CS 663: Assignment 5

Question 3

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Notes

All the necessary images are present in the corresponding question's *images* folder.
The tuned parameters can also be found in the main script file in code directory.

Observations

- To find the irregular interfering frequency we threshold the log magnitude of discrete fourier transform of image to get peaks > 14 in log scale. Ignoring the central DC component of the image we finally have 2 frequency centers which are the cause of interference pattern. The threshold dft image in images directory.
- For notch filter we use the above manually found the irregular frequencies which came out to be (-9, -4) and (10, 6), as centers to remove the peaks in dft region around them. The filter generated by manual notches is in images directory.
- Finally we tune the radius for notch reject region to get a smooth and noise free image