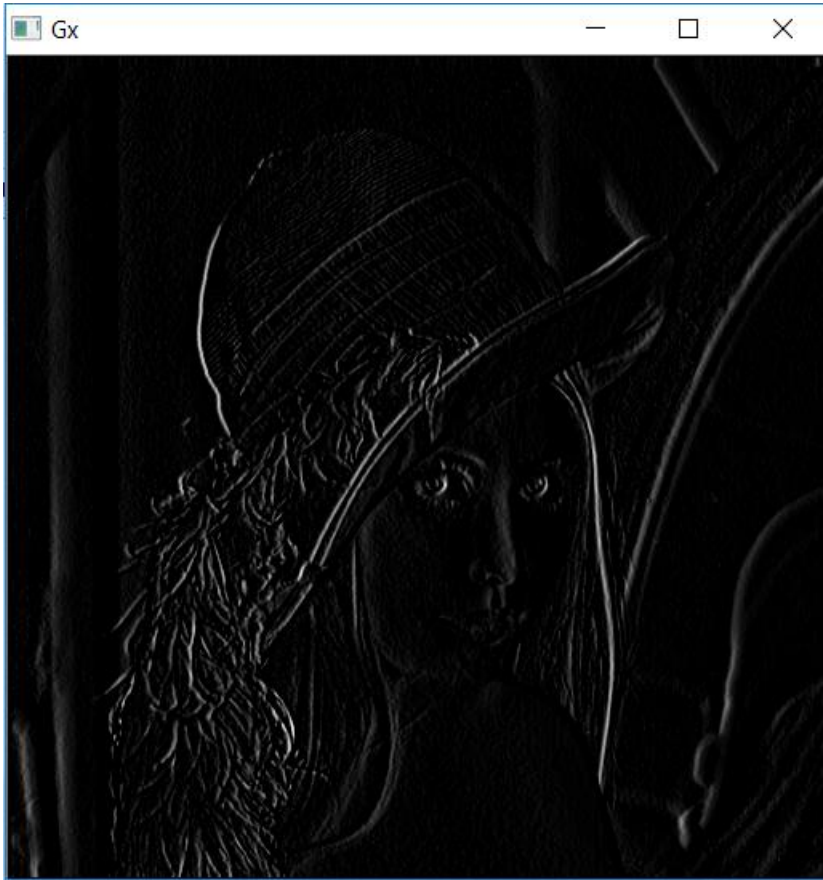


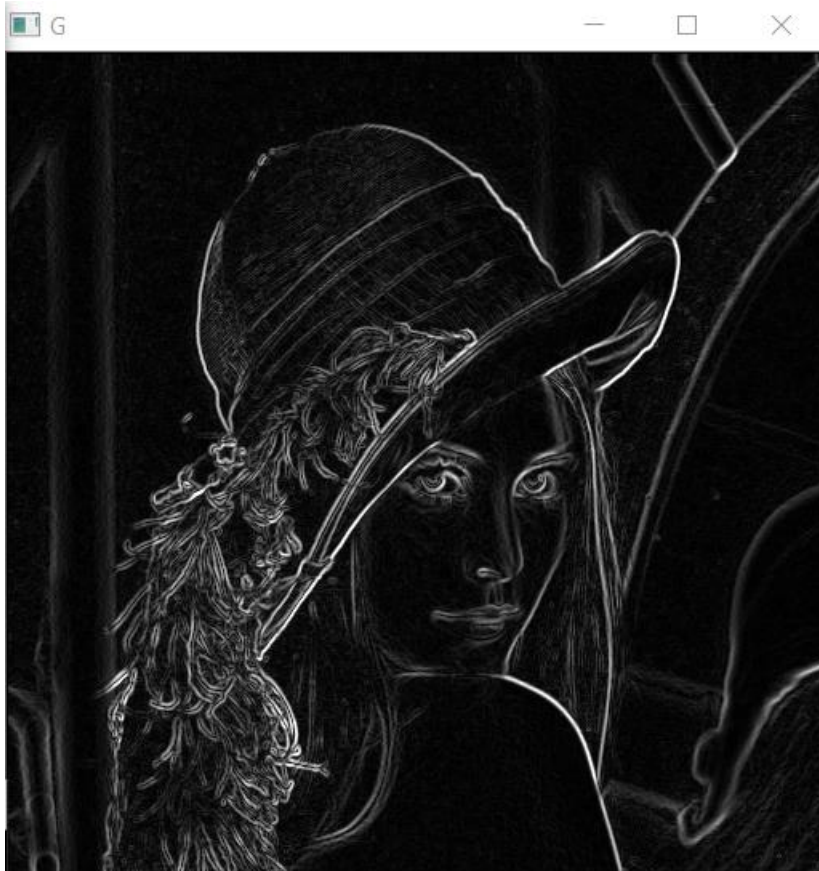
