HW2: Problem 3
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1 Read and display the image:

The rose on ice image:

Figure 1: Rose on ice image.

2 Part 1

2.1 K-means Clustering: 2 Clusters

Image split into two clusters:

Figure 2: Image with K-means Clustering: 2 Clusters.

2.2 K-means Clustering Histogram: 2 Clusters

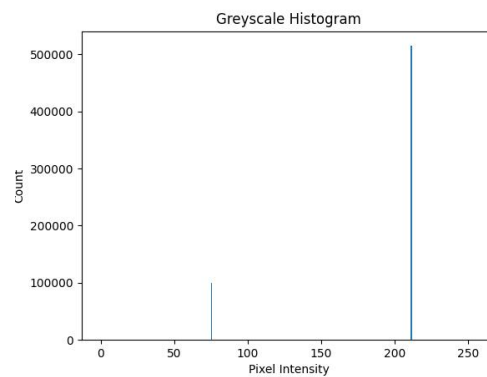Histogram of the image split into two clusters:

Figure 3: Histogram of image with K-means Clustering: 2 Clusters.

2.3   K-means Clustering: 3 Clusters

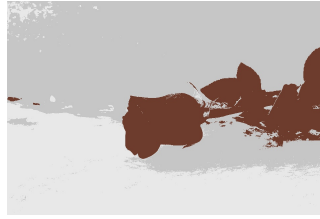Image split into three clusters:

Figure 4: Image with K-means Clustering: 3 Clusters.

2.4   K-means Clustering Histogram: 3 Clusters

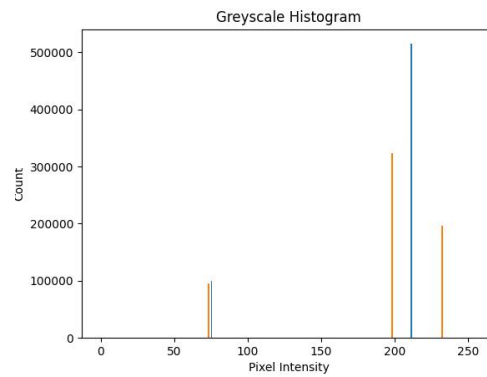Histogram of the image split into three clusters:

Figure 5: Histogram of image with K-means Clustering: 3 Clusters.

2.5   K-means Clustering: 4 Clusters

Image split into four clusters:

Figure 6: Image with K-means Clustering: 4 Clusters.

2.6   K-means Clustering Histogram: 4 Clusters
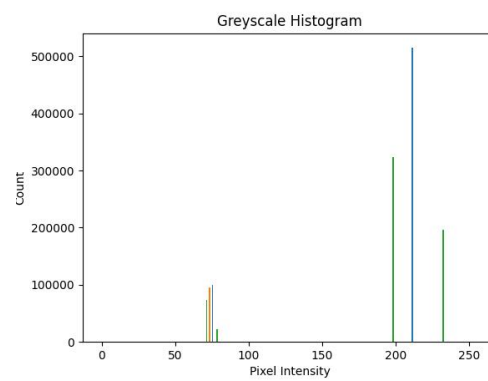
Histogram of the image split into four clusters:

Figure 7: Histogram of image with K-means Clustering: 4 Clusters.