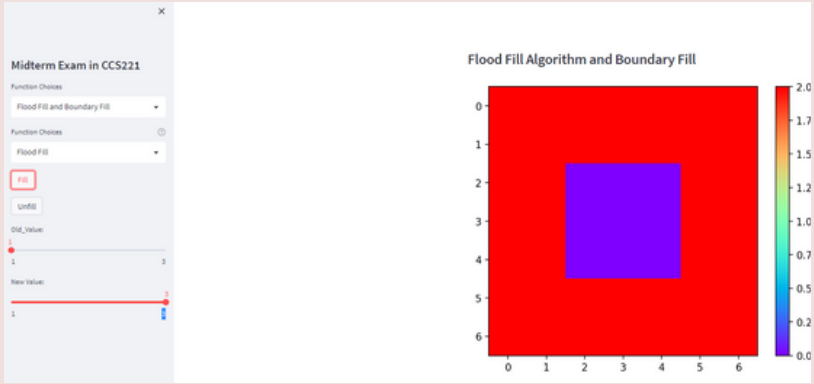


FLOOD FILL

Unfilled



Filled

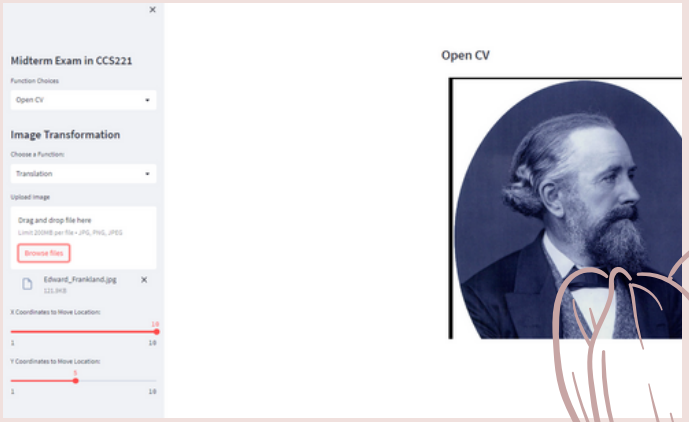


We discovered that with the use of nested for loops, we can change the value of a specific number in a multi-dimensional array to another value, this can also affect the other surrounding same values. This border and flood fill also features the selection of which row and column to change the value. The terminal also presents the process and the new value of the border and flood fill programs.

