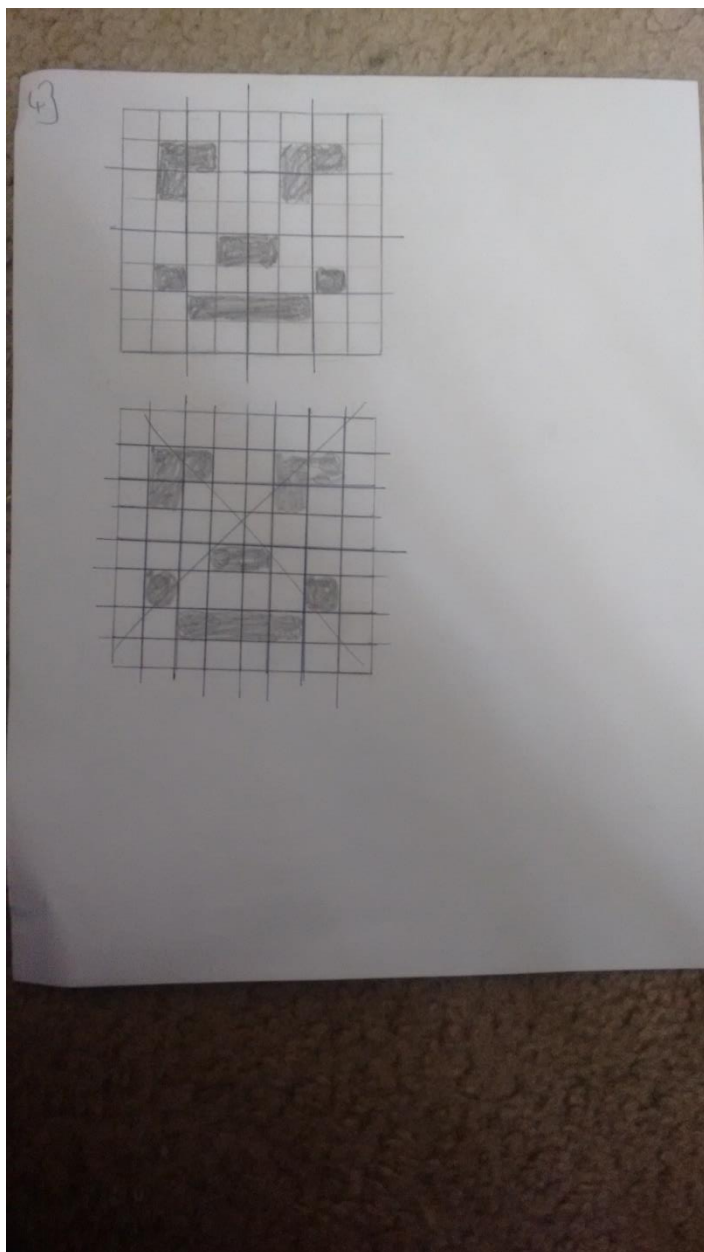
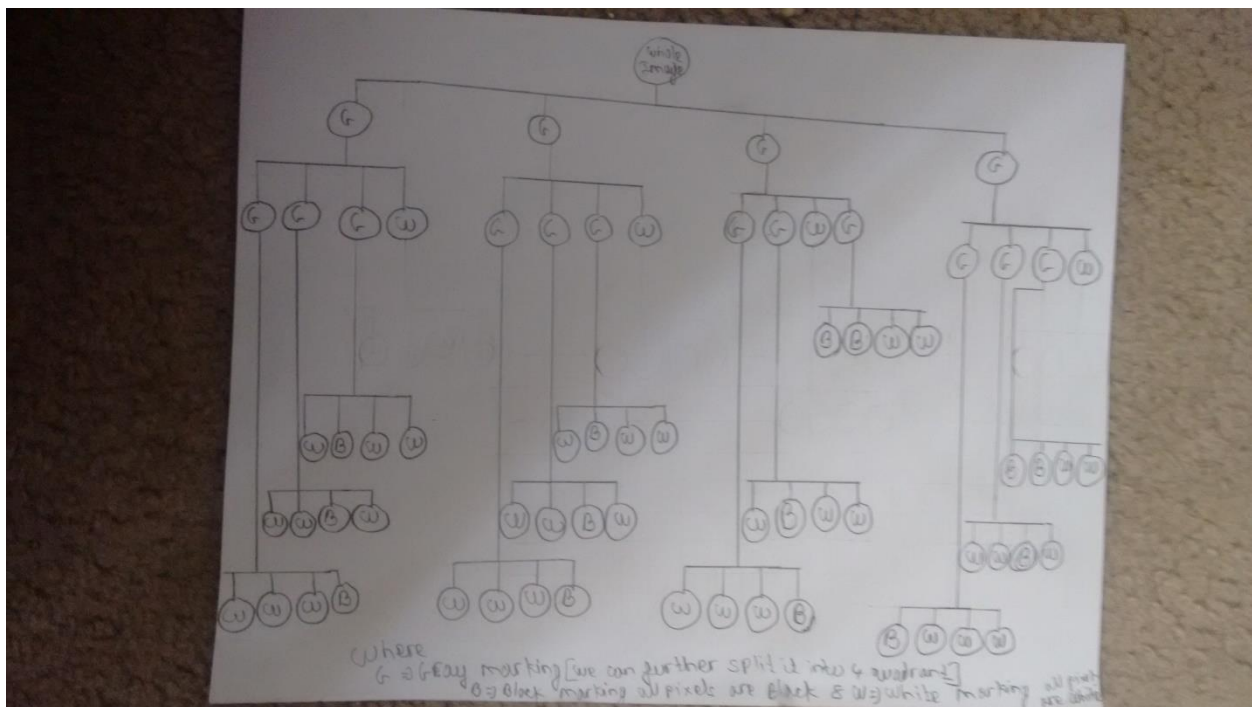


