

Insert a node at a specific position in a linked list

This challenge is part of a tutorial track by [MyCodeSchool](#) and is accompanied by a video lesson.

Given the pointer to the head node of a linked list and an integer to insert at a certain position, create a new node with the given integer as its *data* attribute, insert this node at the desired position and return the head node.

A position of 0 indicates head, a position of 1 indicates one node away from the head and so on. The head pointer given may be null meaning that the initial list is empty.

Example

head refers to the first node in the list $1 \rightarrow 2 \rightarrow 3$

data = 4

position = 2

Insert a node at position 2 with *data* = 4. The new list is $1 \rightarrow 2 \rightarrow 4 \rightarrow 3$

Function Description Complete the function *insertNodeAtPosition* in the editor below. It must return a reference to the head node of your finished list.

insertNodeAtPosition has the following parameters:

- *head*: a *SinglyLinkedListNode* pointer to the head of the list
- *data*: an integer value to insert as data in your new node
- *position*: an integer position to insert the new node, zero based indexing

Returns

- *SinglyLinkedListNode pointer*: a reference to the head of the revised list

Input Format

The first line contains an integer *n*, the number of elements in the linked list.

Each of the next *n* lines contains an integer *SinglyLinkedListNode[i].data*.

The next line contains an integer *data*, the data of the node that is to be inserted.

The last line contains an integer *position*.

Constraints

- $1 \leq n \leq 1000$
- $1 \leq \text{SinglyLinkedListNode}[i].\text{data} \leq 1000$, where *SinglyLinkedListNode[i]* is the *ith* element of the linked list.
- $0 \leq \text{position} \leq n$.

Sample Input

```
3
16
13
7
1
2
```

Sample Output

```
16 13 1 7
```

Explanation

The initial linked list is **16** → **13** → **7**. Insert **1** at the position **2** which currently has **7** in it. The updated linked list is **16** → **13** → **1** → **7**.