Assignment 3

1. Apply correlation filter to find output image from given input image pixel and mask. Show all steps:

|  |  |  |  |
| --- | --- | --- | --- |
| 2 | 2 | 2 | 3 |
| 2 | 1 | 3 | 3 |
| 2 | 2 | 1 | 2 |
| 1 | 3 | 2 | 2 |

Original

|  |  |  |
| --- | --- | --- |
| 1 | -1 | -1 |
| 1 | 2 | -1 |
| 1 | 1 | 1 |

Mask

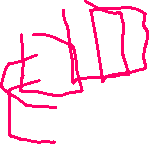
1. What will be the effect of applying the Laplacian filter on the given image? Assume the origin of the filter is the center, and there is no padding.



Graphical user interface, application

Description automatically generatedGraphical user interface, application

Description automatically generated



filter



image



Q3. The range of the intensity of the pixels is given as [0, 1, 2, 3, 4, 5, 6, 7]

Frequency of values = [1, 6, 3, 2, 3, 2, 1, 2]

Calculate, PDF, CDF, and new intensity values for histogram equalization.