Remove Duplicate

Problem	Submissions	Leaderboard	Discussions

Problem Statement

You will be given a singly linked list of integer values as input. You need to remove duplicate values from the linked list and finally print the linked list.

The process is, for each node **N**, traverse from that node and delete all nodes where the values are same with **N**.

Note: You must use singly linked list, otherwise you will not get marks.

Input Format

- First line will contain the values of the singly linked list, and will terminate with -1.

Constraints

1. 1 <= **N** <= 1000; Here N is the maximum number of nodes of the linked list.

2. 0 <= **V** <= 1000; Here V is the value of each node.

Output Format

- Output the final linked list where there will be no duplicate values.

Sample Input 0

```
1 2 3 4 5 -1
```

Sample Output 0

```
1 2 3 4 5
```

Sample Input 1

```
1 2 4 2 3 5 1 4 5 2 6 1 -1
```

Sample Output 1

```
1 2 4 3 5 6
```

Sample Input 2

```
5 5 1 1 2 4 2 4 1 3 5 0 -1
```

Sample Output 2

```
5 1 2 4 3 0
```

Sample Input 3

```
10 10 10 20 20 20 10 20 -1
```

Sample Output 3

```
10 20
```

C++20

```cpp
1  #include <bits/stdc++.h>
2  using namespace std;
3
4  class Node{
5      public:
6      int val;
7      Node* next;
8      Node(int val){
9          this->val = val;
10         this->next = NULL;
11     }
12 };
13
14 void print_linked_list(Node *head){
15     Node* temp = head;
16     while(temp != NULL){
17         cout << temp->val << " ";
18         temp = temp->next;
19     }
20 }
21
22 void insert_tail(Node* &head, Node *&tail, int val){
23     Node *newNode = new Node(val);
24     if(head == NULL){
25         head = newNode;
26         tail = newNode;
27         return;
28     }
29     tail->next = newNode;
30     tail = newNode;
31 }
32
33 void find_func(Node *head, int val){
34     Node* temp2 = head;
35
36     while(temp2->next != NULL){
37         if(val == temp2->next->val){
38             Node* delete_data = temp2->next;
39             temp2->next = delete_data->next;
40             delete delete_data;
41         }else{
42             temp2 = temp2->next;
43         }
44
45     }
46
47 }
48
49 int main(){
50
```

```cpp
        Node* head = NULL;
        Node* tail = NULL;

        int val;
        while (true)
        {
            cin >> val;
            if(val == -1){
                break;
            }
            insert_tail(head, tail, val);
        }

        Node *temp = head;
        while(temp->next != NULL){
            find_func(temp,temp->val);
            temp = temp->next;
        }

        print_linked_list(head);

        return 0;
    }
```

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