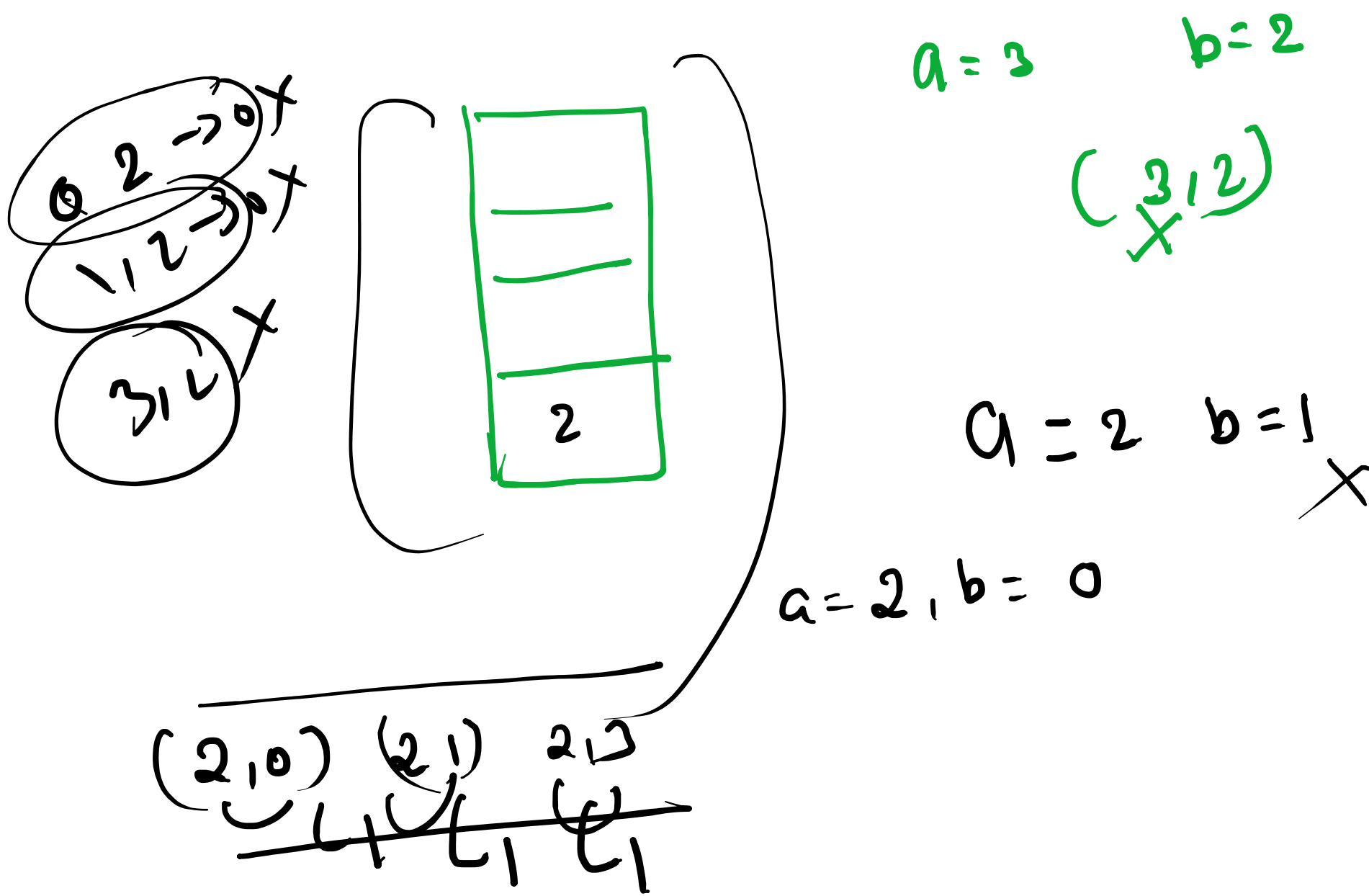
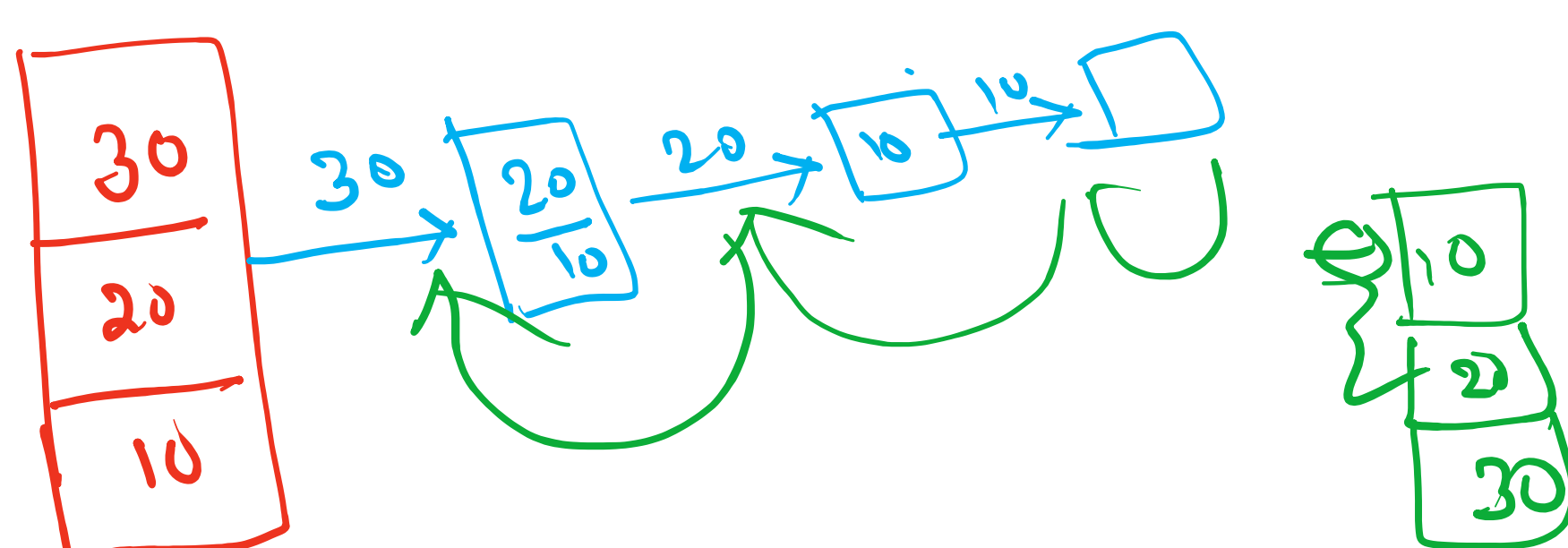
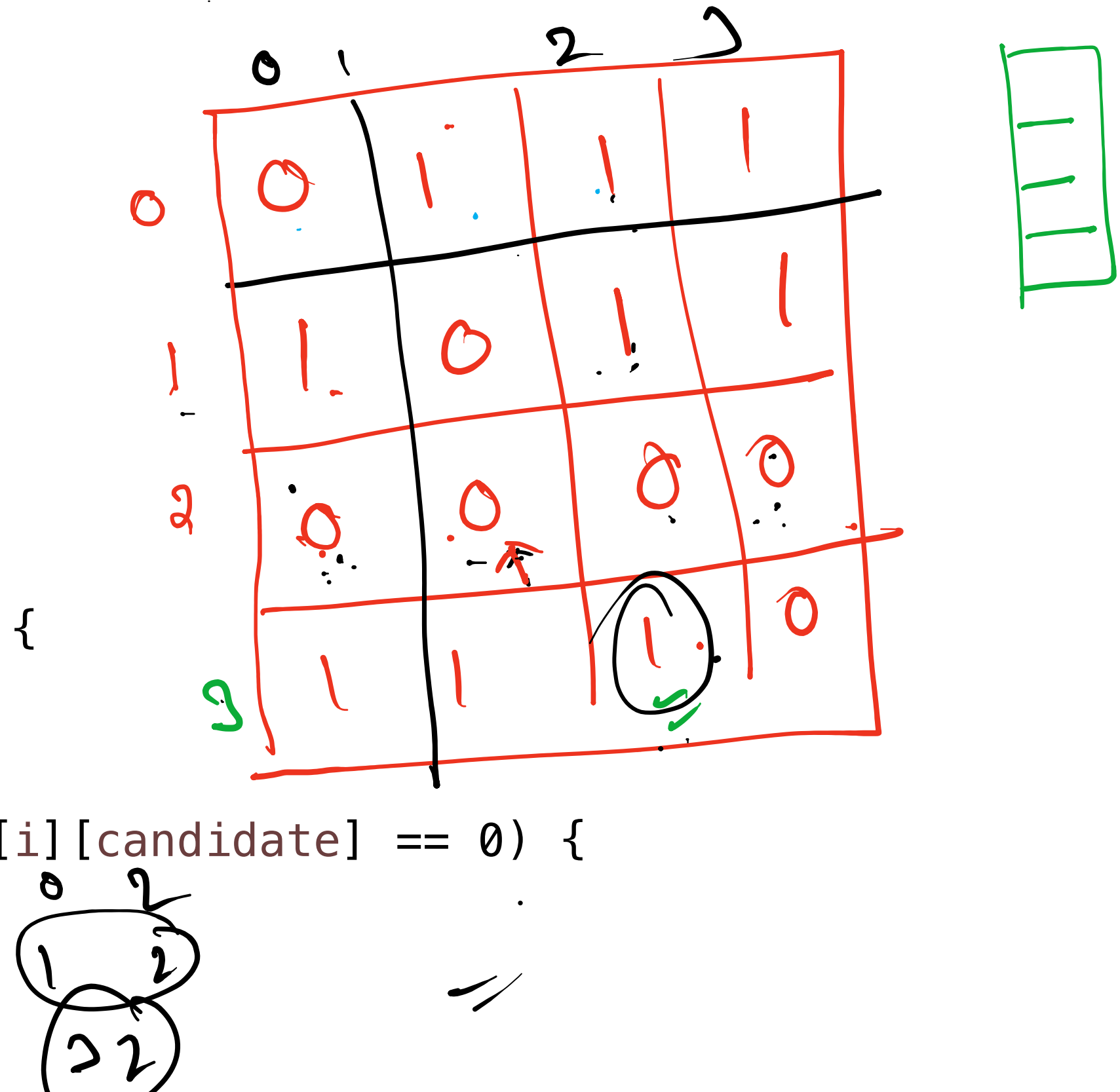


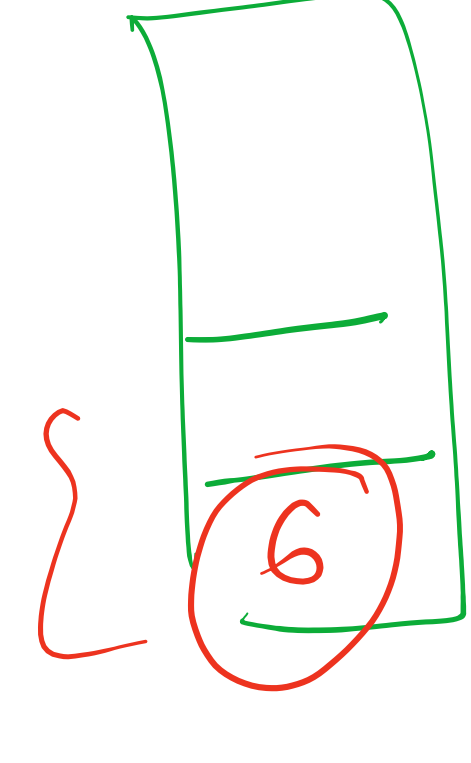
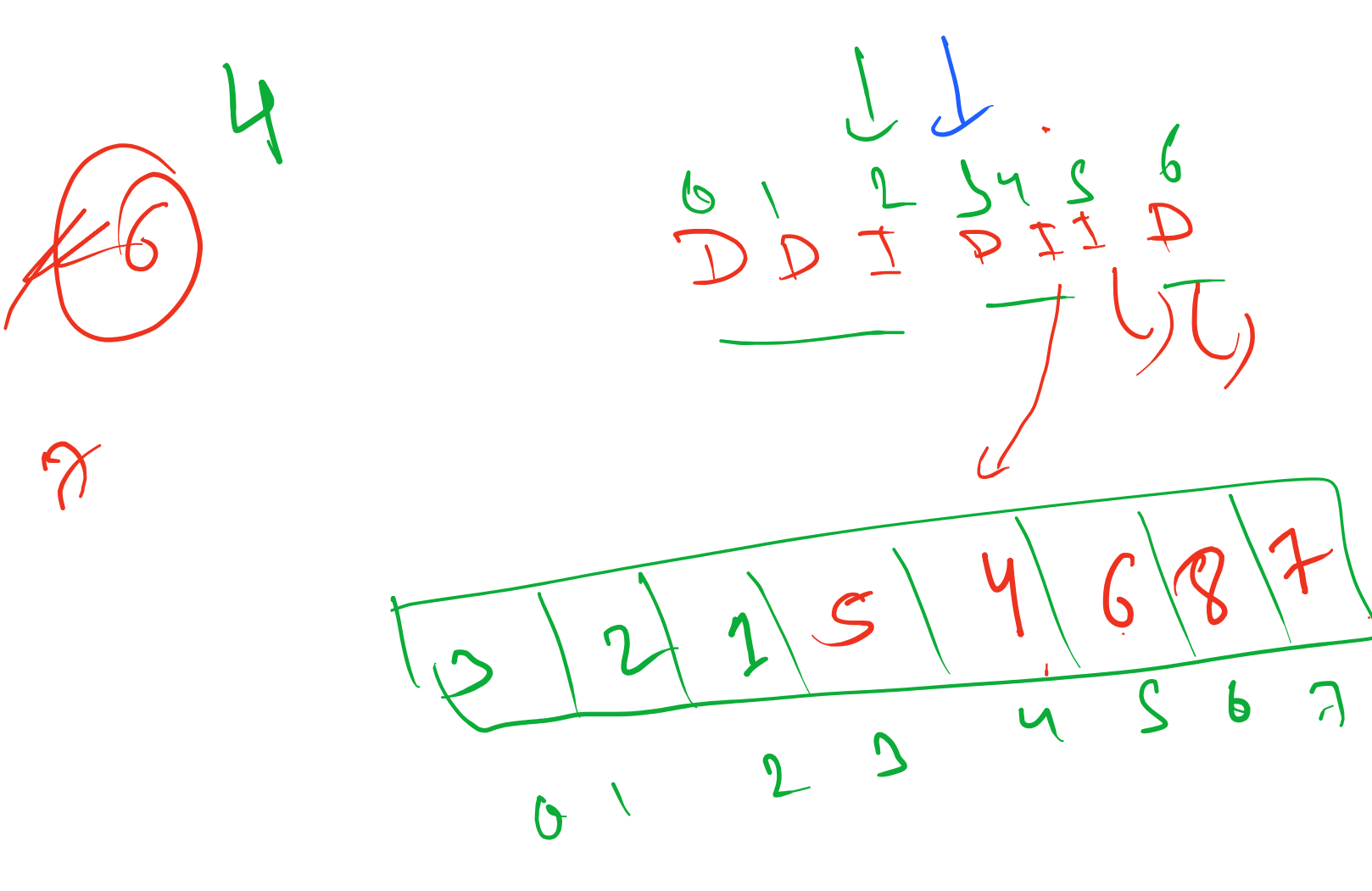
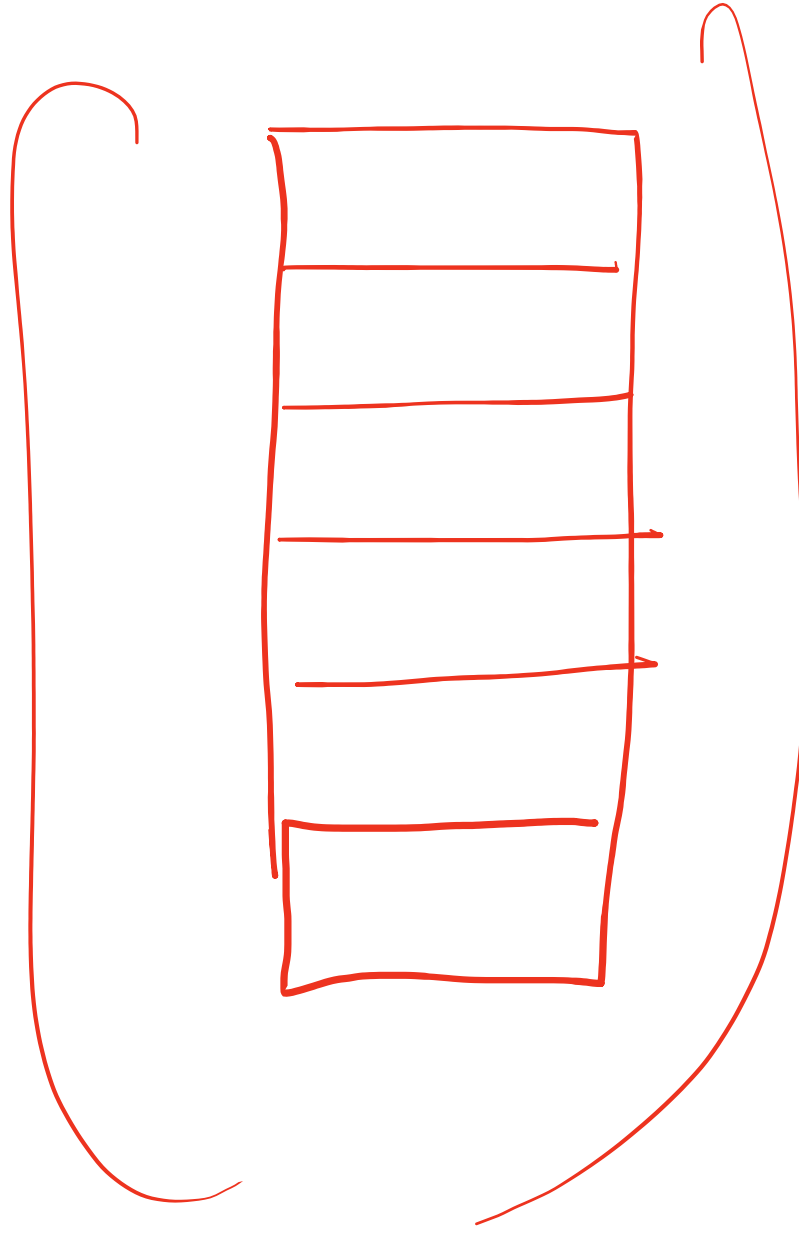
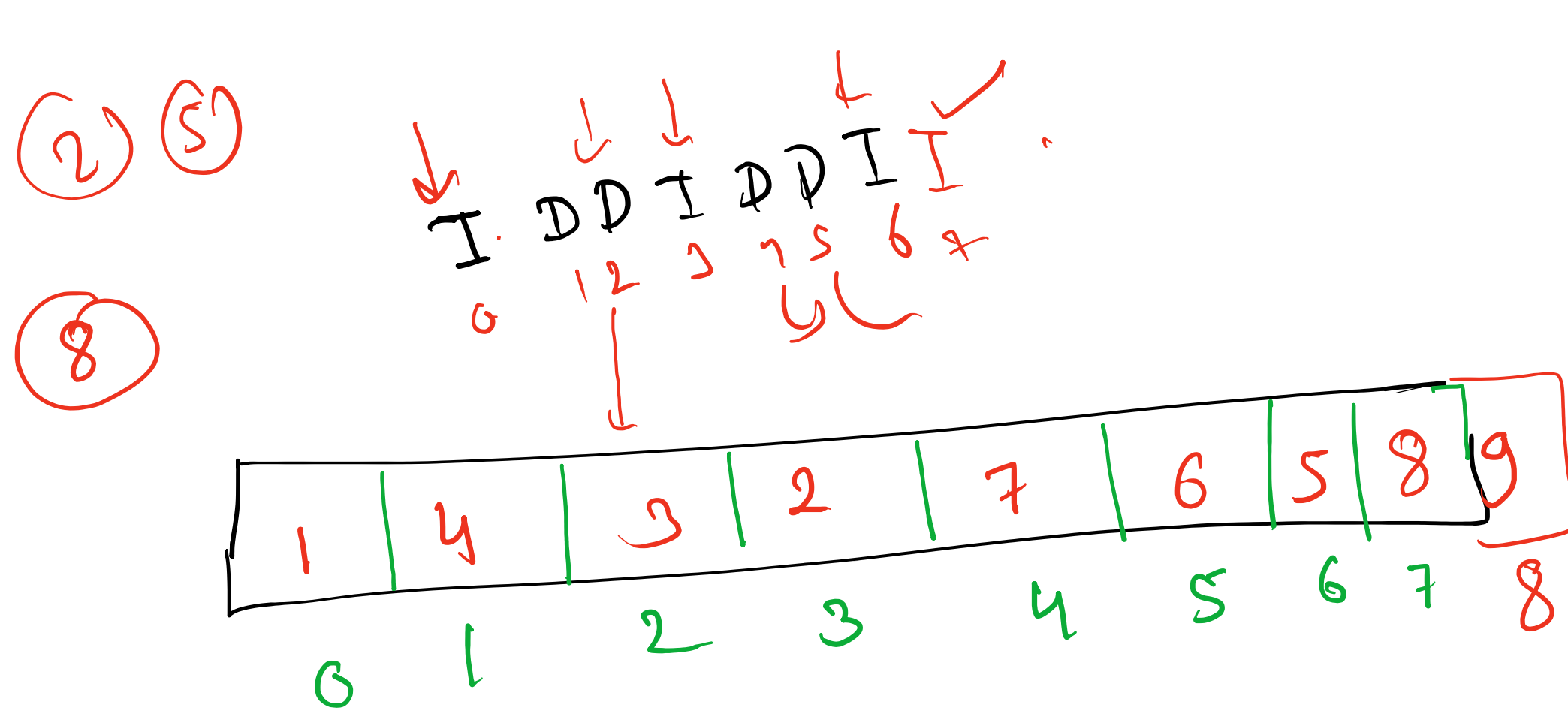
