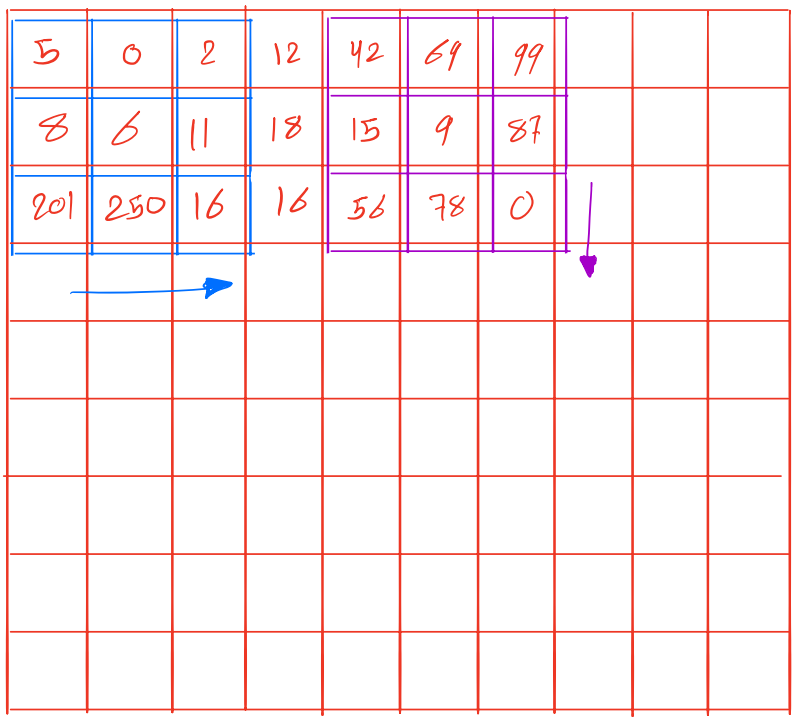
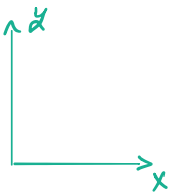
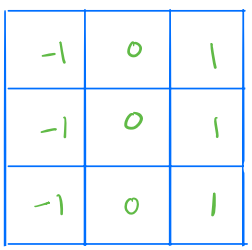
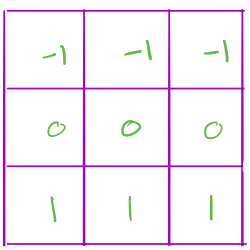






• 3X3
Gx



• 3X3
Gy

$$G_y(i,j) = \sum_{k=-1}^{1} \sum_{l=-1}^{1} I(i+k, j+l) \cdot G_y(k+1, l+1)$$

T considered to be the mean of G

$$G_x(i,j) = \sum_{k=-1}^{1} \sum_{l=-1}^{1} I(i+k, j+l) \cdot G_x(k+1, l+1)$$

$$\text{Edge}(i,j) = \begin{cases} 1 & \text{if } G(i,j) > T \\ 0 & \text{if } G(i,j) \leq T \end{cases}$$

$$M(i,j) = \sqrt{G_x(i,j)^2 + G_y(i,j)^2}$$