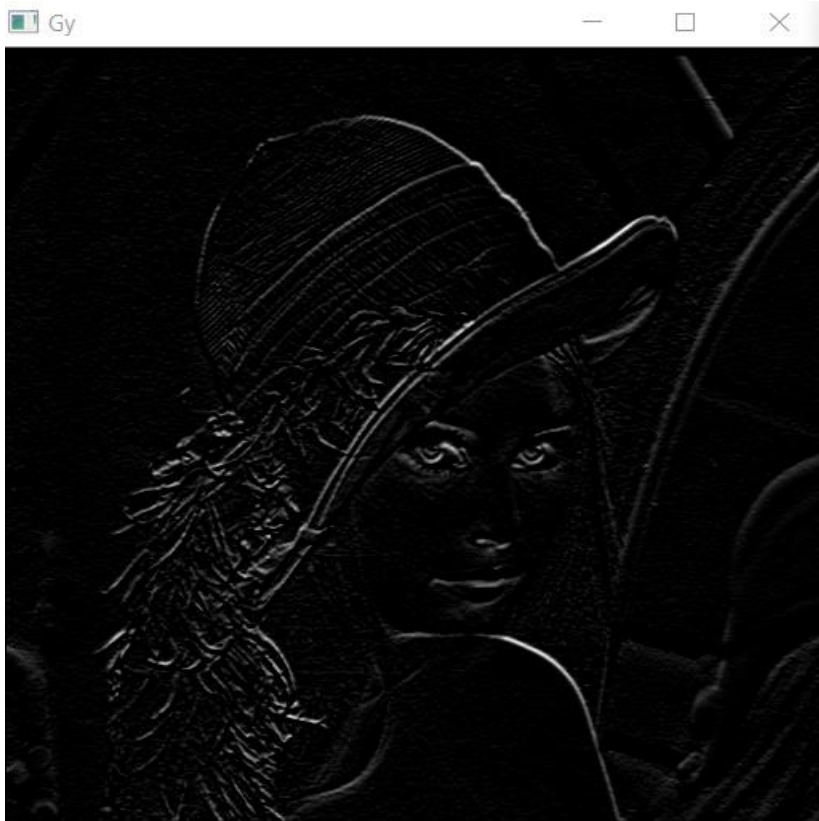
**CSE 573: Introduction to Computer Vision and Image Processing**

