CSE 573: Programming Assignment 1
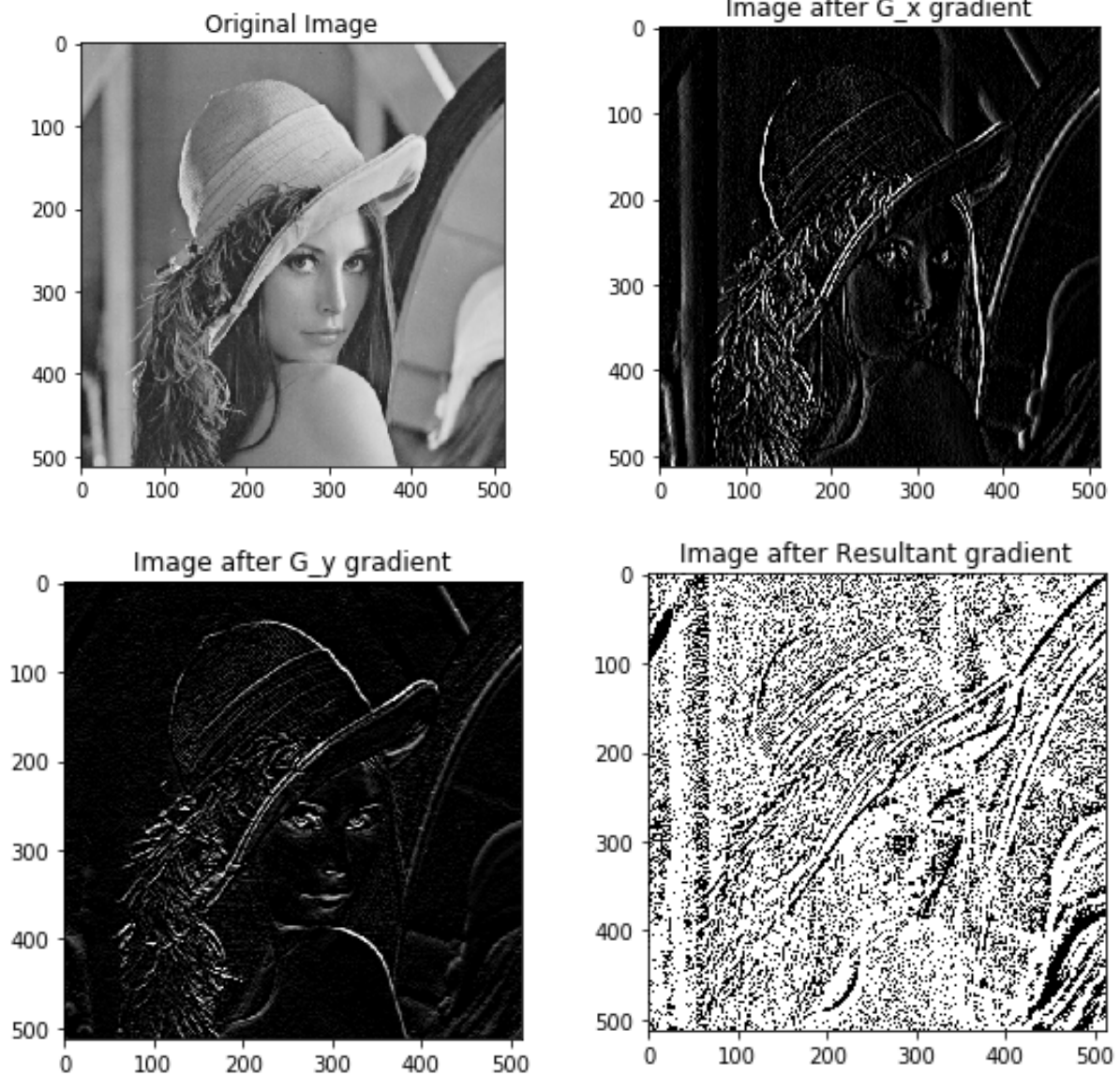
Name: Sokhey, Harshdeep , UB#50247213

