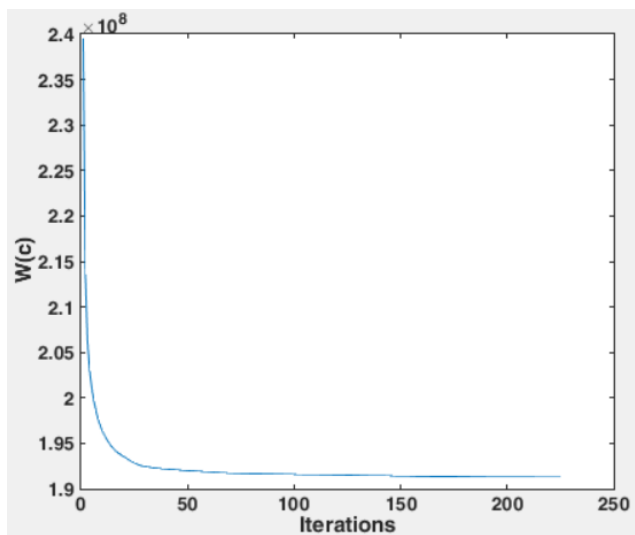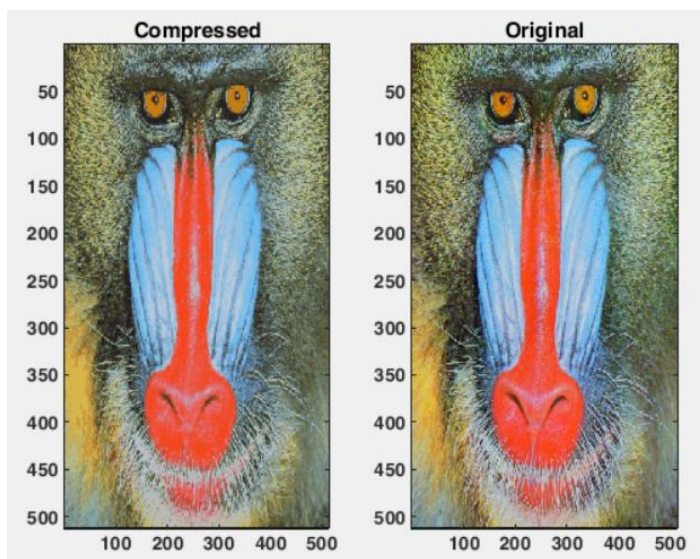Objective function values versus iterations

Compressed image compared to original image

Difference image

Nose region is less preserved because there are details in difference image while eyes and outer part of face is more preserved because there are nothing significant in difference image.

24*M^2*k bits for cluster

(N/M)^2 blocks & for each bock $\log_2 k$ bits for cluster number

Bpp of compressed=(24*M^2*k+(N/M)^2* $\log_2 k$)/(24*N^2)

Compression ratio= 0.0744

Relative mean absolute error=0.002