**PROJECT 1**

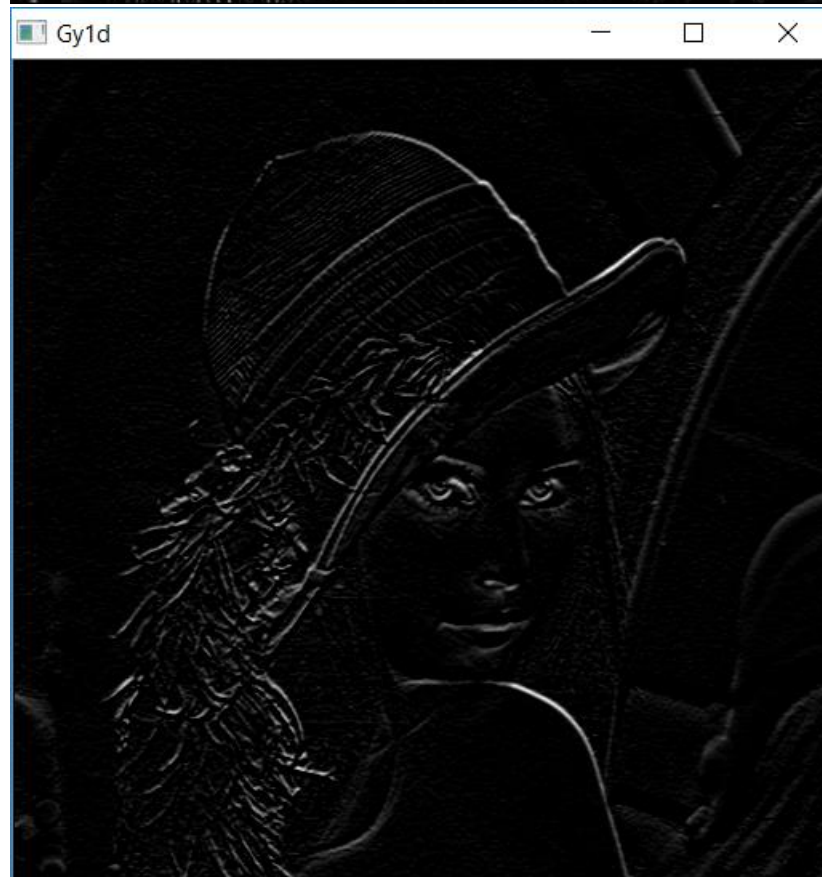
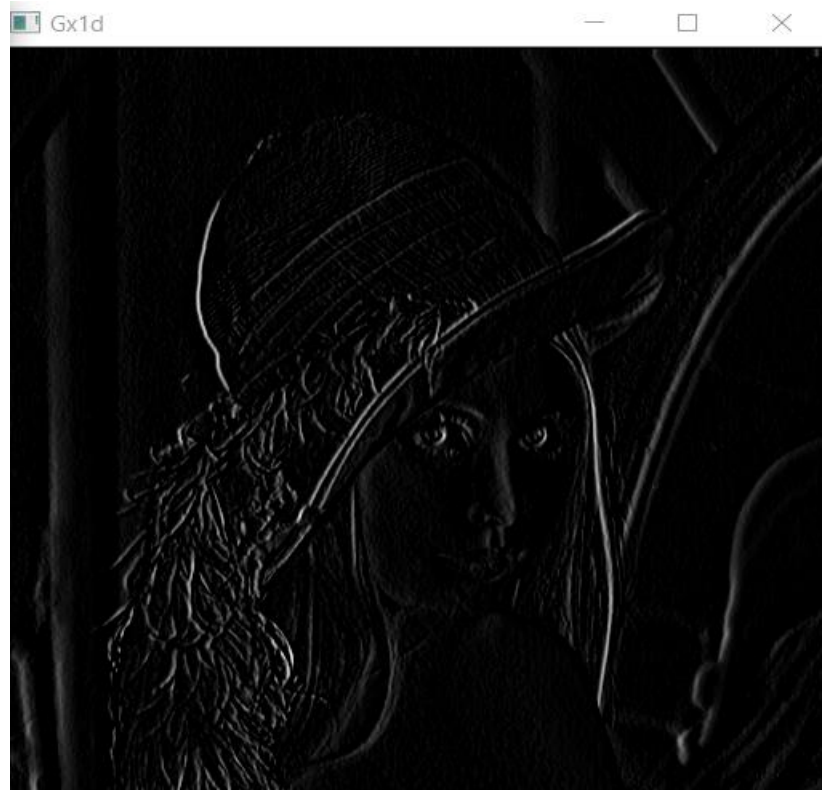
**Vandit Aruldas (UBID - 50208047)**

