Find Mex

6681 68% 10 ★★★★★9 votes , Algorithms, Brute Force, Implementation, Linear Search, Iterators Share

Problem

You are given an integer array of length N. You have to find MEX of i^{th} element for all $1 \leq i \leq N$.

MEX of the i^{th} element is the minimum element greater than or equal to 0 which is not present in array till the i^{th} index.

Input Format:

First line contains an integer N denoting the size of array.

Next line contains N integers denoting the elements of the array.

Output Format:

Print N integers. i^{th} element should be the MEX of the array prefix till i

Constraints:

$1 \leq N \leq 2 * 10^5$
$0 \leq arr[i] \leq 2 * 10^5$

Sample Input	Sample Output
5 1 0 5 5 3	0 2 2 2 2

Time Limit: 1

Enter your code or Upload your code as file. Save Python 3 (python 3.10)

```
def solve():
    n = int(input())
    max_size = 1000000
    v = [False] * max_size
    ans = 0
    result = []
    x_values = list(map(int, input().split()))

    for x in x_values:
        if x >= max_size:
            v.extend([False] * (x - max_size + 1))
            max_size = len(v)

        v[x] = True
        while ans < len(v) and v[ans]:
            ans += 1
        result.append(ans)

    print(" ".join(map(str, result)))

if __name__ == "__main__":
```

2:21 Vscode

Test against custom input Compile & Test code Submit code

Submission ID: 104487510

RESULT: Accepted Refer judge environment

Score	Time (sec)	Memory (KiB)	Language
0	1.08528	36056	Python 3