$$\begin{bmatrix} 1 & 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 & 1 \end{bmatrix} \Rightarrow$$

There are 2 Island

	0	1	2	3	4
0	1	1	0	0	0
1	1	0	0	0	0
2	0	0	0	0	1
3	0	0	0	1	1

[00, 01, 10]

[24, 33, 34]

⇒ Canonical Coordinates

Reflection

(x, y)

(-x, y)

(x, -y)

(-x, -y)

Rotation

(y, x)

(-y, x)

(y, -x)

(-y, -x)

Normalization

* Sorting
* Transpose.

After Normalizing We get

⇒ [00, 01, 10]

[[00, 01, 10], [00, 01, 10] [00, 1-1, 10], [00, 1-1, 10]
[00, 01, 11], [00, 01, 11], [00, 10, 11], [00, 10, 11]]

⇒ [24, 34, 33]

[[00, 1-1, 10], [00, 1-1, 10], [00, 01, 10], [00, 01, 10]
[00, 10, 11], [00, 10, 11] [00, 01, 11] [00, 01, 11]]

Now If we sort the Normalized Value, we get :

⇒ [00, 01, 10]

[[00, 01, 10], [00, 01, 10], [00, 01, 11], [00, 01, 11],
[00, 1-1, 10], [00, 1-1, 10], [00, 10, 11] [00, 10, 11]]

⇒ [24, 34, 33]

[[00, 01, 10], [00, 01, 10], [00, 01, 11], [00, 01, 11], [00, 1-1, 10]
[00, 1-1, 10], [00, 10, 11], [00, 10, 11]]

* We can store the entire value in set or
we could just use the min/max value & save it in set

* Using min/max value → we optimize the solution because
min or max value makes the program effecient.