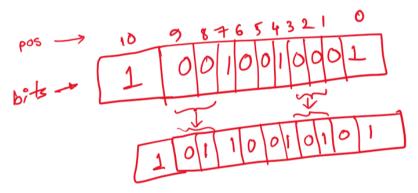Solve the problem below. You have *20 minutes*. After you are done, rename the file containing your source code as your student ID (so, if your student ID is 2005001, the name of your file should be **2005001.c**). Then submit that file to Moodle. Make sure you submit a file containing the source code.

Failure to not follow these instructions will result in penalties.

Problem 1.

1. Write a C program that takes a positive integer as input and replaces all occurrences of **two consecutive 0's**, where the **first 0 is in odd position**, with **01**. Print the bits of the given integer and the integer after replacement.

Input	Output
24 (011000)	11000 11001
4 (0100)	100 101
43 (101011)	101011 101011

N.B.

★ You *must* use *bitwise operators* to solve the problem.

★ You *can* assume that the provided input will *always* be valid.

★ *Build the decimal number for your output first* and then print the bits of the number.