**EXPERINMENT 3**

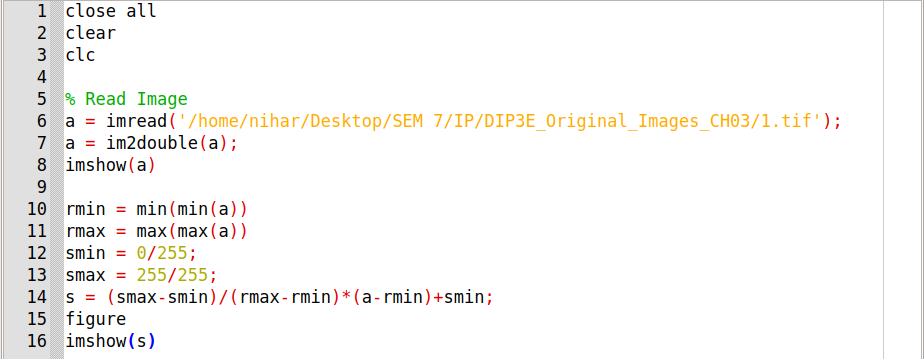
**Aim :** To study Contrast stretching, Intensity level slicing and Bit plane slicing.

* **Exercises :**

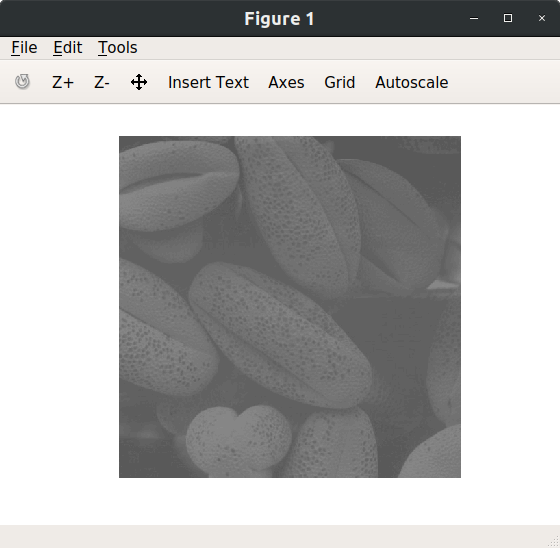
1. **Do contrast stretching For the Image given in Figure 3.10 of the Textbook. Obtain Contrast stretched Image from Low contrast Image as given in Figure 3.10 (c).**

* **Solution :-**

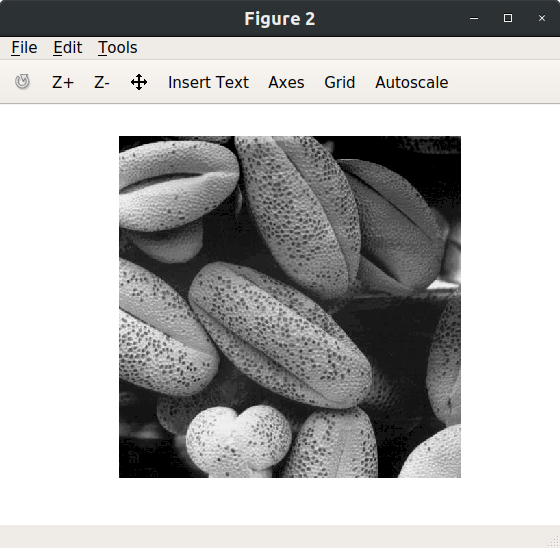
Code :



Input Image :



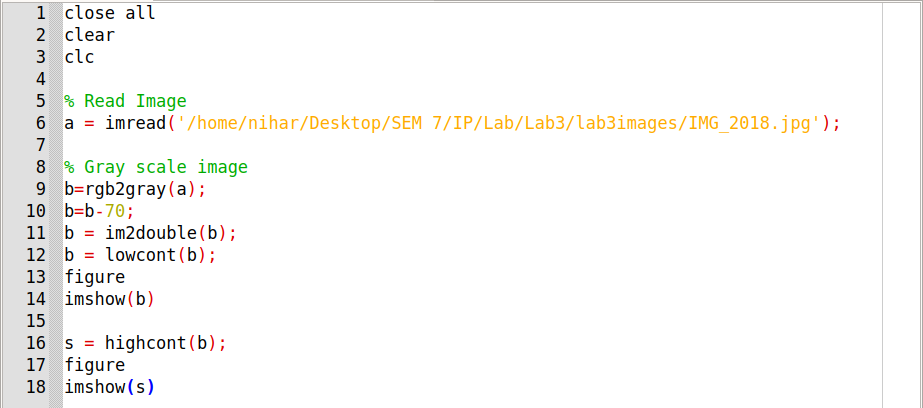
Output Image :



