Problem 1

Problem Statement:

Given the pointer to the head of the Linked list answer the following queries

Query 1: k, v Insert a new node at kth position from the beginning with the data in the node being v.

Query 2: k Delete the kth node from the beginning in the linked list.

Query 3: k, v Update the data in the kth node from the beginning to the value v.

Query 4: Find the maximum of all the node values in the linked list.

Input:

The first line of input contains an integer q, denoting the number of queries, then q lines follow. The ith line has three space separated integers *t, k, v,* where t denotes the type of the query, 0<=*k*<=*List.Length* denotes the position in the query and *–10^9 <= v <= 10^9* denotes the value in the query. It is guaranteed that the queries will be valid i.e. For each operation it is guaranteed there are sufficient number of nodes in the linked list before that operation.

Output:

For each query of type 4, print a single integer on a new line denoting the maximum of all the elements currently in the linked list.

Sample Testcase1:

Input	Output
6 1 0 10 1 1 9 1 1 8 2 2 3 0 2 4	8