**Smallest Binary Substring**

You are given a binary string **S**. We define **M** to be the smallest integer such that the binary representation (with no leading ‘0’-s) is not a subsequence of **S**. Do you think you can write me a program to find **M**?

**Input:** The first line of input contains **N**, the number of test cases. Each test case consists of one line that contains a binary string.

**Output:** The binary representation of **M**.

**Example Input:**

2

1001011

1111

**Example Output:**

1100

0

**Explanation:** In the first test, the integers 0 through 11 appear in binary representation, yet 12 (which is 1100) does not appear. In the second case, 0 doesn’t appear, so 0 is the smallest integer that doesn’t appear.