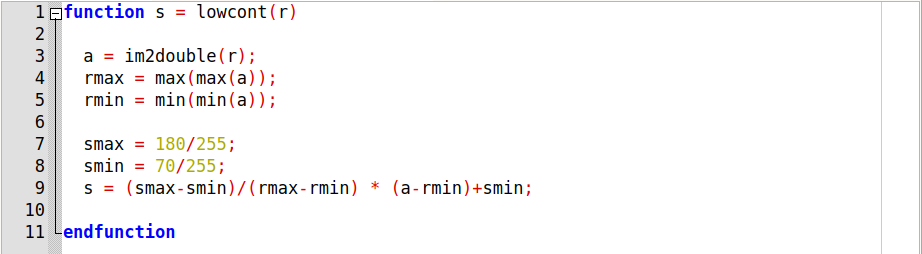
1. **Take any family photo of yours – convert it into grayscale- reduce it’s contrast by using the function that was defined during lab session. Enhance the contrast of that image using piecewise linear operation for contrast stretching.**

* **Solution :-**

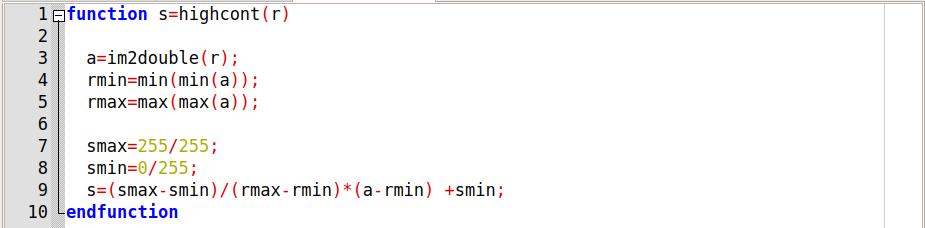
Code :



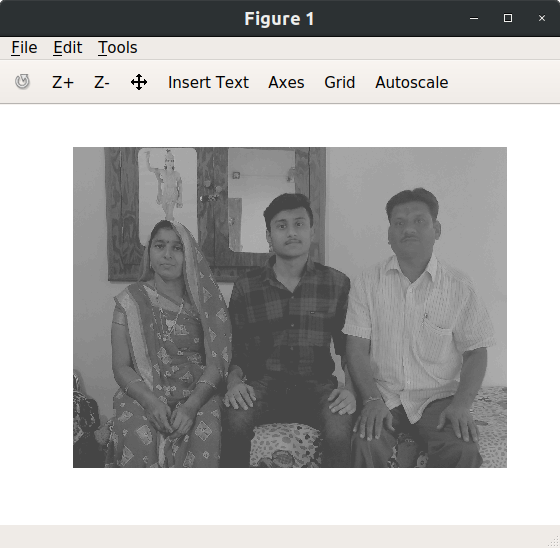
Low Contrast Function :



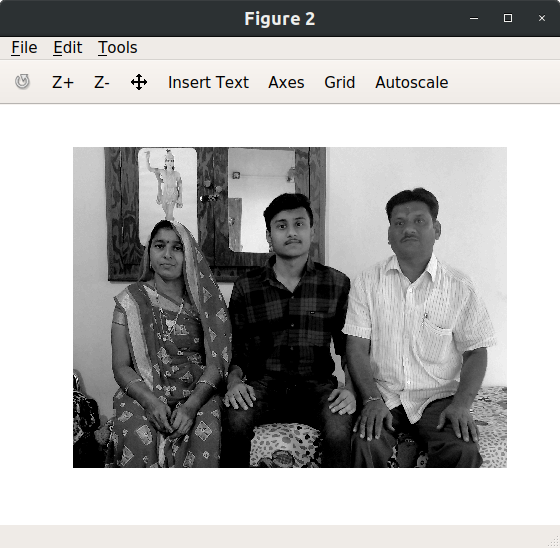
High Contrast Function :



Input Image :



