# Assignment 1:

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This report contains result of Linear mapping, piecewise linear mapping, histogram stretch and histogram equalization algorithm.

Code on gitHub: <https://github.com/nNasir/imageprocessing>

Table 1 Results of different enhancement techniques on "Cameraman" image

|  |  |  |
| --- | --- | --- |
| Image | Enhancement technique+ settings | Historgram |
| F:\PhD\AppliedProgramming\cameraman.png | Original images |  |
| F:\PhD\AppliedProgramming\temp.png | After linear mapping  (0,80) to (0,200) |  |
| F:\PhD\AppliedProgramming\temp.png | After piecewise liner mapping  (0-80) to (0-180)  (80-255) to (180-255) |  |
| F:\PhD\AppliedProgramming\temp.png | After piecewise liner mapping  (0,50) to (0,150)  (50,80) to (100,150)  (80,255) to (100,255) |  |
| F:\PhD\AppliedProgramming\temp.png | After piecewise liner mapping  (0,35) to (0,150)  (35,80) to (100,150), (80,200)to (100,255) (200,255) to (240,255) |  |
| F:\PhD\AppliedProgramming\stretched.png | After histogram stretch  Histogram of image is also shown |  |
| F:\PhD\AppliedProgramming\hist_equalized_img.png | After histogram equalization | max in original was 253 but while noramlization it took max to 255 |

Table 2: Results of histogram stretch and equalization on Gorilla image

|  |  |  |
| --- | --- | --- |
| Image | Technique | Histogram |
| F:\PhD\AppliedProgramming\gorilla.PNG | Original image |  |
| F:\PhD\AppliedProgramming\stretched.png | Histogram stretched |  |
| F:\PhD\AppliedProgramming\hist_equalized_img.png | Histogram equalized |  |