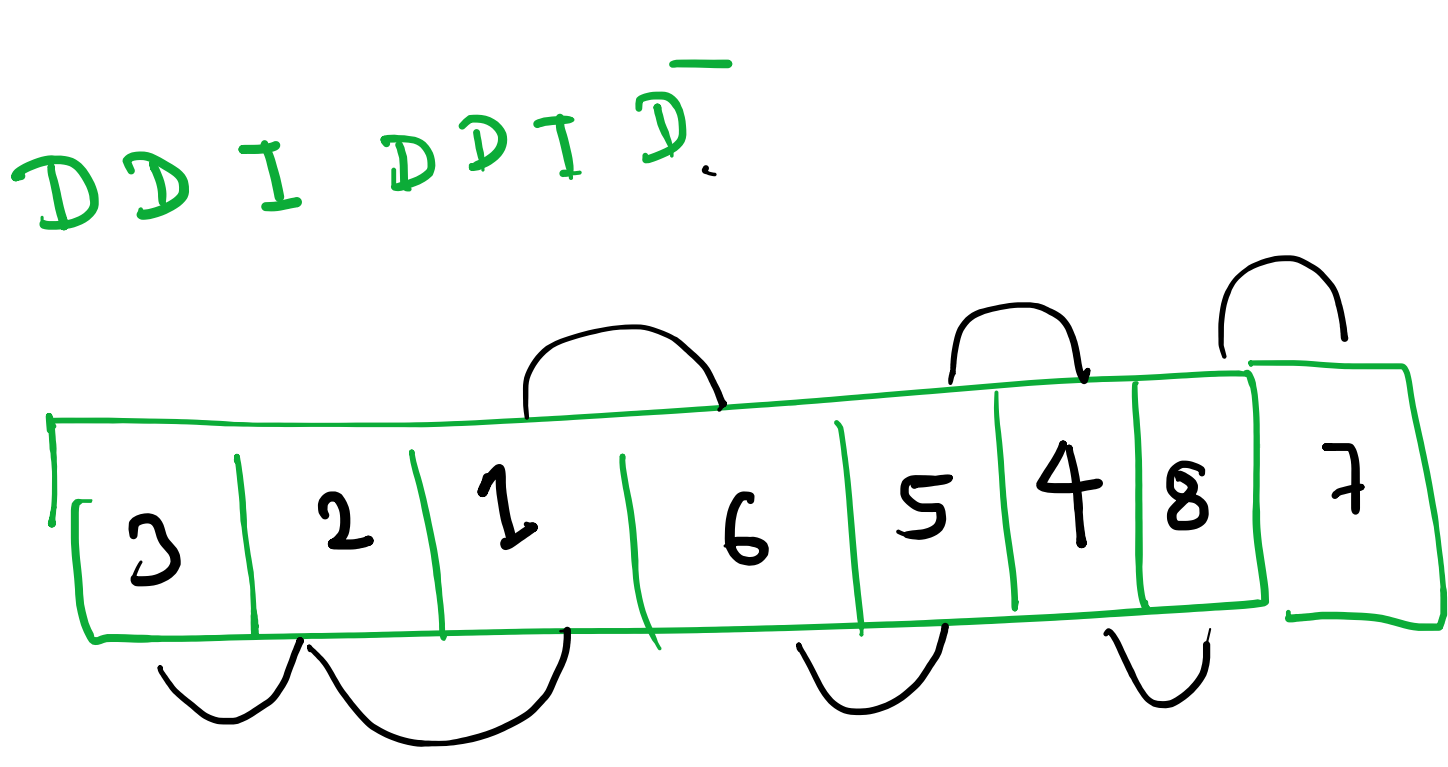
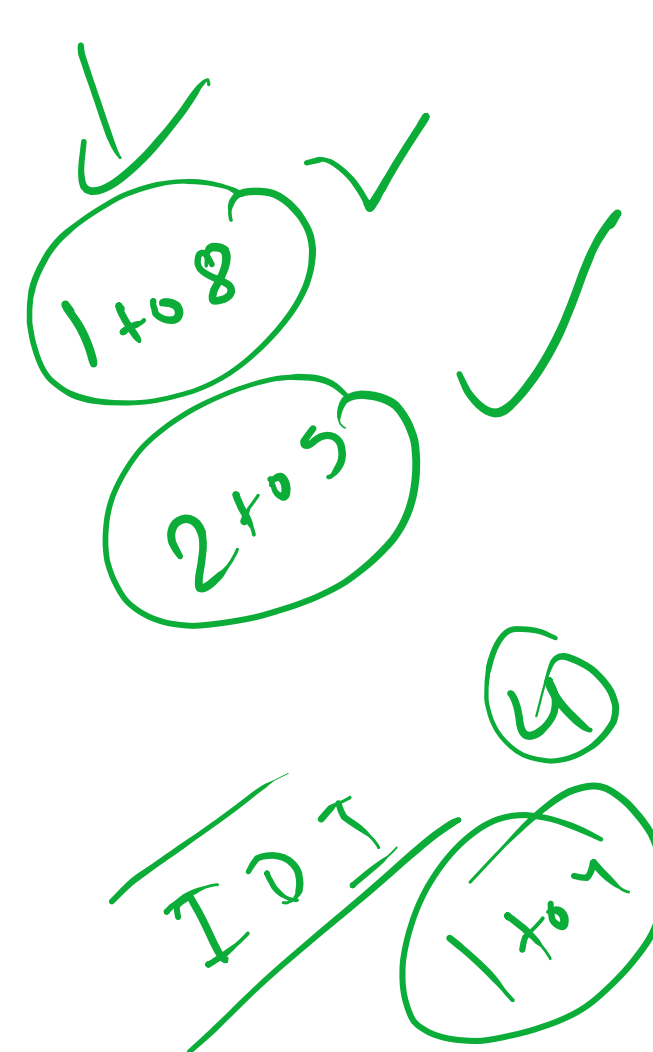
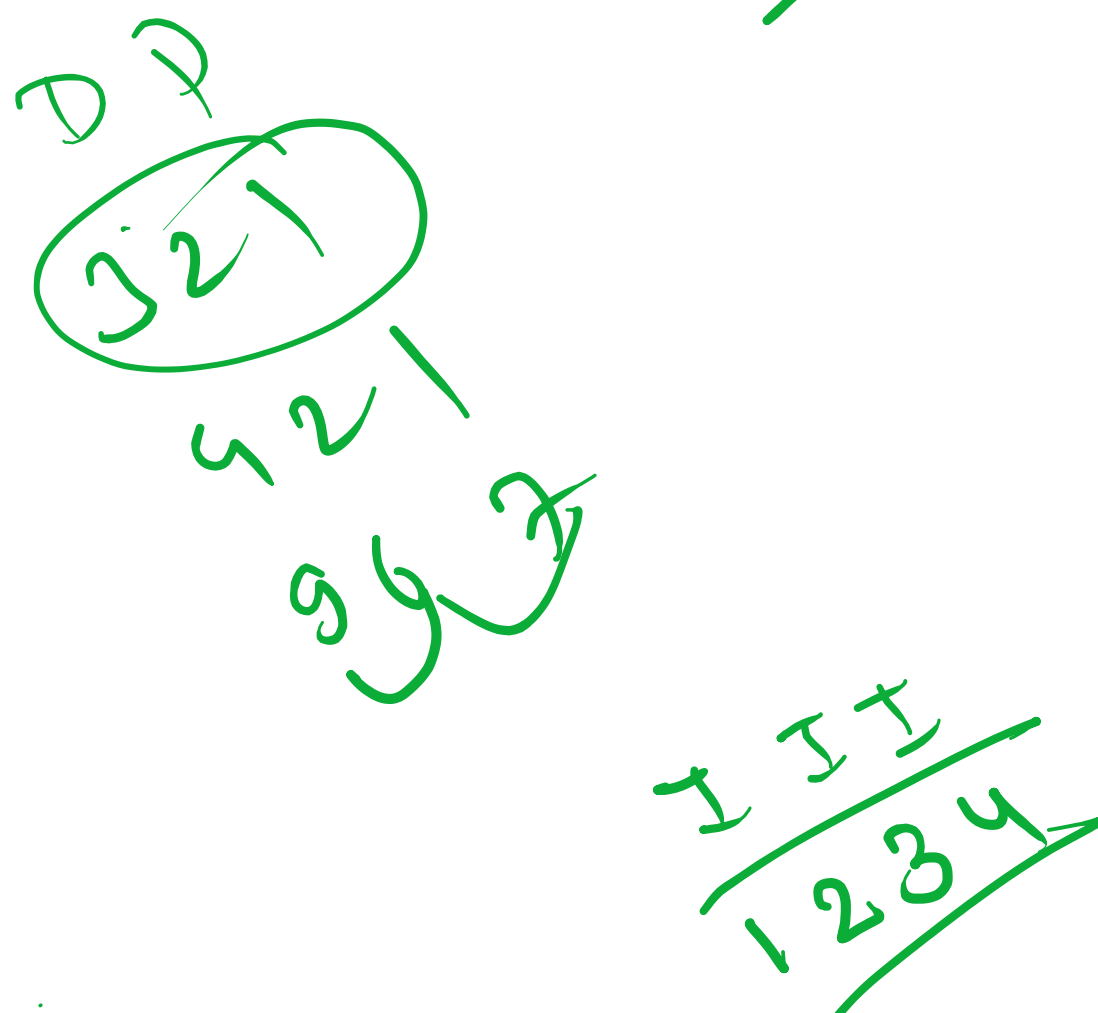
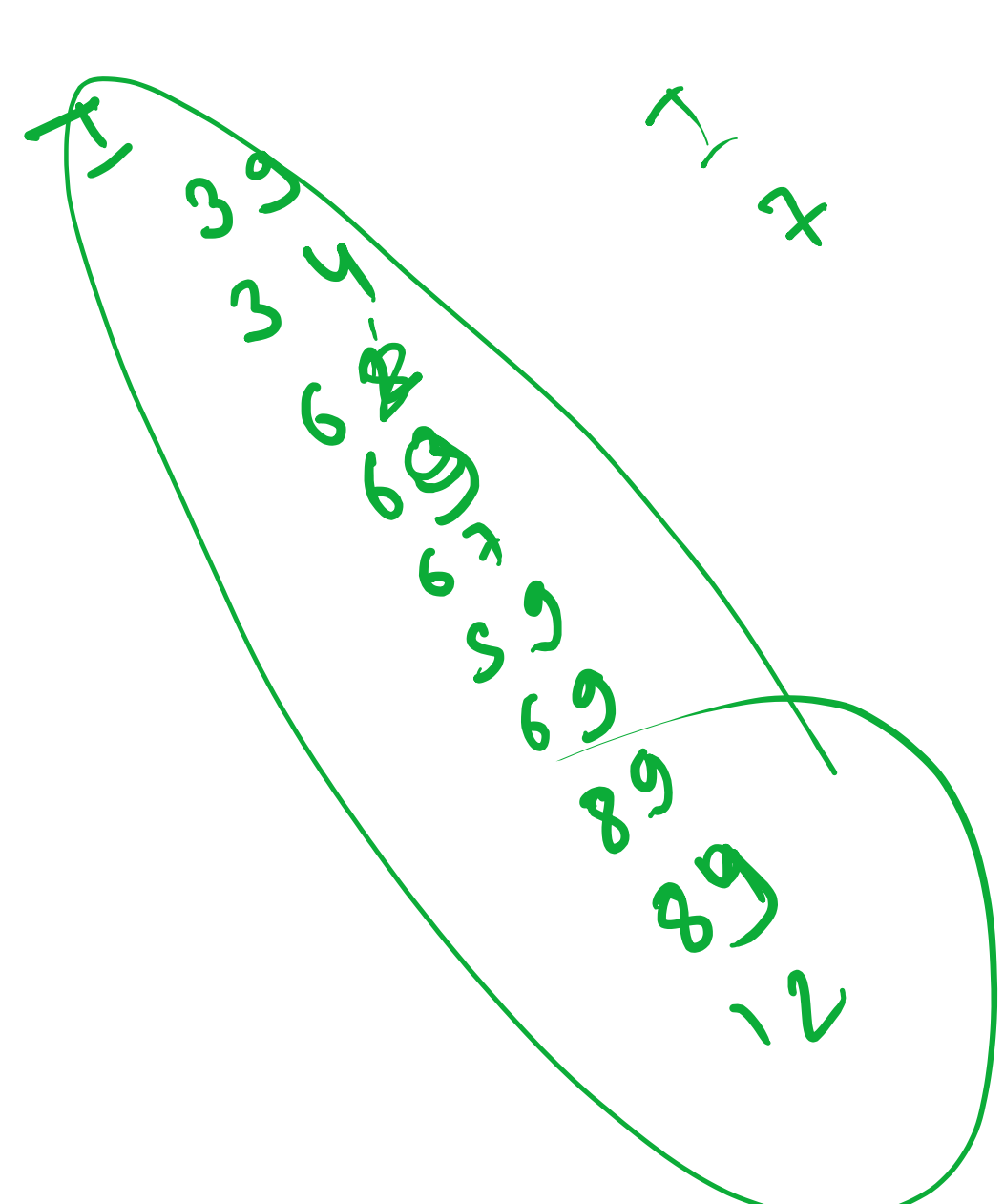
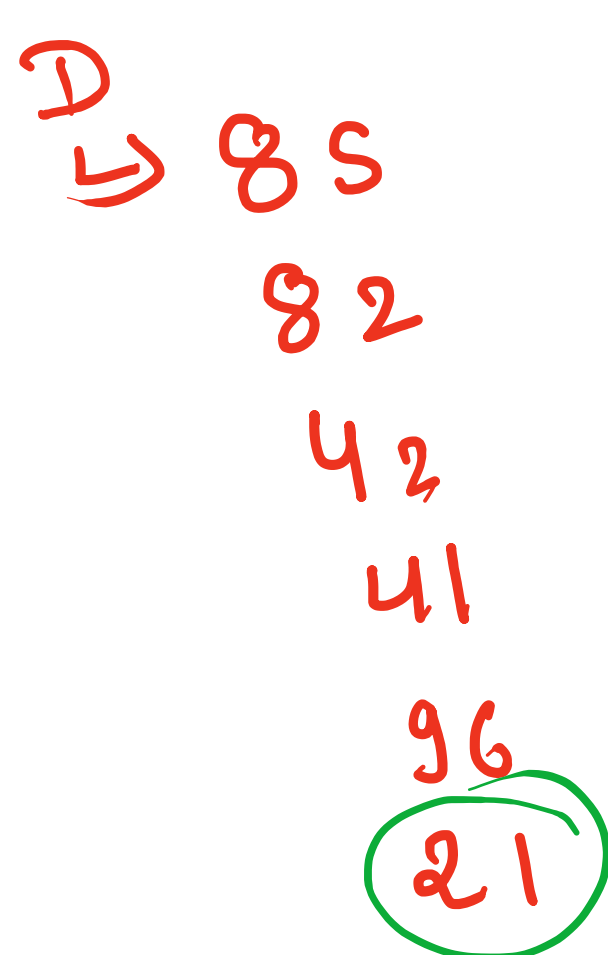
```
private static void Reverse(Stack<Integer> st) {  
    // TODO Auto-generated method stub  
    if (st.isEmpty()) {  