IMAGE TRANSFORMATION

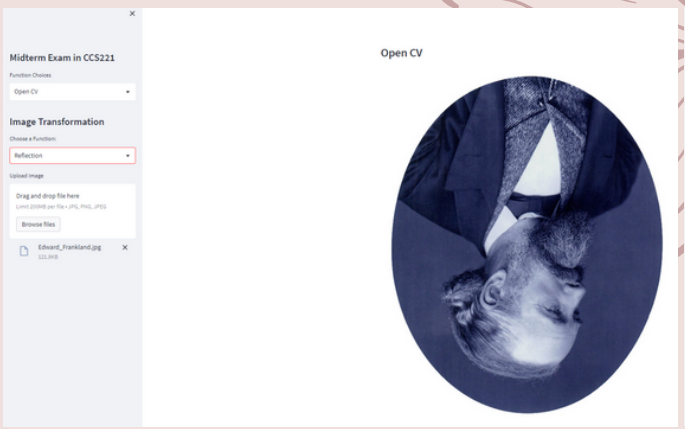
TRANSLATION

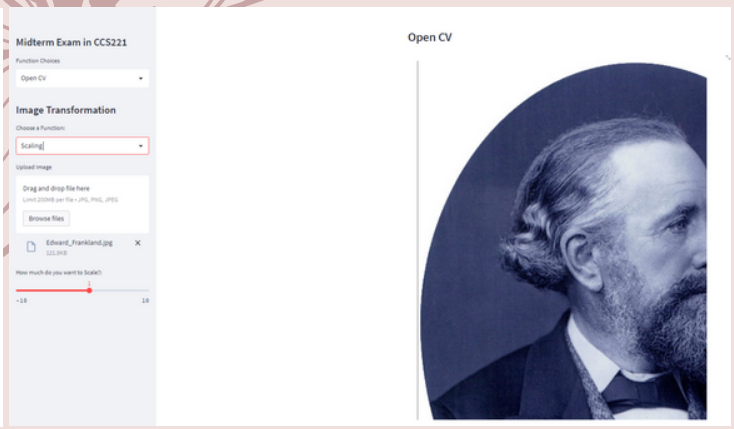
SHEARING



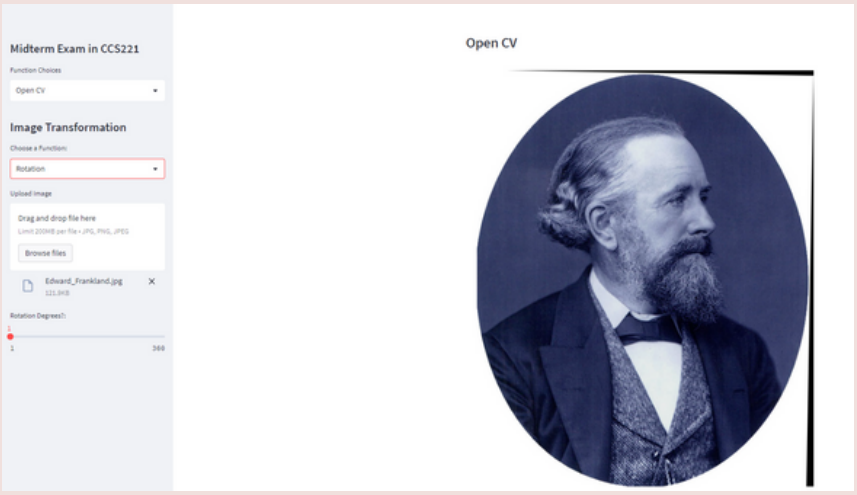
REFLECTION

SCALING



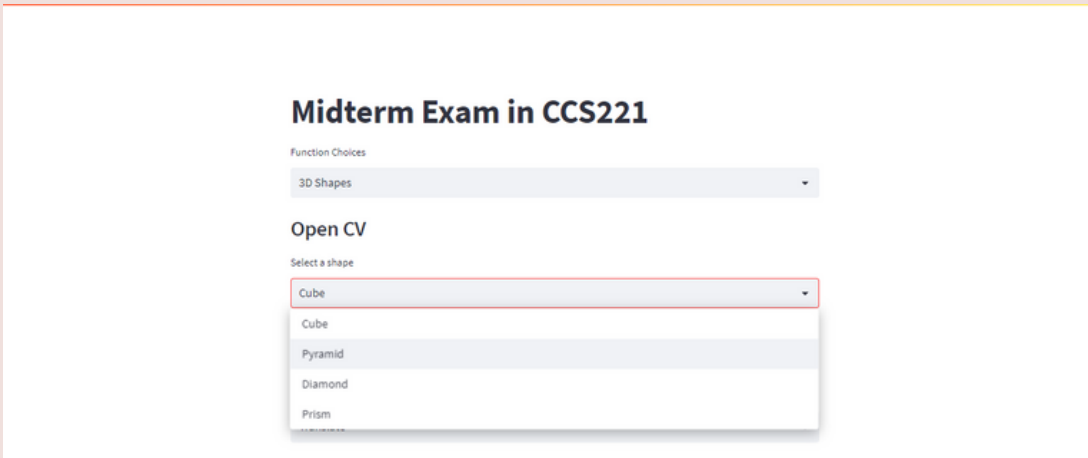


ROTATION



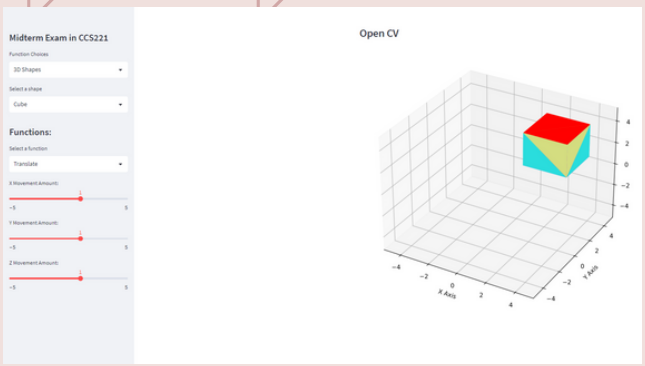
We, the group 1 have explored, used and learned about using OpenCV to manipulate and edit images. We also managed to use the browse file option.

