Img12

🡪go to frequency domain, shift image to the center.

Making a mask with same size of image full of 1’s and to mask the pixels that makes the pattern we need to identify these pixels first, the pattern in the image like sin function in lab so it’s near the center of the image like this

A black and blue lines

Description automatically generated



So I have been looking for this pattern near the center of the image and I found it in the magnitude phase

A grey rectangular object with black letters

Description automatically generated



And its intensity value is 351.

So will make thresholding with this value so we can see them clearly.

A screenshot of a computer

Description automatically generated

Img 4🡪

A screenshot of a qr code

Description automatically generated

Img6🡪

A qr code and a bar code

Description automatically generated

Img10🡪

A qr code with a bar code

Description automatically generated

Img11🡪

A qr code with a graph

Description automatically generated

Img14🡪

A qr code and a graph

Description automatically generated

Connected Component Extraction Algorithm

* Preparing our canvas with same size of the real image
* Getting all connected component using OpenCV
* Iterating over them to extract the one we need based on the coordinates of the image.
* When finding (x, y) coordinates of the image we need save them and width and height of the component.
* Extracting it through the values we save and then save it in our canvas in it’s true location