130. Surrounded Regions

130 Surrounded Regions

- **Depth-first Search**
- **Breadth-first Search**
- **Union Find**

Description

Given a 2D board containing `'X'` and `'O'` (the **letter** O), capture all regions surrounded by `'X'`.

A region is captured by flipping all `'O'` s into `'X'` s in that surrounded region.

For example,

```
X X X X
X O O X
X X O X
X O X X
```

After running your function, the board should be:

```
X X X X
X X X X
X X X X
X O X X
```

1. Thought line

2. Depth-first Search

3. Breadth-first Search

4. Union Find