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CS825 – Assignment1

Q.4 (10 marks) Non-Programming

1. Describe what "false contour" is.

When the intensity decreases, the smoothness of the images also decreases. Intensity and smoothness proportional to each other. As the smoothness decreases, at some point, the boundaries of the image starts to merge at different intensity. These boundaries are called as false contour.

We can refer to 3rd question of Assignment1. The false contour starts from 32 level.

At 128th level, image smoothness is pretty good and we do not see any major changes in the image.

At 64th level, image smoothness will slightly decrease compared to 128th level and we start to see little changes in the image.

At 32th level, we start to see major changes and smoothness decreases compared to previous two levels. We can see some changes in lower leaves and stem. We can see in Figure1.

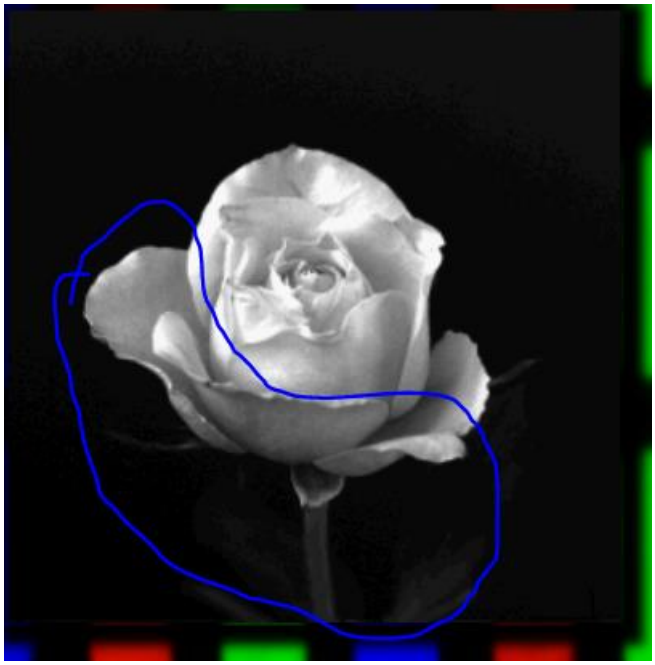

Figure1: 32 level

At 16th level, we can see major difference in the image and smoothness also decreases a lot compared to previous four levels. We can see major difference around petals, leaves and stem. We can see in Figure2.

Figure2: 16 level

2. At which level do false contours become visible?

It starts at 32 levels,

3. Is 8 bits per pixel (or 256 levels of intensity) sufficient for human visual system?

Yes!! 8 bit is sufficient for human visual system.