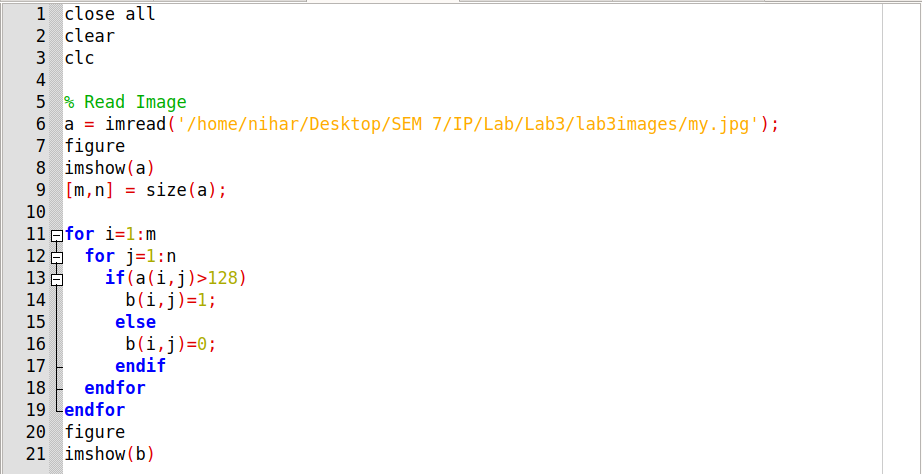
Output Image :



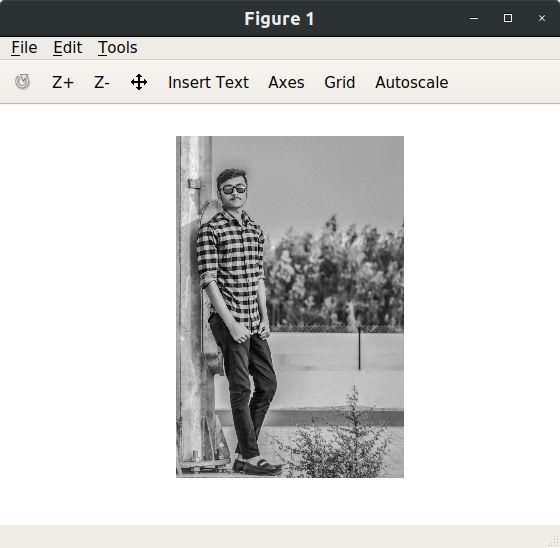
1. **Apply thresholding to any of your gray scale photo.**

* **Solution :-**

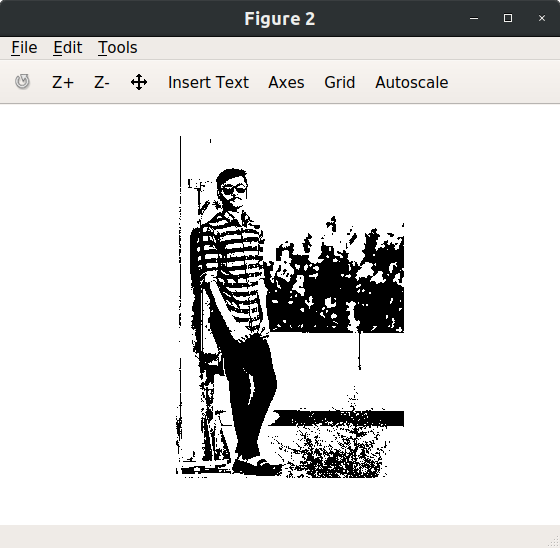
Code :



Input Image :



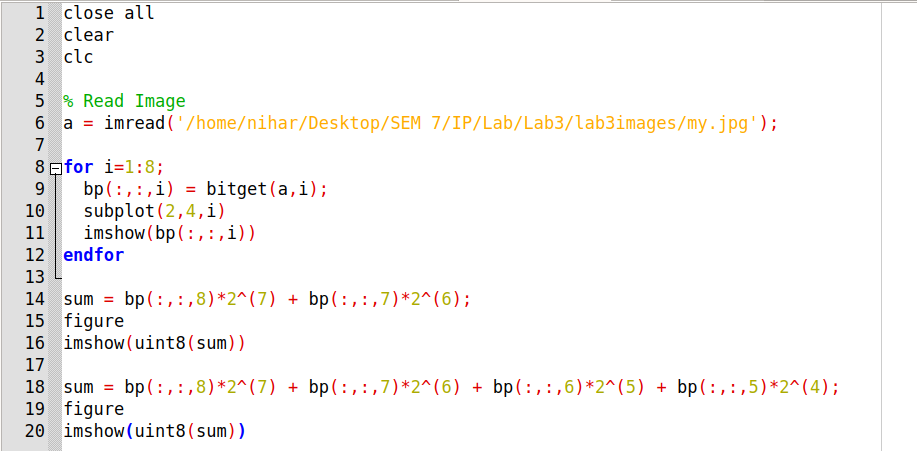
Output Image :