3D SHAPES

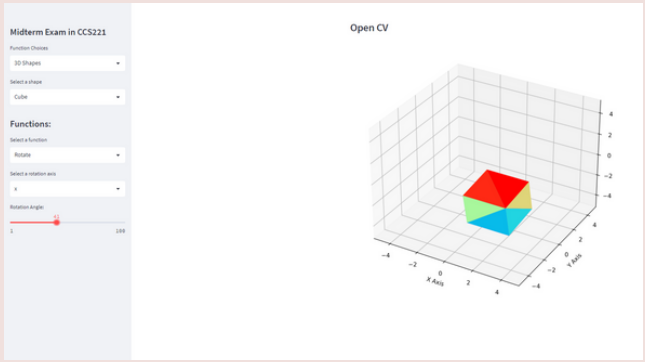


CUBE

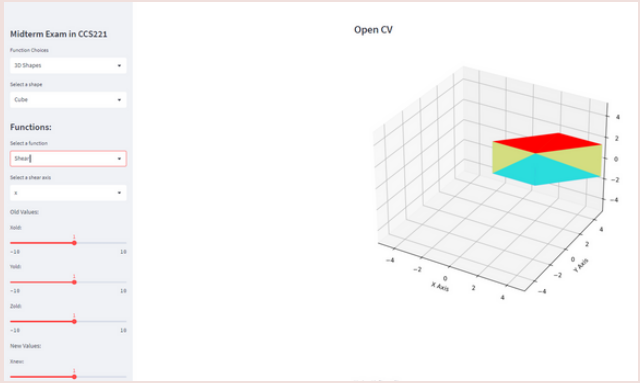
TRANSLATE



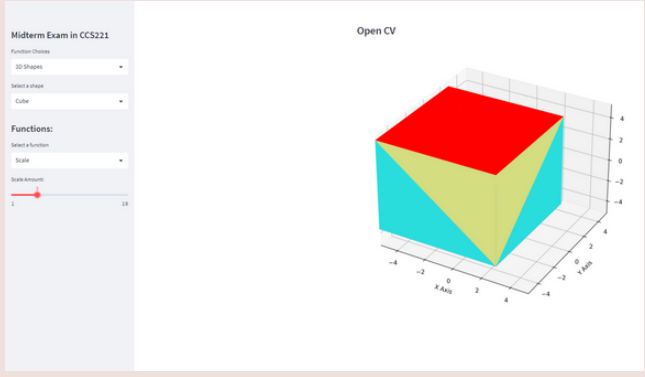
ROTATE



SHEAR

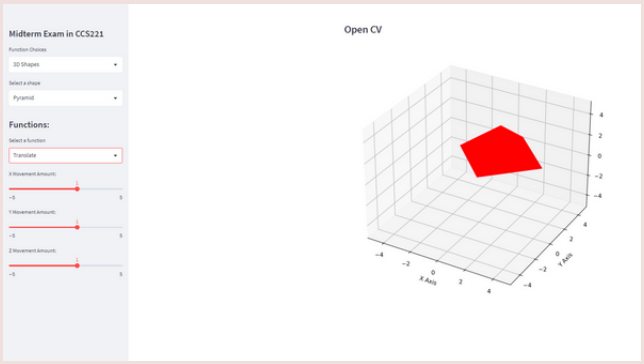


SCALE

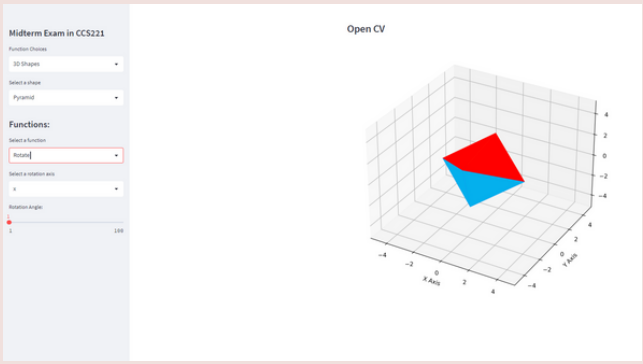


PYRAMID

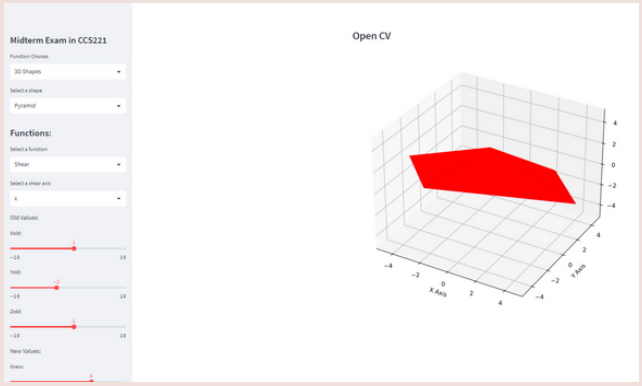
