

## Problem I

# Intercepting Information

Spies Breaching Computers (SBC) is a private digital spy agency that is developing a new device for intercepting information using electromagnetic waves, which allows spying even without physical contact with the target.

The device tries to collect information one byte at a time, this is, a sequence of 8 bits where each of them, naturally, can have a value of 0 or 1. In certain situations, due to interference from other devices, the reading cannot be done successfully. In this case, the device returns the value 9 for the corresponding bit, informing that the reading could not be performed.

In order to automate the recognition of the information the device reads, a request was made for a program that, based on the information read by the device, informs whether all bits were read successfully or not. Your task is to write this program.

### Input

The input consists of a single line, containing 8 integers  $N_1, N_2, N_3, N_4, N_5, N_6, N_7$  and  $N_8$ , indicating the values read by the device ( $N_i$  is 0, 1 or 9 for  $1 \leq i \leq 8$ ).

### Output

Print a single line containing the capital letter “S” if all bits are read successfully; otherwise print a single line containing the capital letter “F”, corresponding to a failure.

<b>Input example 1</b> 0 0 1 1 0 1 0 1	<b>Output example 1</b> S
<b>Input example 2</b> 0 0 1 9 0 1 0 1	<b>Output example 2</b> F