

# Day 24: More Linked Lists

## Objective

Check out the [Tutorial](#) tab for learning materials and an instructional video!

## Task

A *Node* class is provided for you in the editor. A *Node* object has an integer data field, *data*, and a *Node* instance pointer, *next*, pointing to another node (i.e.: the next node in a list).

A *removeDuplicates* function is declared in your editor, which takes a pointer to the *head* node of a linked list as a parameter. Complete *removeDuplicates* so that it deletes any duplicate nodes from the list and returns the head of the updated list.

**Note:** The *head* pointer may be null, indicating that the list is empty. Be sure to reset your *next* pointer when performing deletions to avoid breaking the list.

## Input Format

You do not need to read any input from stdin. The following input is handled by the locked stub code and passed to the *removeDuplicates* function:

The first line contains an integer, *N*, the number of nodes to be inserted.

The *N* subsequent lines each contain an integer describing the *data* value of a node being inserted at the list's tail.

## Constraints

- The data elements of the linked list argument *will always be* in non-decreasing order.

## Output Format

Your *removeDuplicates* function should return the head of the updated linked list. The locked stub code in your editor will print the returned list to stdout.

## Sample Input

```
6
1
2
2
3
3
4
```

## Sample Output

```
1 2 3 4
```

## Explanation

$N = 6$ , and our non-decreasing list is  $\{1, 2, 2, 3, 3, 4\}$ . The values **2** and **3** both occur twice in the list, so we remove the two duplicate nodes. We then return our updated (ascending) list, which is  $\{1, 2, 3, 4\}$ .