Assignment 5.1

**Question 1:**

1.Refer the Attachment for the Processed images and the file name contains the K value.

2.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| K Values | Koala.jpg | | | Penguin.jpg | | |
|  | Average | Compression  Ratio | Standard Deviation | Average | Compression  Ratio | Standard Deviation |
| 2 | 95.15 | 12.486876 | 4.87904 | 44.85 | 5.9099 | 15.34422 |
| 5 | 131.25 | 17.2244 | 47.72971 | 78.85 | 10.3425 | 32.73904 |
| 10 | 159 | 20.866 | 5.65685 | 79.35 | 10.4525 | 33.44615 |
| 15 | 177 | 23.228 | 1.41421 | 74.65 | 9.8353 | 26.79935 |
| 20 | 174.5 | 22.900 | 2.12132 | 88.85 | 11.7061 | 46.88118 |

3.yes there is a trade off between compression degree and image quality. If the value of k is increased a good image will be produced.

**Question 2:**

1. For random Mean and variance the output is

Mean for 0 25.424273575893586

Mean for 1 16.74261131592732

Mean for 2 5.303824499211357

2 .For Variance=1 the output is

Mean for 0 27.09720092894334

Mean for 1 15.8979173491934

Mean for 2 5.29974378551902