**Browser**

You have been tasked with designing a browser! You are focusing on the URL history and must design it based on the following rules and actions:

* “visit [string]”: you go to this current URL, it will also clear up all the forward history.
* “back [integer]”: You will go “back” a given number of websites to a previous website you were on. If you can’t go back those given number of steps, you will instead go back as many steps as you can before you reach the beginning.
* “forward [integer]”: You will go “forward” a given number of websites. If you can’t go forward those number of websites, you will go forward as many steps as possible.

**Input:** The first line of input contains **Q**, the number of queries that will follow. The next **Q** lines will first contain either “visit”, “back”, or “forward”. “visit” will have a string that follows it and “back” and “forward” will both have an integer following it which represents how many website you will go back or forward to.

**Output:** For each “back” and “forward”, you will output the website name that you stop on each time.

**Example Input:**

11

visit netflix.com

visit google.com

visit facebook.com

visit youtube.com

back 1

back 1

forward 1

visit linkedin.com

forward 2

back 2

back 7

**Example Output:**

facebook.com

google.com

facebook.com

linkedin.com

google.com

netflix.com