        return;  
    }  
    int x = st.pop();  
    Reverse(st);  
    st.push(x); push  
}
```



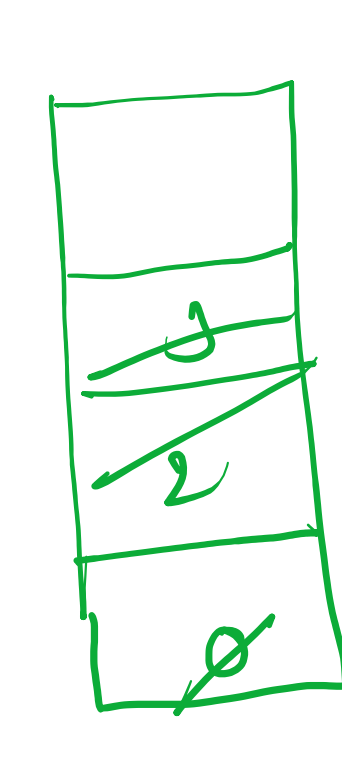
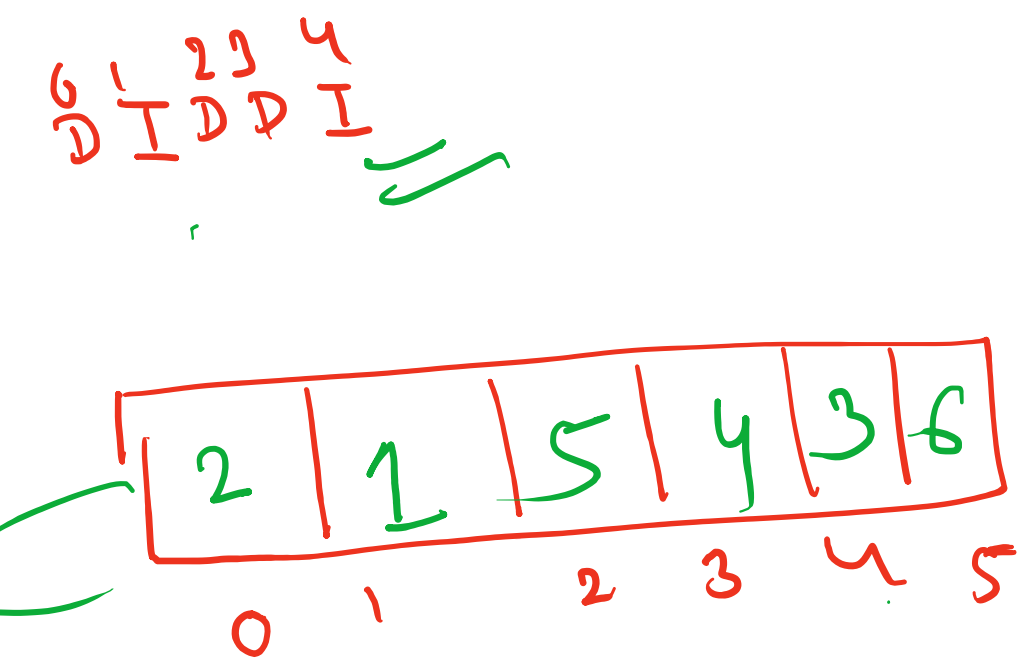
```
private static int Celebrity(int[][] arr) {  
    // TODO Auto-generated method stub  
    Stack<Integer> st = new Stack<>();  
