

Write a program to perform the following. The program will take a binary string of length one or more as an input and perform the following.

- (i) Generate the next binary string in the lexicographic order as an output with the same number of ones.

**Sample input: 00000111**

**Sample output: 00001011**

**Sample input: 00001110**

**Sample output 00010011**

- (ii) Generate the next binary string in the lexicographic order as an output with the same length.

**Sample input: 00001001**

**Sample output: 00001010**

**Sample input: 00010011**

**Sample output 00010100**