TRANSLATE



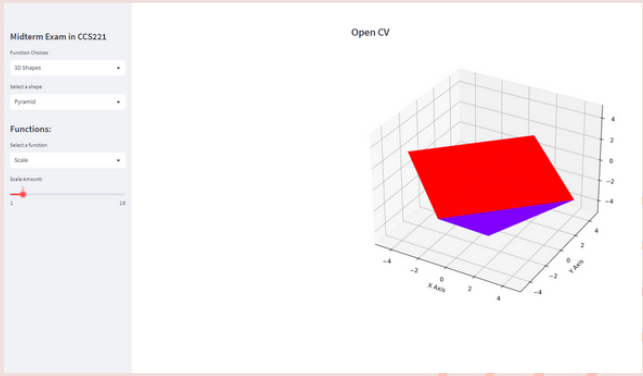
ROTATE



SHEAR

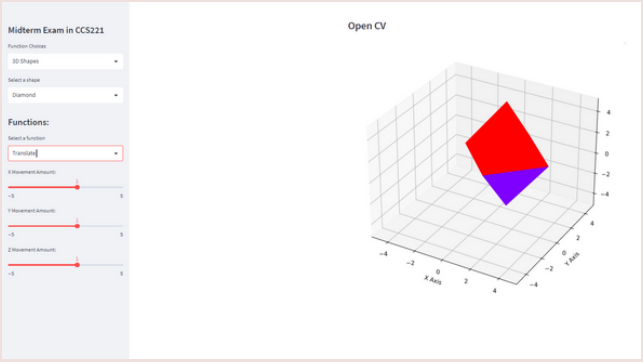


SCALE

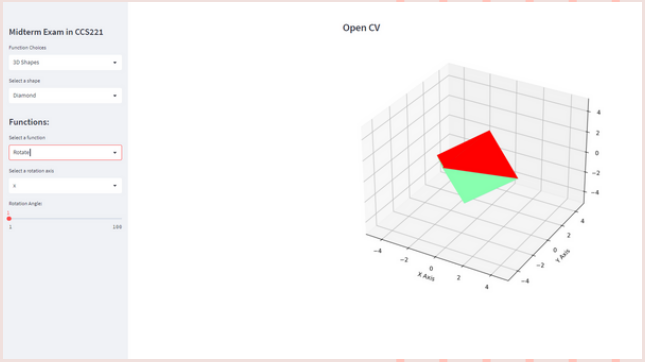


DIAMOND

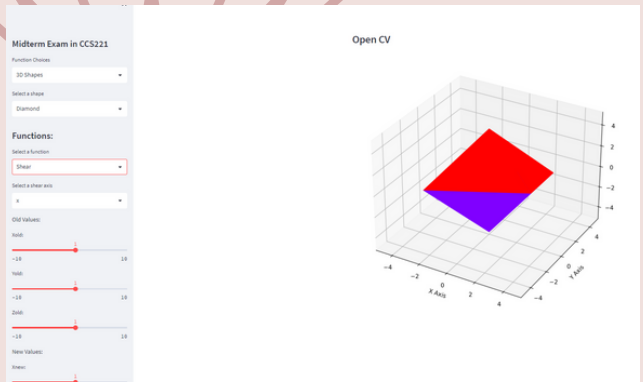
TRANSLATE



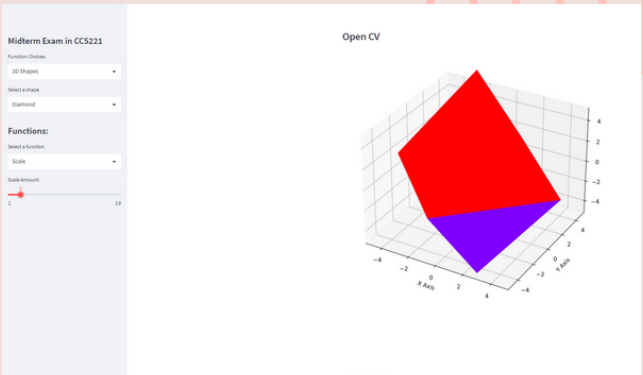
ROTATE



SHEAR

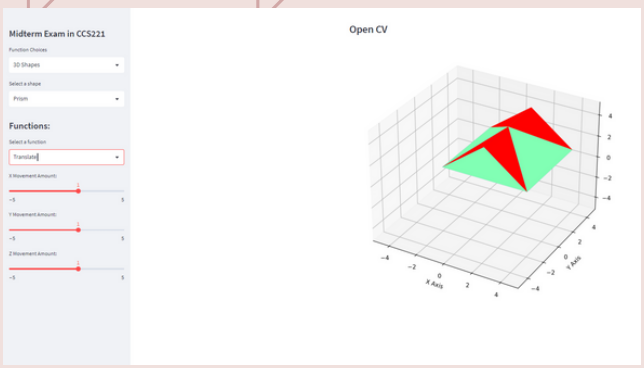