1. **Take your photo and separate out its bit plains. Reconstruct the given image using higher order 2 bit planes. Reconstruct the given image using higher order 4 bit planes. Experiment with the bit planes and derive your conclusions.**

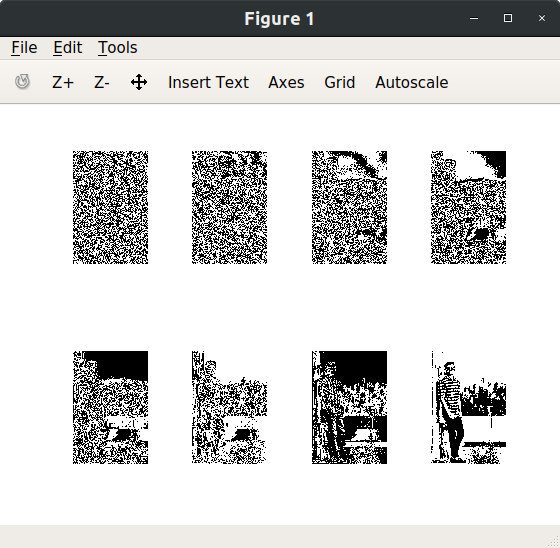
* **Solution :-**

Code :

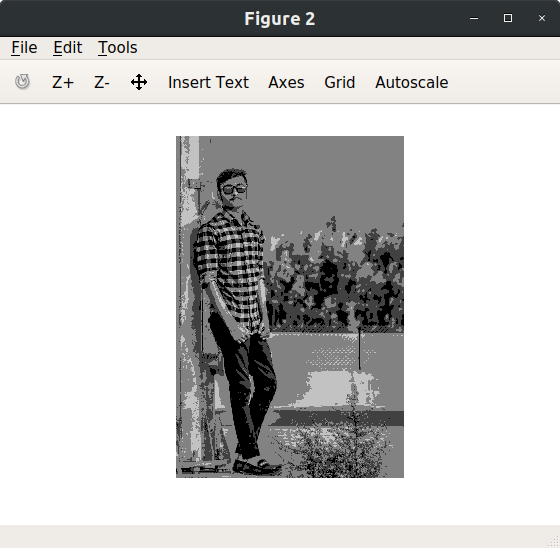


Output Images :

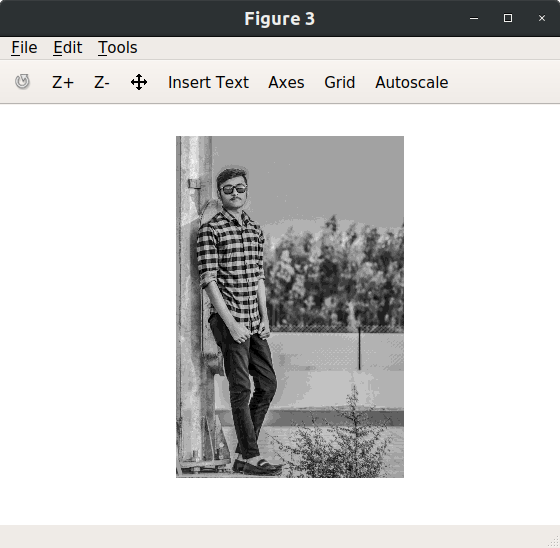
8 bit planes



Reconstructed image using higher order 2 bit planes



Reconstructed image using higher order 4 bit planes



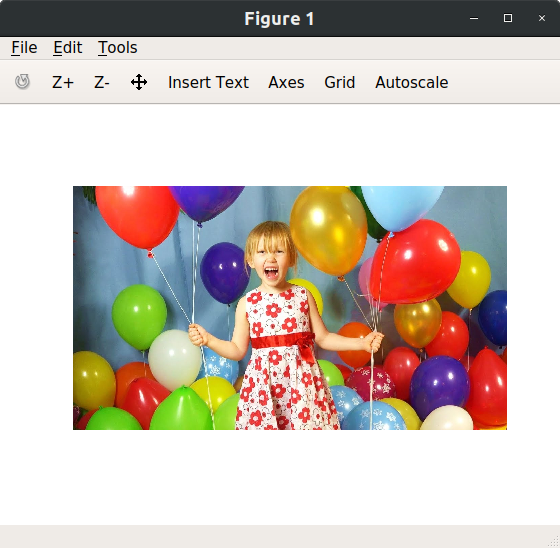
1. **Perform intensity slicing to separate out red green baloons form the image given.**

* **Solution :-**

Code :



Input Image :



Output Images :

