Leetcode Problem 1. (Easy)

Add Binary

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 <= 104
* a and b consist only of '0' or '1' characters.
* Each string does not contain leading zeros except for the zero itself.

Link: <https://leetcode.com/problems/add-binary/>

class Solution {

public String addBinary(String a, String b) {

StringBuilder sb = new StringBuilder();

int i = a.length() - 1;

int j = b.length() - 1;

int carry = 0;

while (i >= 0 || j >= 0) {

int sum = carry;

if (i >= 0) {

sum += a.charAt(i--) - '0';

}

if (j >= 0) {

sum += b.charAt(j--) - '0';

}

sb.append(sum % 2);

carry = sum / 2;

}

if (carry != 0) {

sb.append(carry);

}

return sb.reverse().toString();

}

}