SCALE

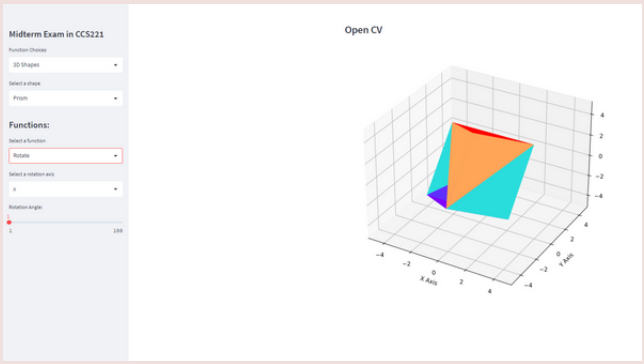


PRISM

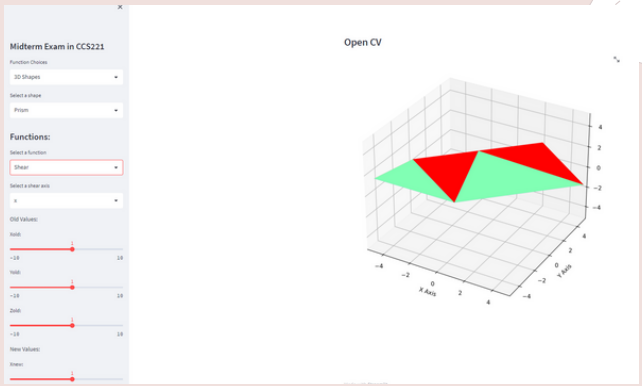
TRANSLATE



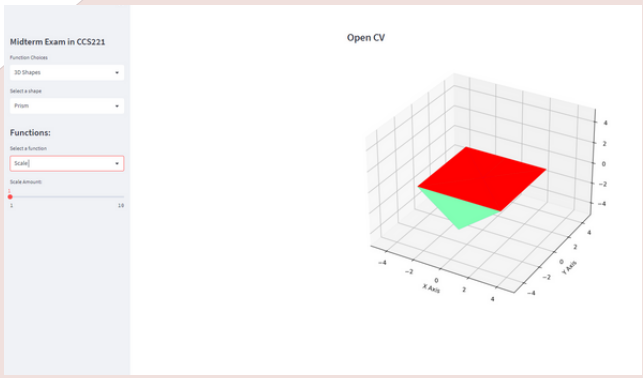
ROTATE



SHEAR

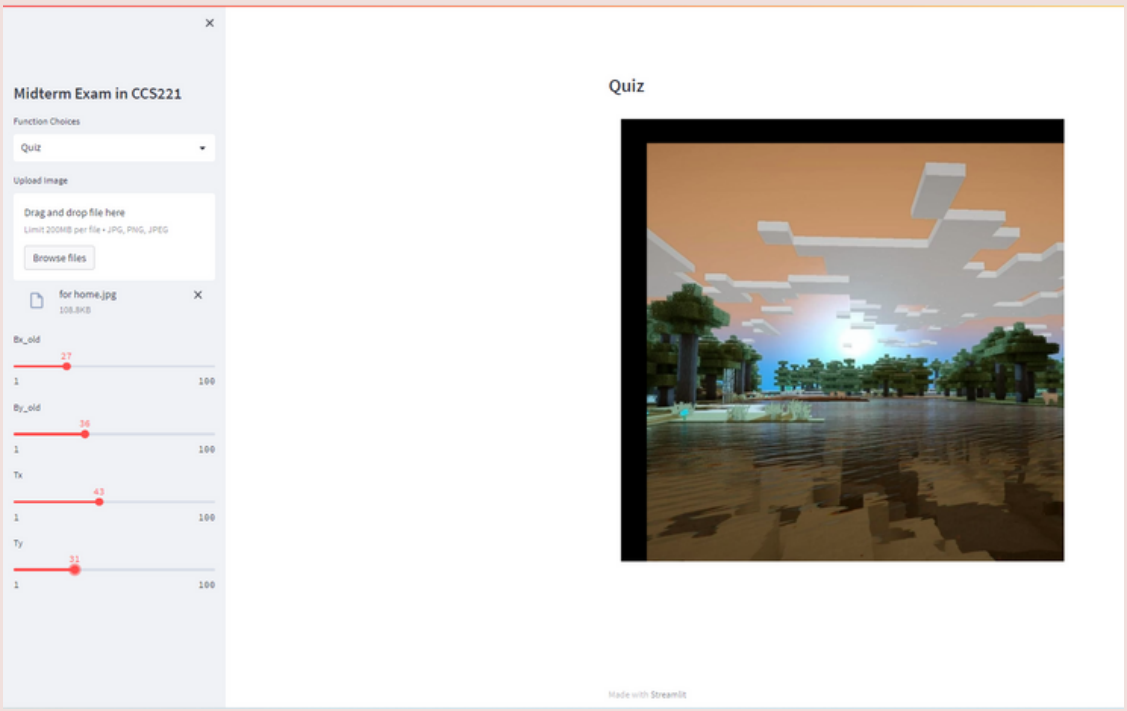


SCALE



Translation, with the help of this function we can move the objects depending on the amount specified by the user, with a maximum value of how much is defined in the plot. Using the tensorflow's addition function we created a function that would add the amount to the points in the shape. On rotation, we had used the specified angles by the user and passed it as an array to be multiplied with the points of the shape.

