

In the attached Gold project you will find a coder that reads strings of **a**, **b**, **c** and writes strings of  $(0..7)$  where the number that is written represents the number of a's, b's and c's modulo 2 that have been read at that point. The following table shows what is written in each case:

a's mod 2	b's mod 2	c's mod 2	writes
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	0	0	4
1	0	1	5
1	1	0	6
1	1	1	7

We show some examples:

Input	Output
abccab	0467620
aaaa	04040
ababab	0462046
abcabcaabbcaacb	0467310402015102
$\lambda$	0

**Task 1.** Your task is to implement a transducer that decodes strings coded with the previous transducer.