Revision.

This week.

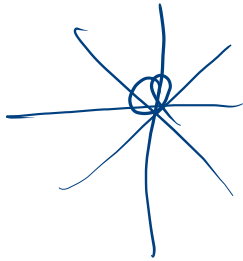
* Game Theory → 2D Array (CW, NQ)

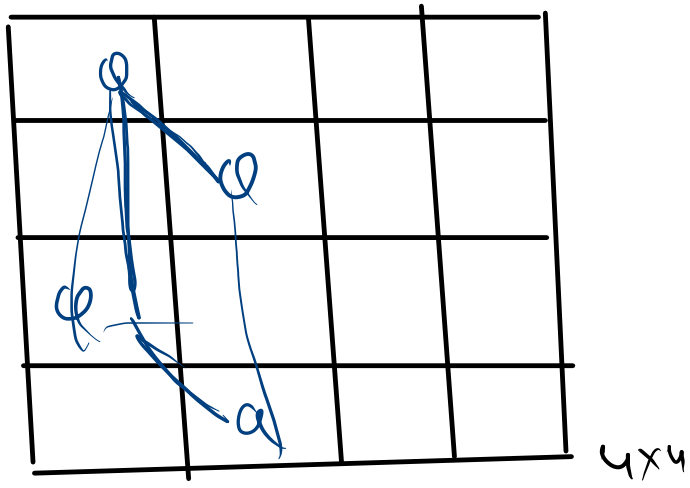
Strings. (completed).

N Queens Check

$n = 4$ → queens.

→ board → $n \times n$.





4x4

Cross - Word

Sample Input 0

```
10
W C R P S R I J L J
D R T I B U B R I Y
Y E T N L P K O S T
J D S K U O O S O B
O B A F E R Y I B R
C L C B H A Q Y E O
D A W C R N L X X W
I C T E L G J N S N
Q K Q K Y E L L O W
H A O K X G R E E N
GREEN
```

```java
public static boolean searchIn4Dir(char [][] A, String word, int i, int j){
    if(dirOne(A, word, i,j) || dirTwo(A, word, i,j) || dirThree(A, word, i,j) || dirFour(A, word, i,j)){
        return true;
    }

    return false;
```

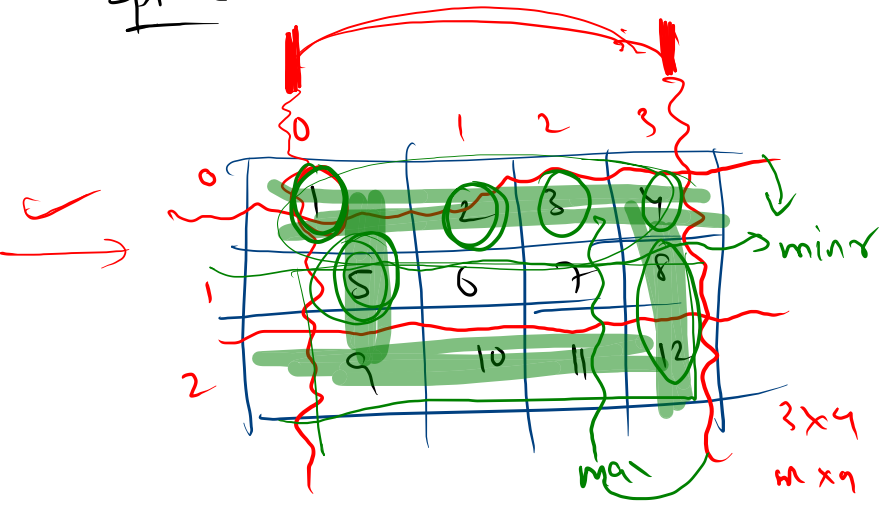
```java
public static boolean dirOne(char [][] A, String word, int i, int j){
    //1. horizontal from L to R
    for(int k = 0; k < word.length(); k++){
        if(j >= A.length){
            return false;
        }
        else if(word.charAt(k) != A[i][j]){
            return false;
        }
        j++;
    }
    return true;

}
```

Sample Output 0

```
true
```

Spiral -

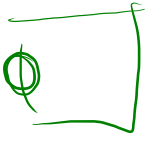


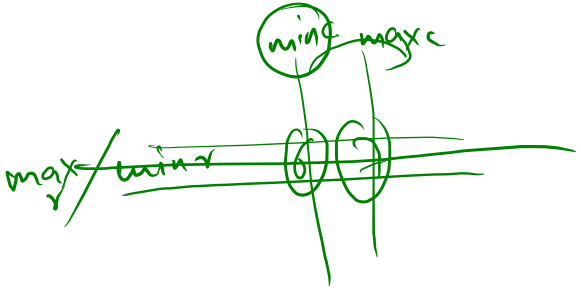
minc → 0

minr → 0

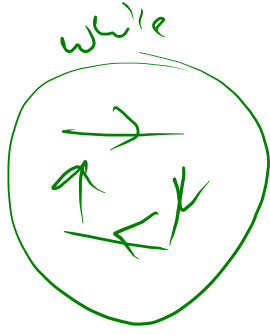
maxc → n-1

maxr → m-1



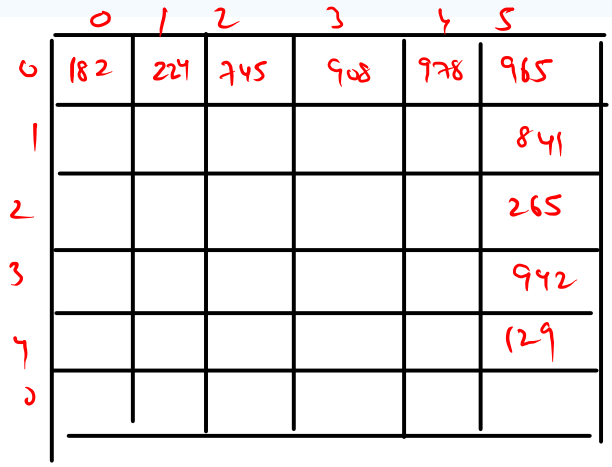


maxc minr



Construct Spiral.

```
36 6 6
182 224 745 908 978 965 841 265 942 129 359 562 775 118 875 646 19 722 25 54 918 791 466 692
793 481 568 36 15 283 393 912 529 47 222 193
```




```
182 224 745 908 978 965
54 918 791 466 692 841
25 912 529 47 793 265
722 393 193 222 481 942
19 283 15 36 568 129
646 875 118 775 562 359
```

Reverse a str.

immutable.

i = n-1

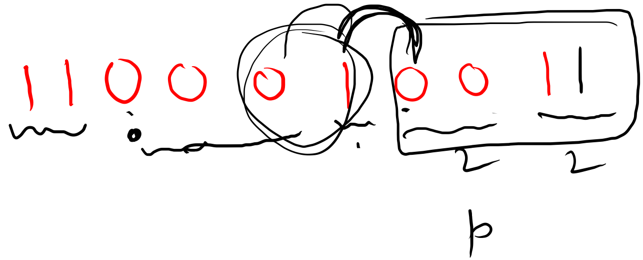
i ≥ 0

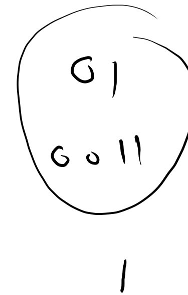
i--

t → "dlrowdoog"

t += s[i]

* equal no. of 0&1 ✓
* grouped together ✓





on ~~1~~ ~~2~~ ~~3~~ 4