1. A)



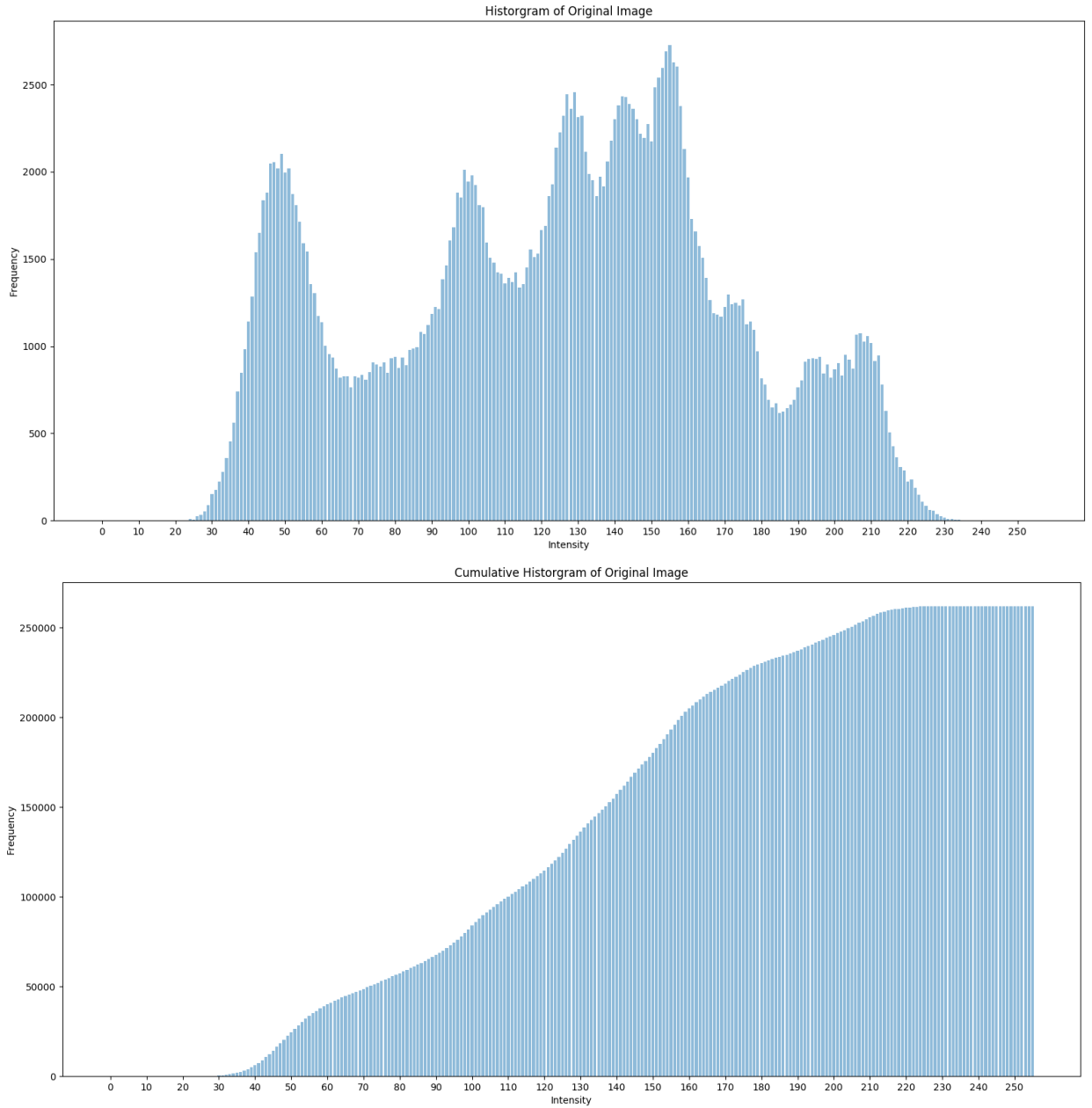


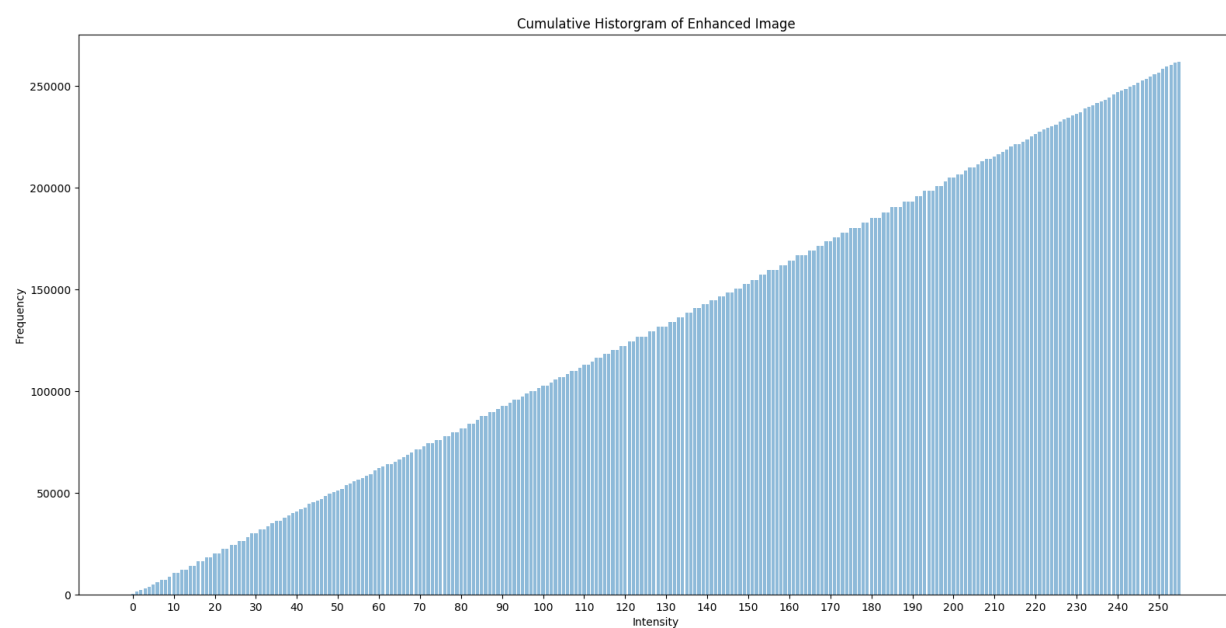
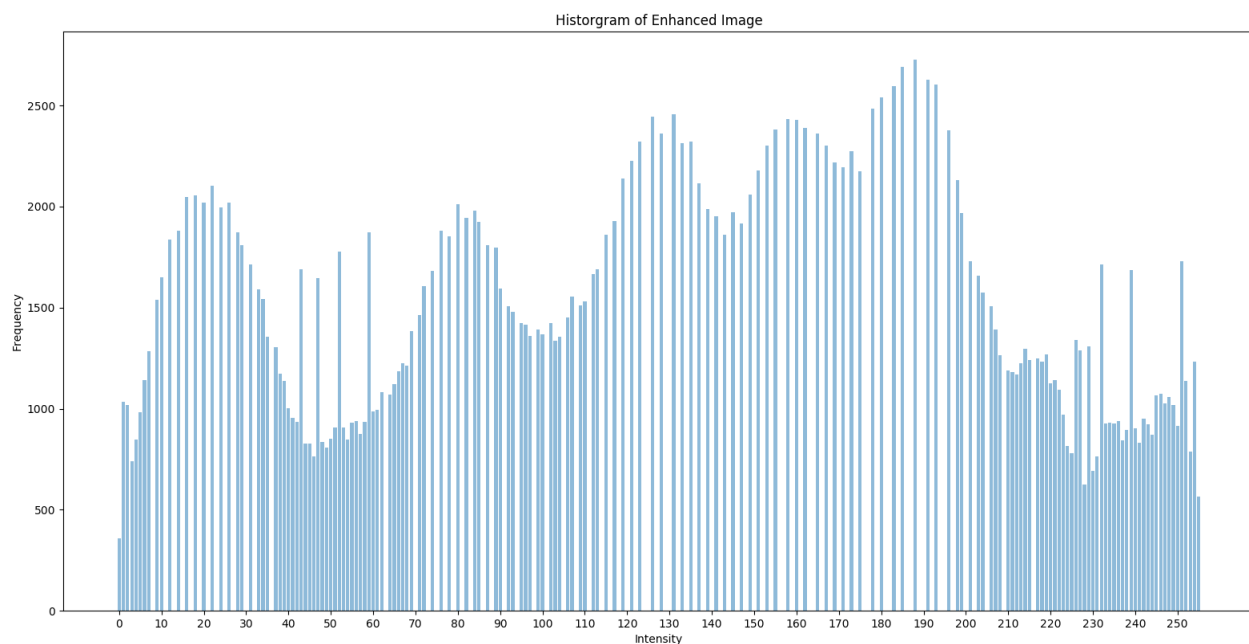
B)



C) For a  $M \times N$  image and  $P \times Q$  filter, the complexity for calculating the value for each pixel in 2D convolution is  $O(PQ)$  and 1D convolution is  $O(P+Q)$  and so the overall complexity will be  $O(MNPQ)$  for 2D convolution and  $O(MN(P+Q))$  for 1D convolution.

2.





Original Image



Enhanced Image