June 18, 2018

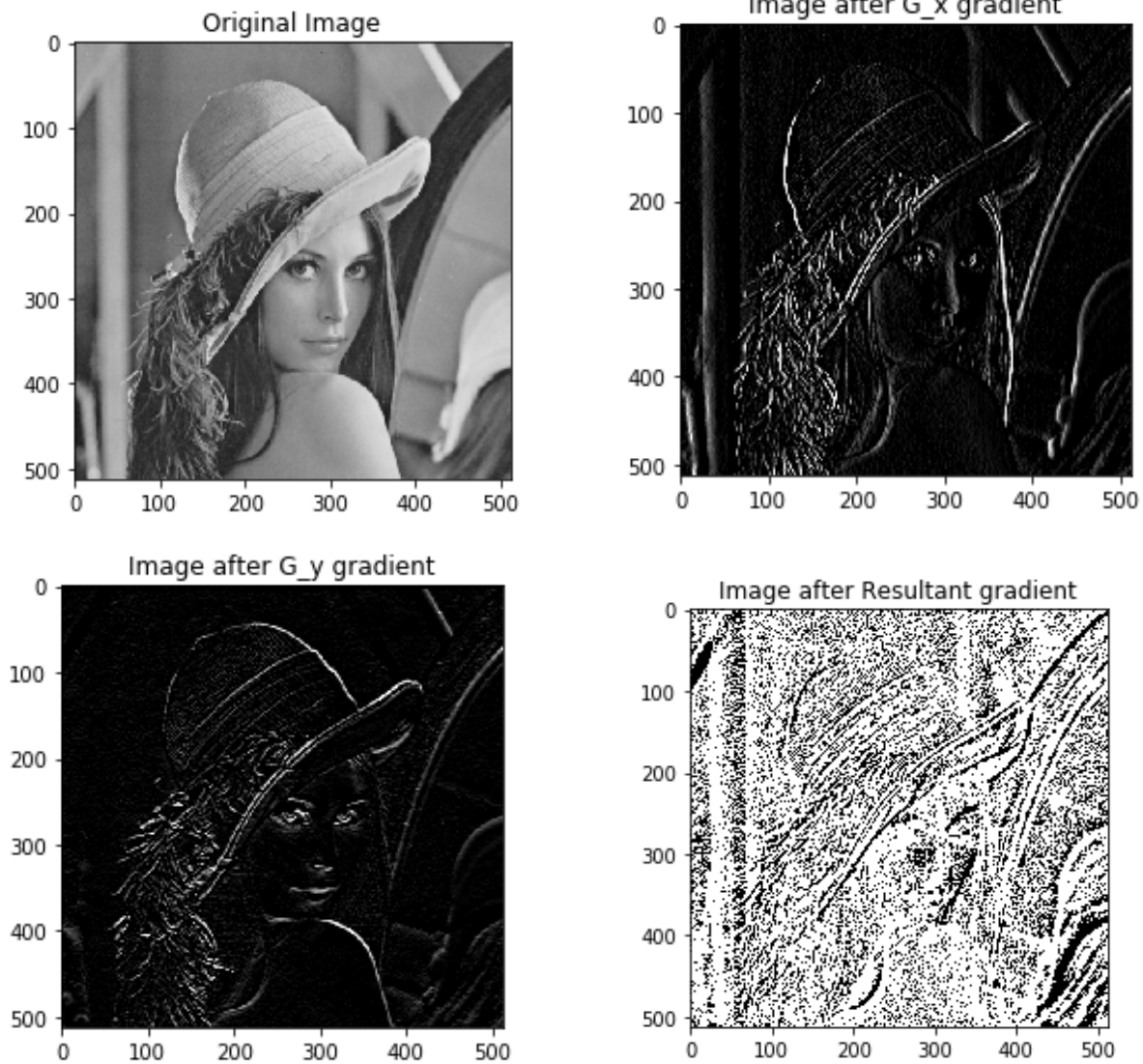# 1 Solution 1

1.1 Part a

Results from 2D convolution of Sobel filter:

1.2   Part b

Results from 1D convolution of Sobel filter:

1.3   Part c & d

1.3.1   SOBEL filter (3x3)

Results from Computational Complexity of 1D,2D **SOBEL** filters of size **3x3** :

Type	Time (s)
1D-SOBEL conv	0.027262 s
2D-SOBEL conv	0.027665 s

1.3.2 STD-NORMAL filter (100x100)

Results from Computational Complexity of 1D,2D **STD-NORMAL** filters of size **100x100** :

Type	Time (s)
1D-NORMAL conv	0.093036 s
2D-NORMAL conv	0.039872 s

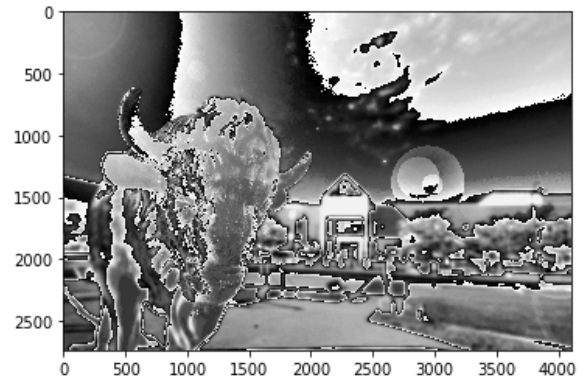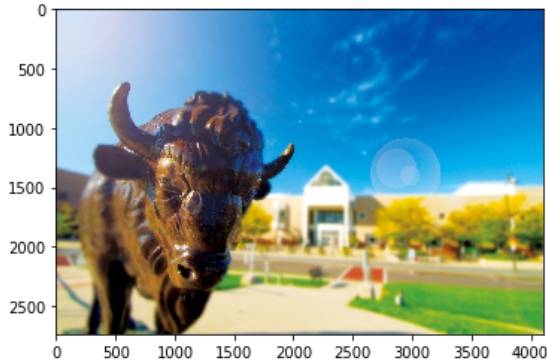### 1.3.3 GABOR filter (100x100)

Results from Computational Complexity of 1D,2D **GABOR** filters of size **100x100** :

Type	Time (s)
1D-GABOR conv	0.122047 s
2D-GABOR conv	0.041958 s

2 Solution 2

2.1 Results: Original(L) versus Enhanced Result(R)

2.2 Histograms

Look Up table

Equalized Histogram