

Leetcode \rightarrow 448.

\Rightarrow Find all numbers disappeared in an Array.

Algorithm:-

1. Iterate through the array.
2. For each element $nums[i]$, mark the element at index $abs(nums[i]) - 1$ as -ve.
3. Iterate through the array again.
4. For each +ve element, its corresponding index plus one is a missing no.
5. Store the missing numbers in a separate array.
6. Return the array containing the missing numbers.

Program:-

```
int * findDisappearedNumbers (int * nums, int numsSize,
                              int * returnSize) {
    int * disappeared;
    int * count = (int *) malloc (numsSize * sizeof(int))
    for (i=0; i<numsSize; i++) {
        counts[nums[i] - 1]++;
    }
    int missingCount=0;
    for (i=0; i<numsSize; i++) {
        if (counts[i] == 0) {
            missingCount++;
        }
    }
    disappeared = (int *) malloc (missingCount * sizeof(int))
    *returnSize = missingCount;
}
```

```

int index = 0;
for (i = 0; i < numsSize; i++) {
    if (counts[i] == 0) {
        disappeared[index++] = i+1;
    }
}
free(counts);
return disappeared;
}

```

O/p:-

nums = [4, 3, 2, 7, 8, 2, 3, 1]

O/p: [5, 6]

Expected: [5, 6].

nums: [1, 1]

O/p: [2]

Expected: [2].

✓
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