Fianl Project

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An opencv enviroment is needed to run this program as the program can deal with the decode images from a video.

Input Command

./Assignment4 -image <directory>
Or
./Assignment4 -video <directory>
Keyboard Function
1-Original image
2-Gaussian 3*3
3-Gaussian 5*5
4-Embossing
5-Sobel
6-Dilation
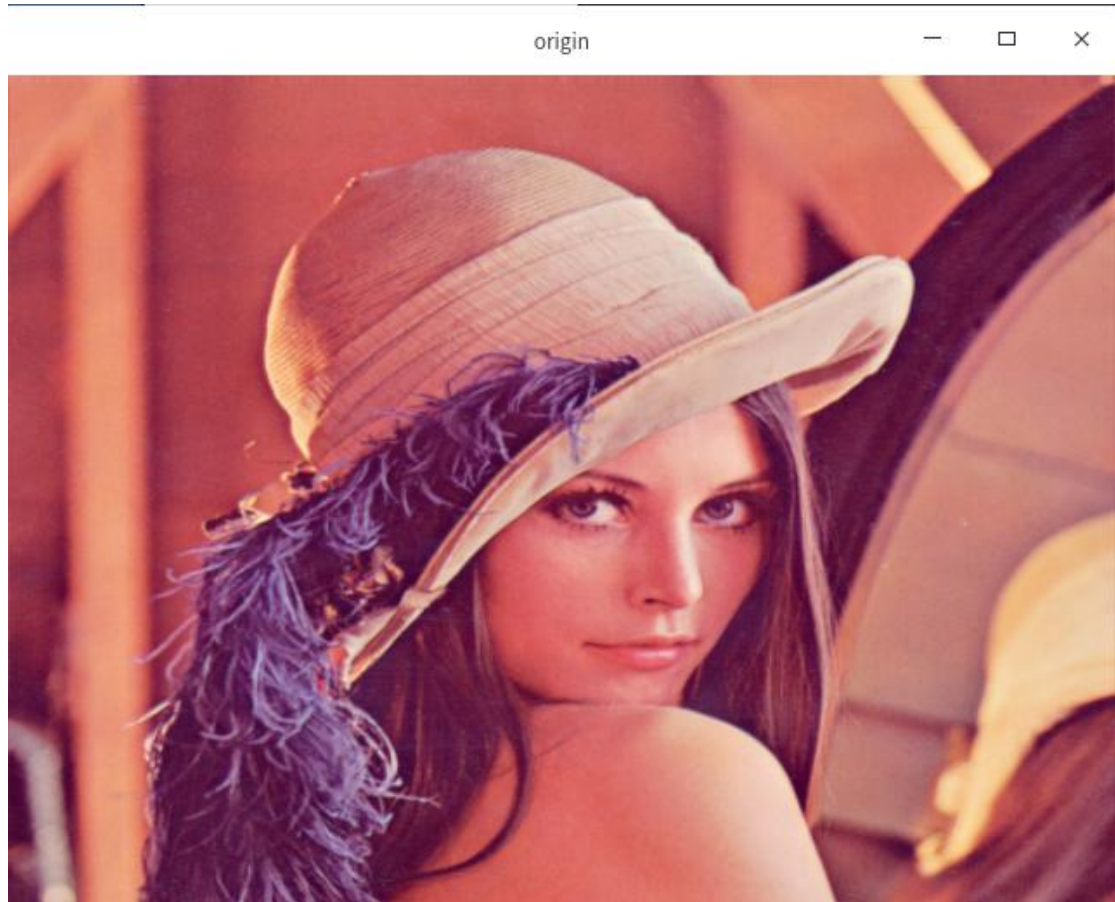7-Enrosion
