Computer Vision HW9 report　　資工三　B07902116　陳富春

For each of following edge detectors, I implement a function edge_detect to generate a result image.
The inputs of the function are original image, offset, threshold and category.

Original image is lena.bmp.

Offset is the masks that each method uses.

Threshold is a value to binarize result image.
Here I use threshold values from homework website.

Category is the way to calculate gradient.
If category is 0, then gradient is the form $\sqrt{r_1^2 + r_2^2}$; if category is 1, then gradient is the form $\max k_n$.
For (a) ~ (d), category is 0. For (e) ~ (g), category is 1.

(a) Robert's : (threshold = 12)

(b) Prewitt : (threshold = 24)

(c) Sobel : (threshold = 38)

(d) Frei and Chen : (threshold = 30)

(e) Kirsch's : (threshold = 135)

(f) Robinson's : (threshold = 43)

(g) Nevatia-Babu : (threshold = 12500)