DSA Lab 4 Set 1 | LinkedList

Create a linked list to store String values (of single word). The linked list supports the following operations:

- Inserting a node at a position
- Deleting a node at a position
- Display the linked list
- Compare a linked list with another list. Two lists are equal only if they have the same number of nodes and corresponding nodes contain the same data.

Input

First line contains two integers M and Q, separated by space. M indicates number of nodes in initial linked list and Q indicates the number of queries. Second line contains M space-separated strings, representing values in the initial linked list. Next Q lines contain a query in each line. The query may be one of the following:

- `1 v p` : inserts string v in the linked list at position p. ($1 \leq p \leq C+1$) where C is the current size of the list.
- `2 p` : removes node in the linked list at position p. ($1 \leq p \leq C$) where C is the current size of the list.
- `3` : displays values in the linked list, space separated.
- `4 k` a_1 a_2 a_3 ... a_k : Compares current list with another linked list of size k. This query is followed by k space separated strings in the same line to indicate the values in another list that would be compared with current list. Refer to sample for clarity.

Constraints:

Basic Case:

- $1 \leq M \leq 10$
- $1 \leq Q \leq 50$
- $1 \leq$ string-length ≤ 10
- $1 \leq k \leq 10$

Advanced Case:

- $1 \leq M \leq 500$
- $1 \leq Q \leq 500$
- $1 \leq$ string-length ≤ 10
- $1 \leq k \leq 100$

Output

For every display(3) query output space separated values in the list. For every compare(4) query output 1 if lists are equal, 0 otherwise. The answer for each query must be printed on a separate line.

Sample Case

Input:

```
4 6

abc mno gqr lmn
```

```
1 jio 2

3

2 3

3

4 4 abc jio gqr lmn

4 4 abc jio june lmn
```

Output:

```
abc jio mno gqr lmn

abc jio gqr lmn

1

0
```