4.





Where

G: Gray colour notation. It means that we can further more divide into 4 quadrants.

W: White colour notation. It mean that complete pixel in this region is white.

B: Black colour notation. It mean that complete pixel in this region is black.

2.

a. I made call `fourier_noise_removal(...)` from `fourierDemo(...)`. I pass magnitude matrix produced by `fourierDemo(...)`.

b. found the centre of the magnitude matrix.

c. Made another matrix temp of the size of magnitude matrix and made the default value to 1

d. through iteration I make square such that it covers the six error spots.

e. then Again through iteration I got the range with this I converted my square into hollow square of width good enough that it covers the six error spots but is hollow at the centre.

f. Rest of the code is same as given.

d. the output Image(`umb_restored3.pgm`) and code is present in the directory.

3.

9	9	9	9	9	9	9	8
9	9	9	9	9	9	3	3
9	9	9	9	9	1	3	3
9	9	9	9	9	1	4	4
2	8	8	4	4	4	4	4
7	7	7	7	2	2	4	4
8	8	4	4	3	6	6	6
0	0	0	0	3	6	6	6

9	9	9	9	9	9	9	8
9	9	9	9	9	9	3	3
9	9	9	9	9	1	3	3
9	9	9	9	9	1	4	4
2	8	8	4	4	4	4	4
7	7	7	7	2	2	4	4
8	8	4	4	3	6	6	6
0	0	0	0	3	6	6	6

9	9	9	9	9	9	9	8
9	9	9	9	9	9	3	3
9	9	9	9	9	1	3	3
9	9	9	9	9	1	4	4
2	8	8	4	4	4	4	4
7	7	7	7	2	2	4	4
8	8	4	4	3	6	6	6
0	0	0	0	3	6	6	6

9	9	9	9	9	9	9	8
9	9	9	9	9	9	3	3
9	9	9	9	9	1	3	3
9	9	9	9	9	1	4	4
2	8	8	4	4	4	4	4
7	7	7	7	2	2	4	4
8	8	4	4	3	6	6	6
0	0	0	0	3	6	6	6

9	9	9	9	9	9	9	8
9	9	9	9	9	9	3	3
9	9	9	9	9	1	3	3
9	9	9	9	9	1	4	4
2	8	8	4	4	4	4	4
7	7	7	7	2	2	4	4
8	8	4	4	3	6	6	6
0	0	0	0	3	6	6	6

Split complete

9	9	9	9	9	9	9	8
9	9	9	9	9	9	3	3
9	9	9	9	9	1	3	3
9	9	9	9	9	1	4	4
2	8	8	4	4	4	4	4
7	7	7	7	2	2	4	4
8	8	4	4	3	6	6	6
0	0	0	0	3	6	6	6

Merge complete

4.