Given two binary strings a and b, return *their sum as a binary string*.

Example 1:

Input: a = "11", b = "1"
Output: "100"

Example 2:

Input: a = "1010", b = "1011"
Output: "10101"

Constraints:

- **1 <= a.length, b.length <= 10^4**
- **a and b consist only of '0' or '1' characters.**
- **Each string does not contain leading zeros except for the zero itself.**

Solution:

```
class Solution {
    public String addBinary(String a, String b) {
        StringBuilder str = new StringBuilder();
        int carry=0,i=a.length()-1,j=b.length()-1;
        while(i>=0||j>=0||carry==1){
            if (i >= 0) {
                carry += a.charAt(i--) - '0';
            }
            if (j >= 0) {
                carry += b.charAt(j--) - '0';
             }
            str.append(carry % 2);
            carry /= 2;
        }
        return str.reverse().toString();
    }
}
```