Delete Nodes Greater Than X

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Points: 50 16 test cases (0 samples)

Coding EASY Linked Lists Data Structures Algorithms Core Skills Problem Solving

In this challenge, you will be given a singly-linked list of integers and a single integer to compare to. You must remove any values greater than that single integer value, maintaining the integrity and order of the list. You will return a pointer to the head of new list which will be printed by the code that is supplied.

For example, if you are given the list of integers [100, 105, 50] and a maximum value of 100, you would only insert 100 and 50 into your list, with 100 as the list head.

Function Description

Complete the function *removeNodes* in the editor below. The function must return a reference to the root node of your list.

removeNodes has the following parameter(s):

listHead: a reference to the root node of the singly-linked list

x: integer, the maximum value to be included in new list

Constraints

- $1 \leq n, x \leq 10^5$
- $1 \leq$ *Linked list node values* $\leq 10^5$

▼ Input Format for Custom Testing

Input from stdin will be processed as follows and passed to the function.

The first line contains an integer *n*, the number of nodes in the linked list.
The next *n* lines each contain an element to insert into your linked list.
The last line contains *x*, the maximum value allowable in your linked list.

▼ Sample Case 0

Sample Input 0

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

Sample Output 0

```
1
2
3
```

Explanation 0

$n = 5, x = 3$

$list = 1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5$

After removing the nodes having $value > 3$, $list = 1 \rightarrow 2 \rightarrow 3$.

▼ Sample Case 1

Sample Input 1

```
5
5
2
1
6
7
5
```

Sample Output 1

```
5
2
1
```

Explanation 1

$n = 5, x = 5$

$list = 5 \rightarrow 2 \rightarrow 1 \rightarrow 6 \rightarrow 7.$

After removing the nodes having $value > 5$, $list = 5 \rightarrow 2 \rightarrow 1.$