Keypad
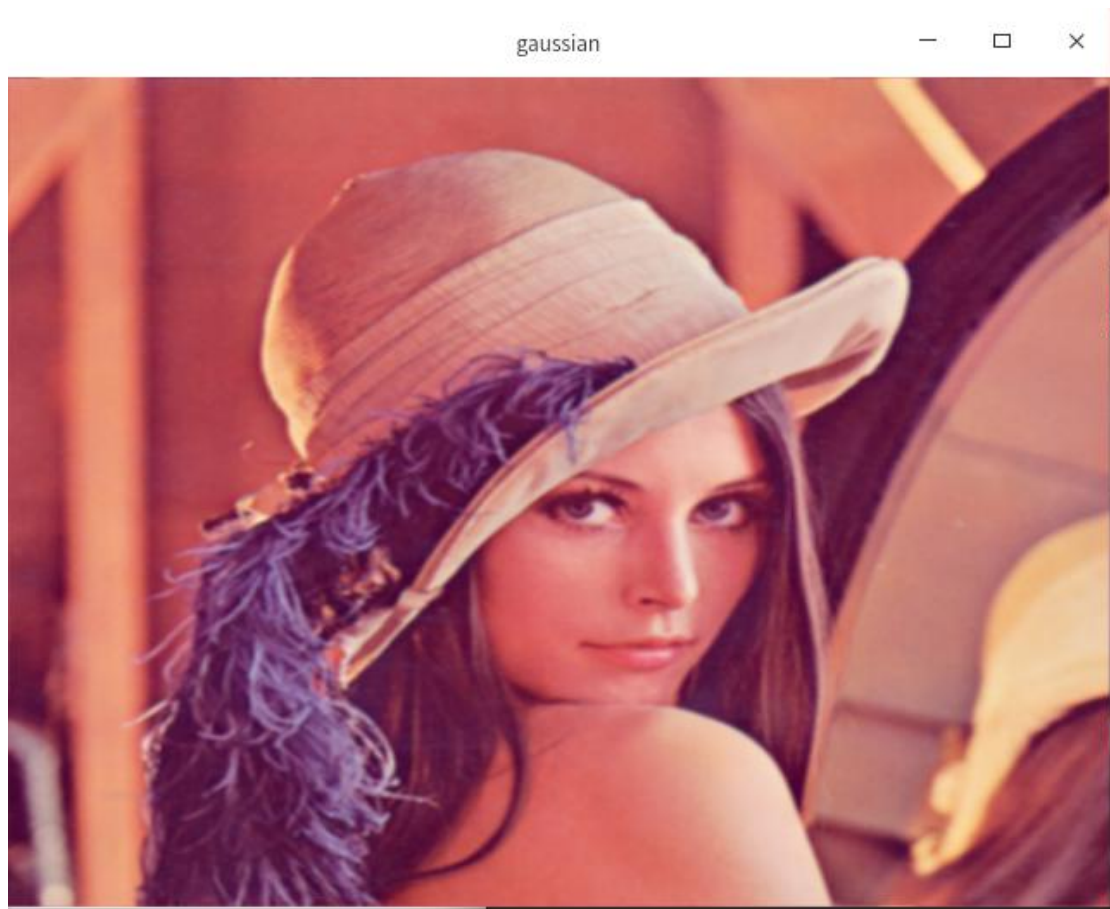4-Move the screen to left
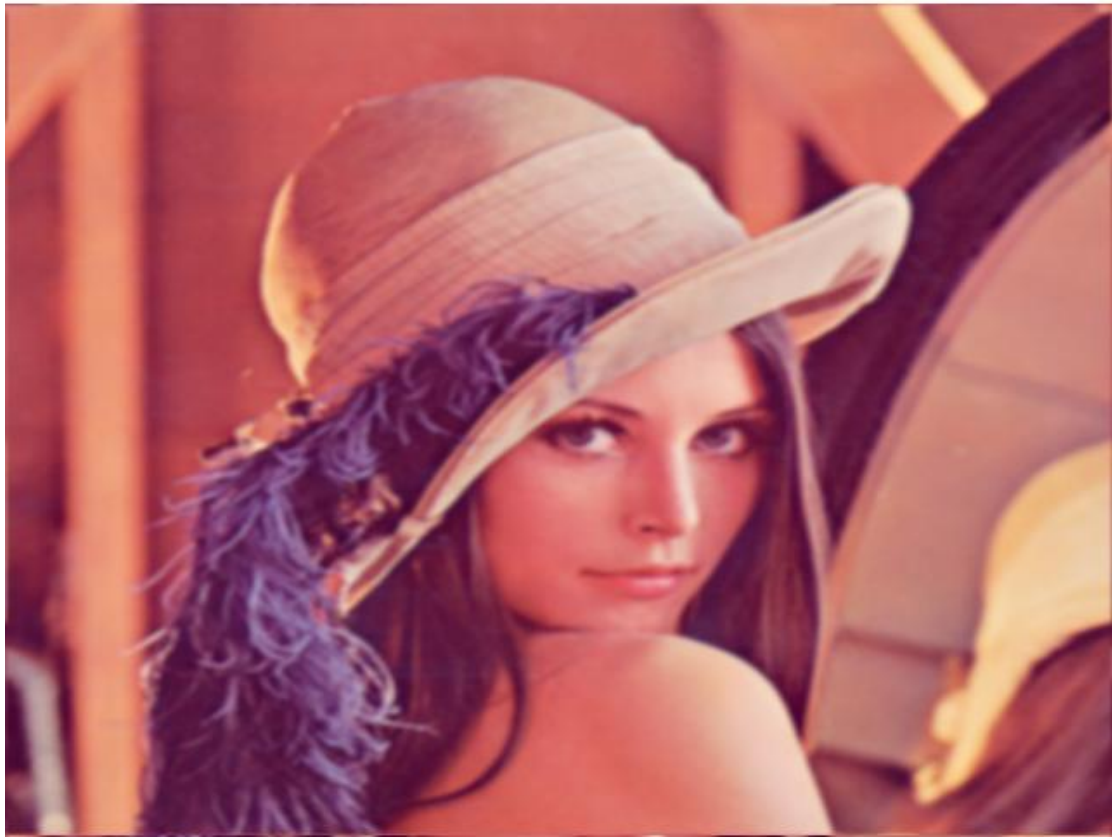6-Move the screen to right
2-Zoom in
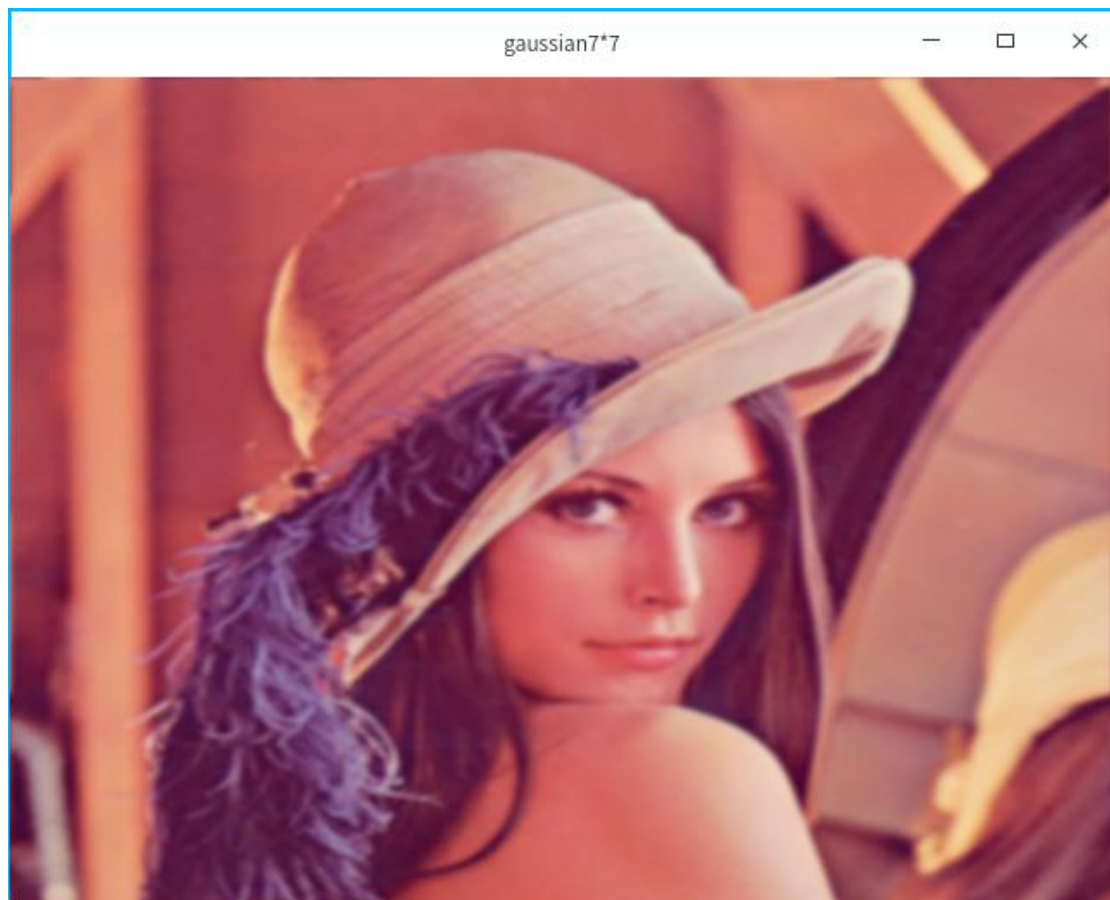8-Zoom out

