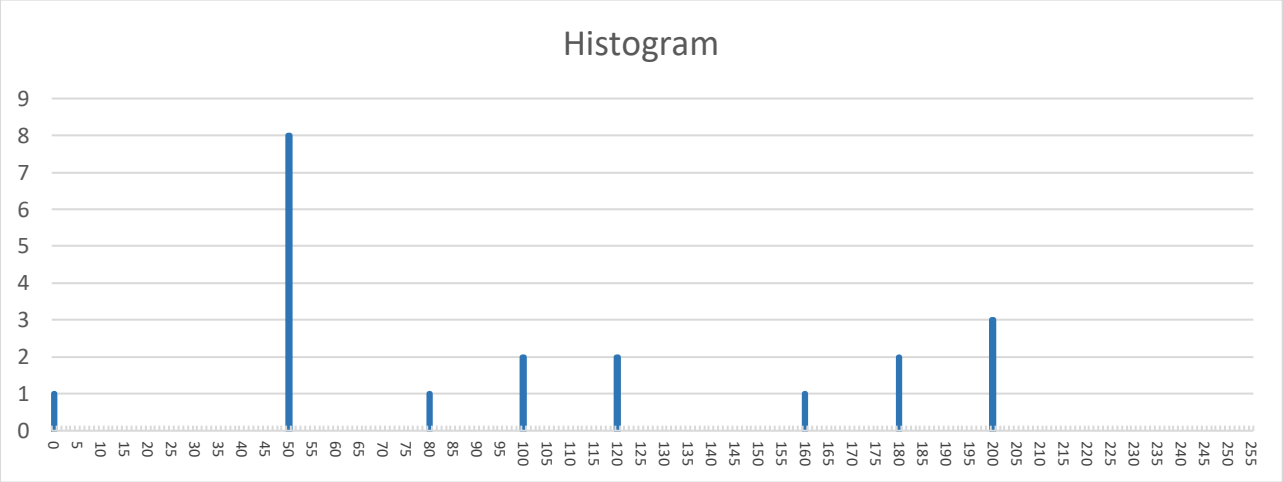
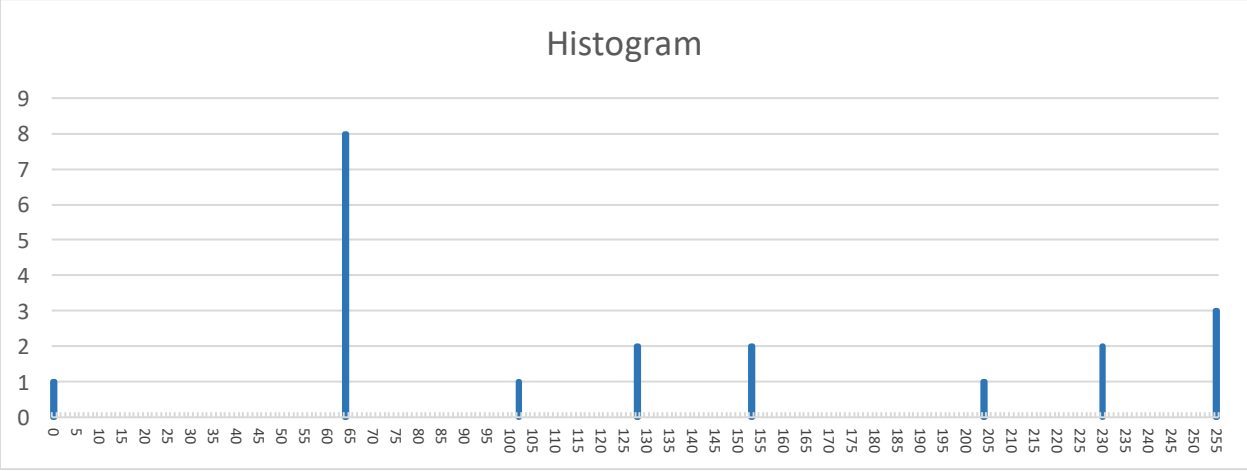
Q1-a



$$g(x,y) = stretch[f(x,y)] = \left(\frac{f(x,y) - f_{min}}{f_{max} - f_{min}}\right)(MAX - MIN) + MIN$$

$$g(x,y) = stretch[f(x,y)] = \left(\frac{f(x,y) - 0}{200 - 0}\right)(255 - 0) + 0$$

$$\begin{bmatrix} 0 & 204 & 64 & 153 \\ 64 & 128 & 64 & 64 \\ 255 & 102 & 255 & 153 \\ 64 & 230 & 255 & 230 \\ 64 & 128 & 64 & 64 \end{bmatrix}$$



Q1-b

$$g(x,y) = clip[f(x,y)] = \left(\frac{f(x,y) - 50}{180 - 50}\right)(255 - 0) + 0$$

$$\begin{bmatrix} -98 & 216 & 0 & 138 \\ 0 & 99 & 0 & 0 \\ 295 & 59 & 295 & 138 \\ 0 & 255 & 295 & 255 \\ 0 & 99 & 0 & 0 \end{bmatrix} \Rightarrow \begin{bmatrix} 0 & 216 & 0 & 138 \\ 0 & 99 & 0 & 0 \\ 255 & 59 & 255 & 138 \\ 0 & 255 & 255 & 255 \\ 0 & 99 & 0 & 0 \end{bmatrix}$$