*Add Binary*

class Solution {

public String addBinary(String a, String b) {

// Resultant String

StringBuilder result = new StringBuilder();

// Indices for a and b

int i = a.length() - 1;

int j = b.length() - 1;

// Carry

int carry = 0;

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

// Sum of two bits

int sum = carry;

if (i >= 0) {

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

}

if (j >= 0) {

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

}

// Add the bit to the result

result.insert(0, sum % 2);

// Modify carry

carry = sum / 2;

}

// Final check if carry lexists

if (carry > 0) {

result.insert(0, 1);

}

return result.toString();

}

}