

2/05/24

Lab 1 (ADA)

Find all numbers disappeared in an Array

Program:

```
int *findDisappearedNumbers (int *nums,  
int numSize, int *returnSize) {
```

```
    int *disappeared;
```

```
    int *count = (int *) malloc (numSize  
                                * sizeof (int))
```

```
    for (i=0; i<numSize; i++)  
        counts[num[i] - 1] ++;
```

```
    int missingCount = 0;
```

```
    for (i=0; i<numSize; i++) {  
        if (counts[i] == 0) {  
            missingCount++;
```

```
        }
```

```
    disappeared = (int *) malloc (missingCount * sizeof  
                                (int));
```

```
    *returnSize = missingCount;
```

```
    int index = 0;
```

```
    for (i=0; i<numSize; 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]

B. display