    for (int i = 0; i < arr.length; i++) {  
        st.push(i);  
    }  
    while (st.size() > 1) {  
        int a = st.pop();  
        int b = st.pop();  
        if (arr[a][b] == 1) {  
            st.push(b);  
        } else {  
            st.push(a);  
        }  
    }  
    int candidate = st.pop();  
    for (int i = 0; i < arr.length; i++) {  
        if (i == candidate) {  
            continue;  
        }  
        if (arr[candidate][i] == 1 || arr[i][candidate] == 0) {  
            return -1;  
        }  
    }  
    return candidate;  
}
```



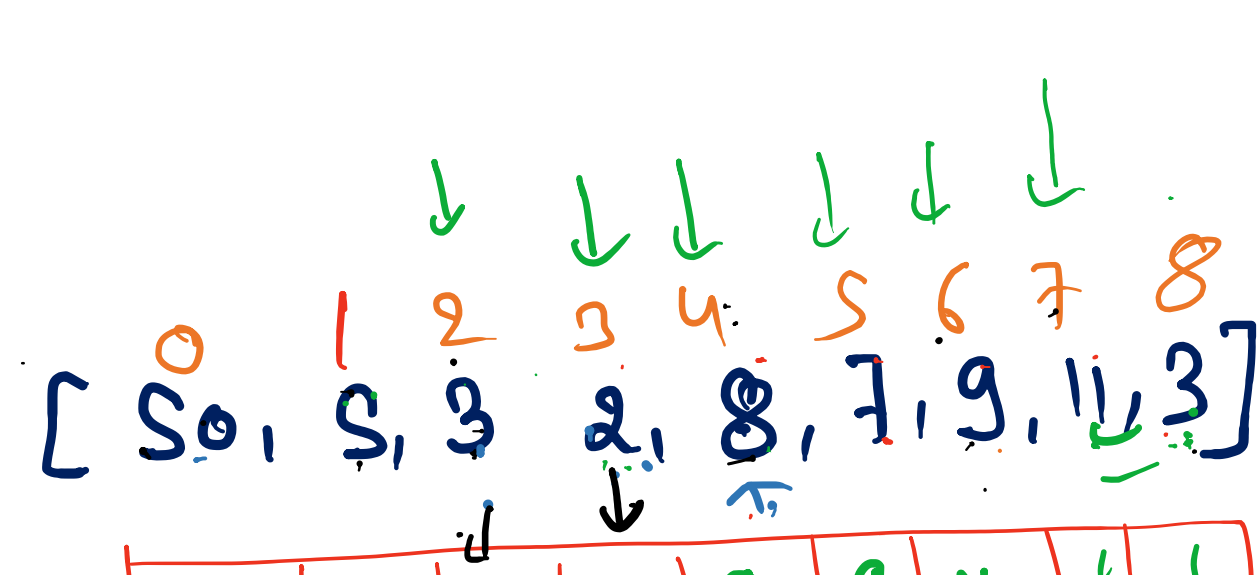
pattern = "IIIDIDDD"
:: "123549876"



```
public static String Smallest_Number(String s) {  
    int[] ans = new int[s.length() + 1];  
    int count = 1;  
    Stack<Integer> st = new Stack<>();  
    for (int i = 0; i < s.length(); i++) {  
        if (i == s.length() || s.charAt(i) == 'I') {  
            ans[i] = count;  
            count++;  
            while (!st.isEmpty()) {  
                ans[st.pop()] = count;  
                count++;  
            }  
            st.push(i);  
        }  
    }  
}
```



Given an array, print the Next Greater Element (NGE) for every element. The Next Greater Element for an element x is the first greater element on the right side of x in array. Elements for which no greater element exist, consider next greater element as -1.



```
while (!st.isEmpty() && arr[i] > arr[st.peek()])  
    ans[st.pop()] = arr[i];  
    st.push(i);
```