QUIZ

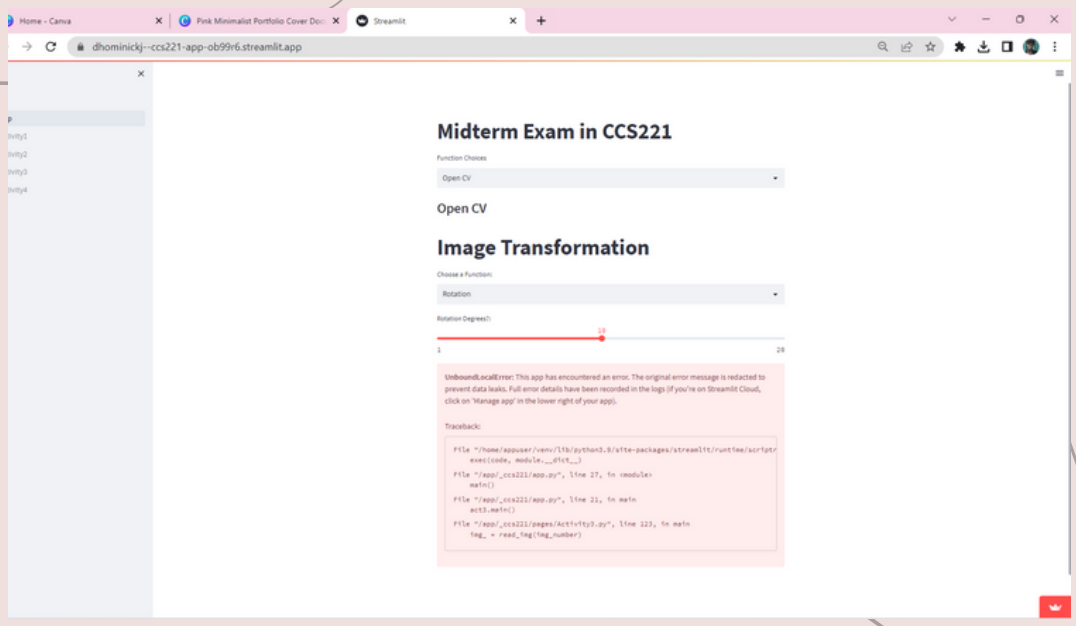


On our understanding, the image translation is a way to move the picture we put in our code from one place to another, depending to the users input of Bx and By. The amount the image will travel on the x-axis is determined by the value of bx or the 3rd number in the first line of the array, and its movement on the y-axis is determined by the value of by

