

Code Golf Practice Questions

Computer Science Club at Indiana University

Event date: February 13, 2020

These are practice questions for the upcoming Code Golf competition. The goal is to come up with a solution with the smallest amount of characters in your code. For many popular programming languages, you can find guides online that provide shorthand code for common tasks. Example solutions for these questions will be released on Tuesday, February 11.

Register for the competition here: go.iu.edu/2i1J

1 Back up

Given a string as an input, reverse the string. **Example:** "foo" \rightarrow "oof"

2 Seeing double

Given a string as an input, duplicate every other character in the string, starting with the second character. **Example:** "abcde" \rightarrow "abbcdde"

3 Fibonacci numbers

The Fibonacci sequence is a series of numbers where each number is the sum of the two numbers before it. The first few terms of the sequence are:

1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

Given an integer n , return the n th number of the Fibonacci sequence.

Examples:

- 1 \rightarrow 1

- $2 \rightarrow 1$
- $3 \rightarrow 2$
- $7 \rightarrow 13$

4 Mountain range numbers

A number is a mountain range number if, for each pair of consecutive digits in the number, the inequality of the pairs alternates, creating a “mountain range” pattern: $/\backslash/\backslash$ or $\backslash/\backslash/\backslash$

For example, the number 1324 is a mountain range number:

$$1 < 3$$

$$3 > 2$$

$$2 < 4$$

Given a number, output **Yes** if it is a mountain range number, and **No** otherwise. **Examples:**

- $1324 \rightarrow \text{"Yes"}$
- $9191 \rightarrow \text{"Yes"}$
- $19898 \rightarrow \text{"Yes"}$
- $1212121 \rightarrow \text{"Yes"}$
- $123 \rightarrow \text{"No"}$
- $2232 \rightarrow \text{"No"}$
- $4422 \rightarrow \text{"No"}$