**[Add Binary](https://leetcode.com/problems/add-binary/)**

**public** **class** AddBinary {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

System.***out***.println(*addBinary*("11","1"));

}

**public** **static** String addBinary(String a, String b) {

**int** length1 = a.length() - 1;

**int** length2 = b.length() - 1;

**int** carry = 0;

String result = "";

**while**(length1 >= 0 || length2 >= 0 || carry != 0) {

**int** chara = (length1 < 0) ? 0 : Character.*getNumericValue*(a.charAt(length1));

**int** charb = (length2 < 0) ? 0 : Character.*getNumericValue*(b.charAt(length2));

result = (chara ^ charb ^ carry) + result;

carry = (chara + charb + carry) >= 2 ? 1 : 0;

length1--;

length2--;

}

**return** result;

}

}

Time complexity : O(n). Number of Max of length of a or b.

Space Complexity : O(1)