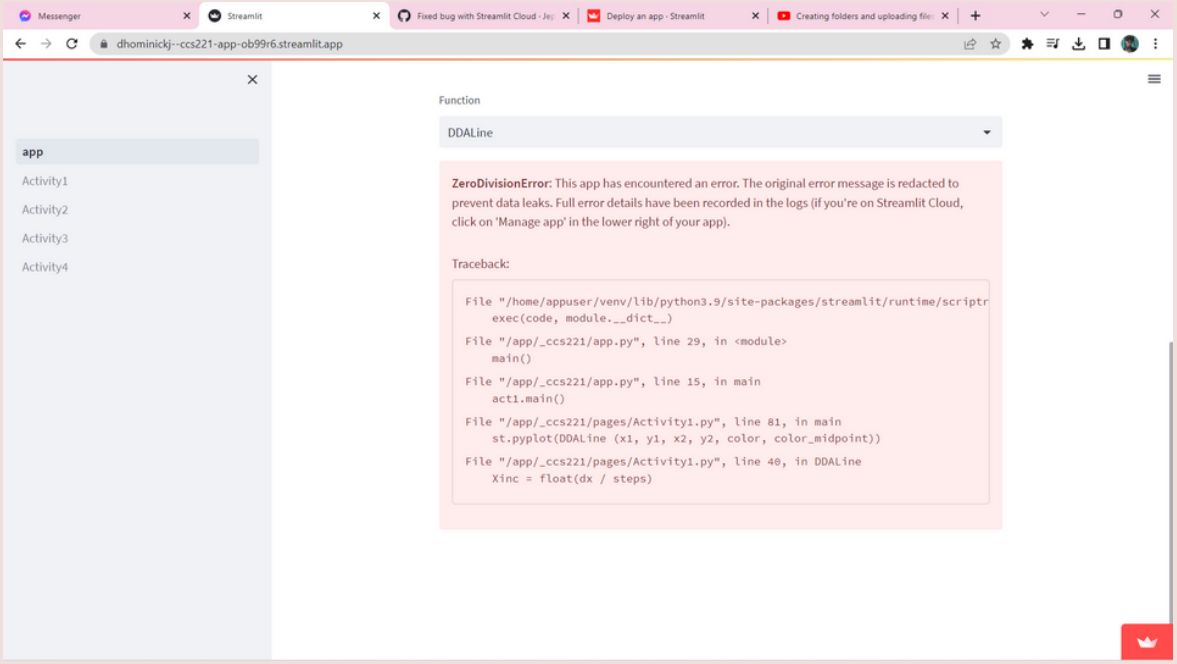
THE PROBLEMS WE ENCOUNTERED IN THE PROCESS

Our translation in Opencv won't run

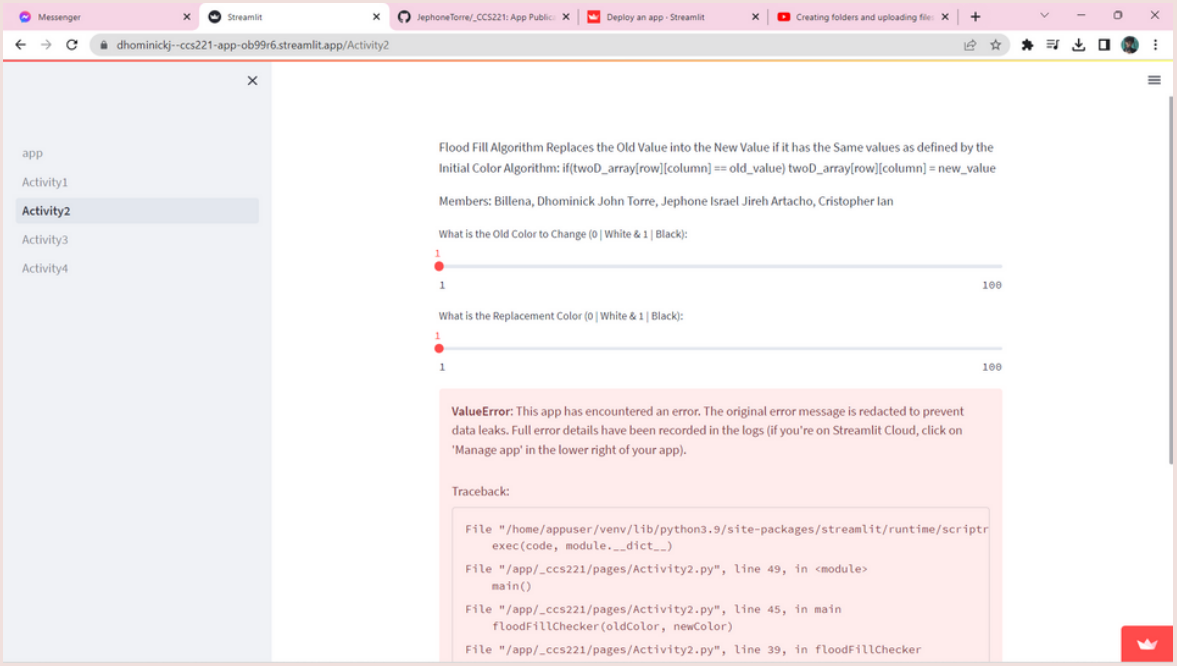
and our rotation also



We also have encountered an error in our DDALine



And some little problems at first



BUT THANKFULLY WE OVERCOME IT