1 Result

1.1 Origin

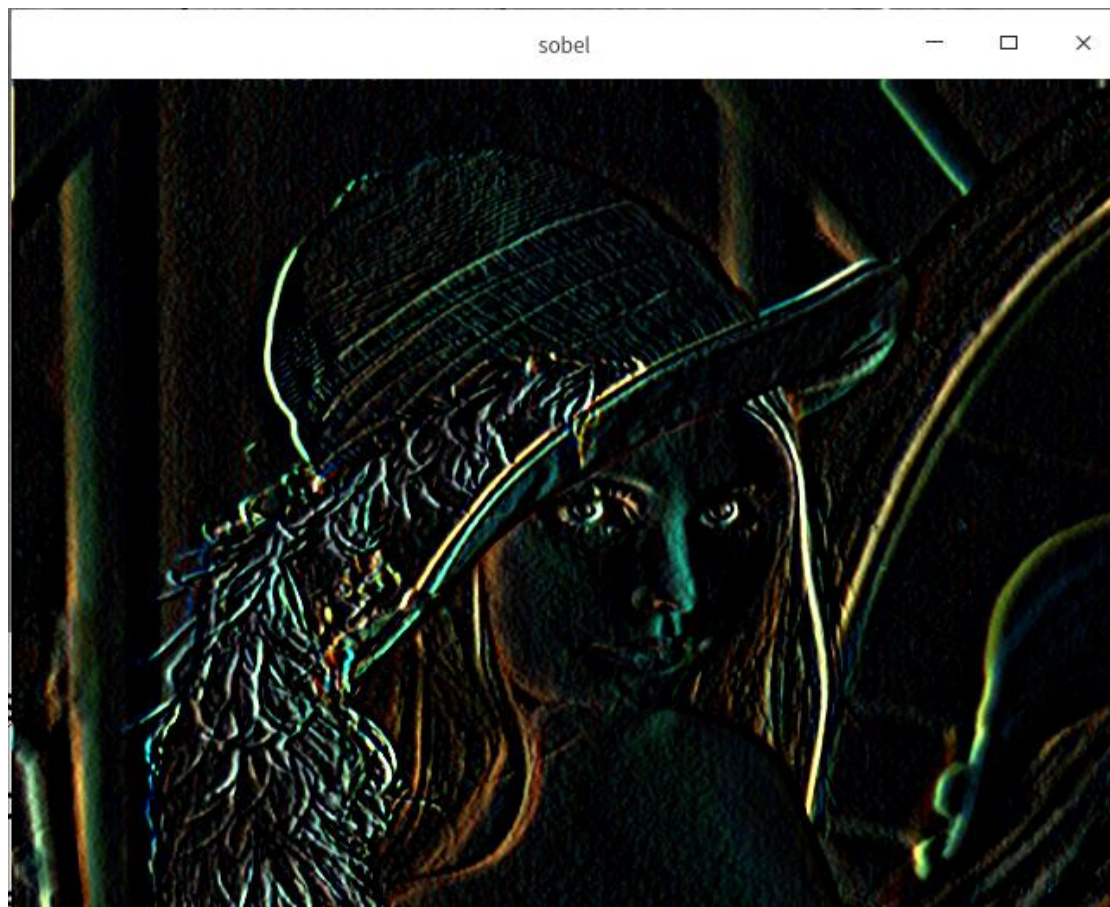## 1.2 Gaussian 3*3

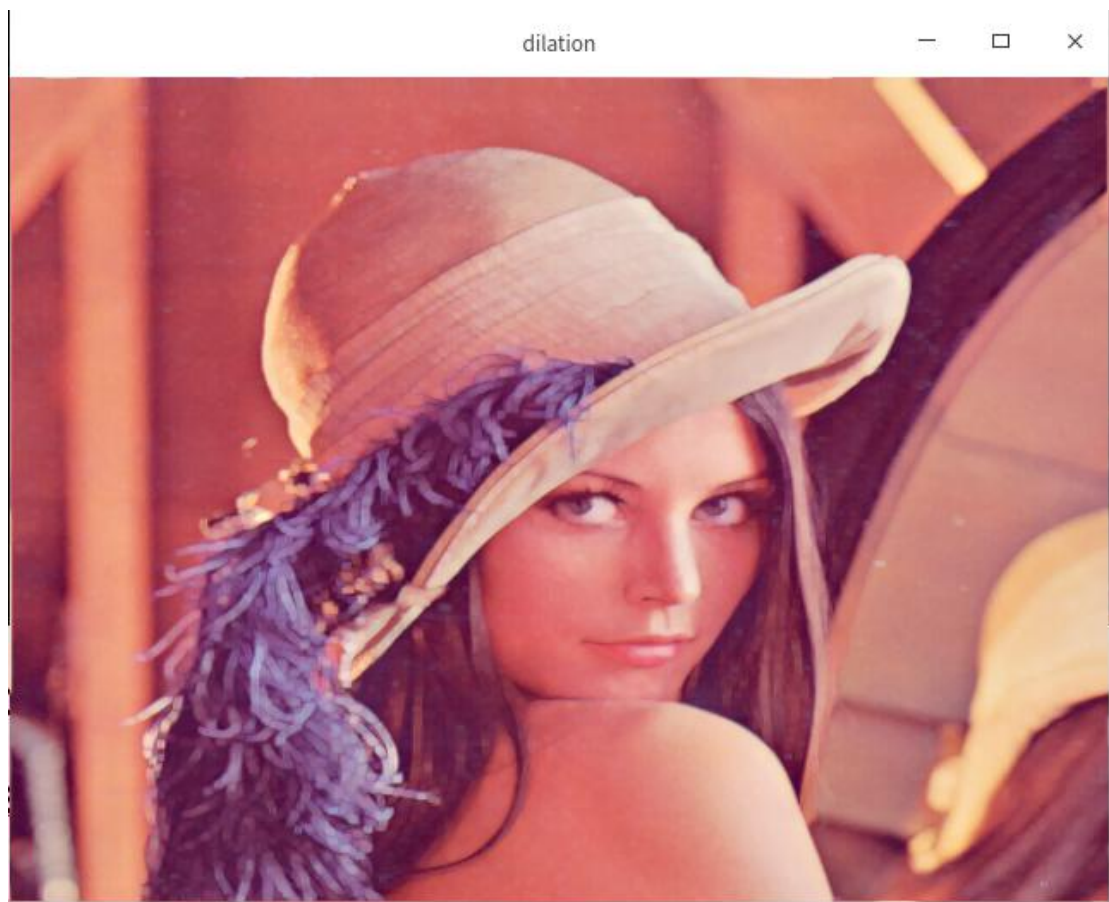## 1.3 Gaussian 5*5
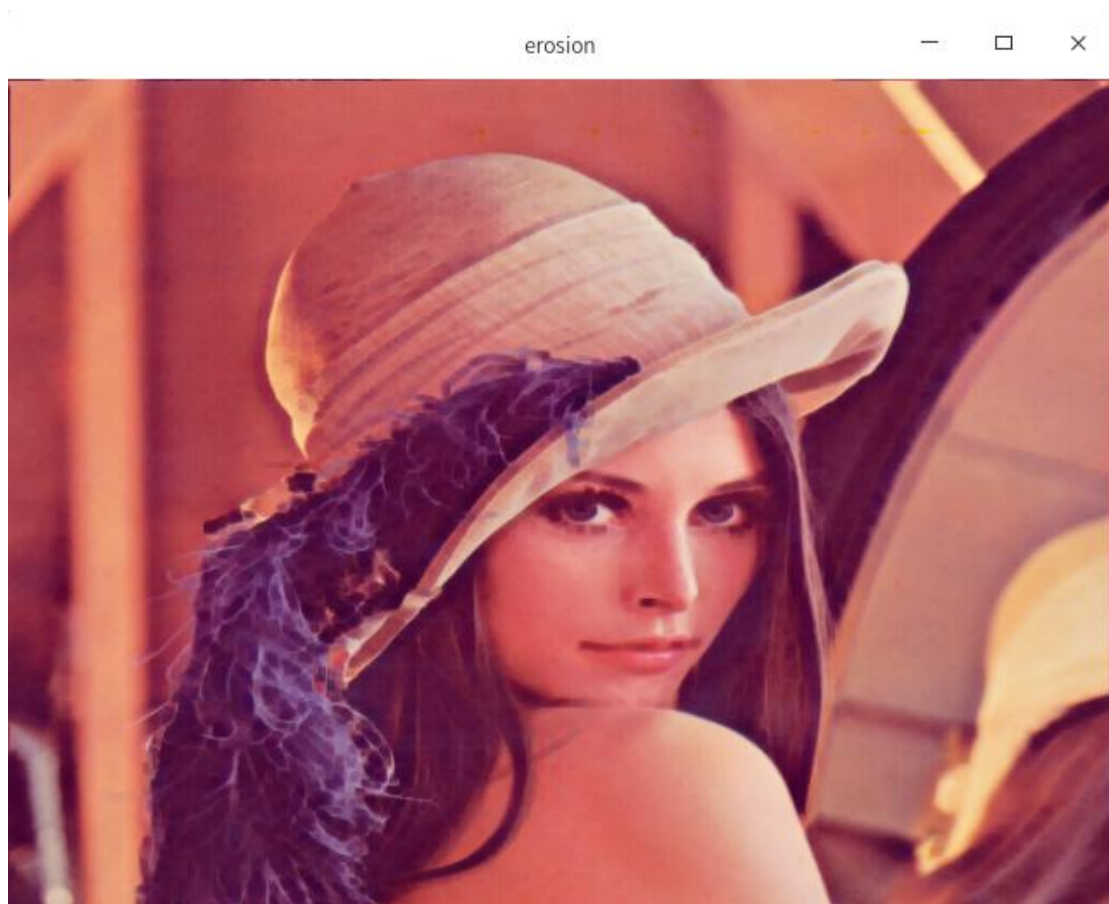
1.4   Gaussian 7*7

1.5 Embossing

1.6 Sobel

1.7 Dilation

1.8 Enrosion

2 Implement Method

As we can see from the two pictures below, through changing the convolution core, we can achieve many different image filter.

In opengl, we write code in fragment shader, we use the function below to change the color of a center fragment and its neighbor.

```
texture(textureMap, TexCoord).rgb,
```