Too Clever by Half

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	1024 megabytes

Prof. Chen has developed a new type of robot named: **S**peedy **U**niversal **G**uided **A**ssistance **R**obot. To test whether this new robot can provide stable services to the residents of Pigeland, Prof. Chen has prepared a test.

The test site consists of a horizontal runway extending from left to right, with $n+1$ locations labeled $0, 1, 2, \ldots, n$. Prof. Chen can issue the following commands to the robot:

- Move Left: Suppose the robot is currently at location x ($x > 0$). After executing this command, the robot will move to $x - 1$. The robot can not execute this command at location 0.
- Move Right: Suppose the robot is currently at location x ($x < n$). After executing this command, the robot will move to $x + 1$. The robot can not execute this command at location n.

At the beginning of the test, the robot is at location 0, and at the end of the test, the robot must also return to location 0. Prof. Chen requires that the robot must arrive at location i exactly c_i times after performing a move (excluding the initial position). Now, Prof. Chen asks you to design an operation sequence of length $\sum_{i=0}^{n} c_i$, consisting of characters L and R, where L represents Move Left and R represents Move Right, such that the robot sequentially executing the operations in this test sequence can meet the requirements. If there are multiple valid sequences, Prof. Chen wants you to find the *lexicographically smallest*† one. If no such sequence exists, you should report that.

†: A string s of length m is said to be *lexicographically smaller* than string t of length m if and only if there exists $1 \le i \le m$ that $s_j = t_j$ for $j < i$, and $s_i < t_i$. In lexicographical comparisons, we define "L" to be lexicographically smaller than "R".

Input

The input contains multiple test cases. The first line contains an integer T ($1 \le T \le 10^5$), denoting the number of test cases.

For each test case, the first line contains an integer n ($1 \le n \le 5 \cdot 10^5$).

The second line contains $n+1$ integers, the i-th integer is c_{i-1} ($1 \le c_{i-1} \le 10^6$).

It is guaranteed that the sum of n does not exceed $5 \cdot 10^5$, and the sum of $\sum_{i=0}^{n} c_i$ does not exceed $2 \cdot 10^6$.

Output

For each test case, if there exists a test sequence, output a single string consisting of $\sum_{i=0}^{n} c_i$ characters in a single line, and the string should only contain characters `L` and `R`. Otherwise, output "`Impossible`" in a single line, denoting that there is no such sequence.

Example

standard input	standard output
3 2 2 3 1 5 1 2 2 2 2 1 4 1 1 1 1 1	RLRRLL RRRRRLLLLL Impossible