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**34th Annual High School Programming Contest**

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##### April 8, 2022

###### Gold Problem #2: Stratego

Background Information: In the classic board game Stratego, you have various pieces, most of which represent soldiers; there are also BOMBs and a FLAG.

Here are the soldiers in rank order from highest to lowest:

MARSHAL

GENERAL

COLONEL

MAJOR

CAPTAIN

LIEUTENANT

SERGEANT

MINER

SCOUT

SPY

In the game, a soldier may attack any other defending piece, resulting in one or both pieces being removed according to the following rules:

* If the FLAG is attacked, it is always removed.
* Any soldier other than a MINER attacking a BOMB is removed. When a MINER attacks a BOMB, the BOMB is removed.
* If a SPY attacks a MARSHAL (but not vice versa), then the MARSHAL is removed.
* If a soldier attacks a soldier of the same rank, both pieces are removed.
* In all other cases, the lower-ranking piece is removed.

Your program will read in two legal Stratego pieces: an attacking piece first and then a defending piece. Your program will then print out which piece(s) are removed, according to the stated rules.

###### Programming Problem:

Input:  An attacking piece string and a defending piece string on separate lines.

Output: The piece that is removed, in the form <NAME> REMOVED (all caps, one space of separation). If both pieces are removed, output BOTH REMOVED.

###### Example 1: Input: SERGEANT

###### CAPTAIN

######  Output:  SERGEANT REMOVED

###### Example 2: Input: SPY

###### MARSHAL

######  Output:  MARSHAL REMOVED

###### Example 3: Input: COLONEL

###### BOMB

######  Output:  COLONEL REMOVED

###### Example 4: Input: MINER

###### BOMB

######  Output:  BOMB REMOVED

###### Example 5: Input: MARSHAL

###### SPY

######  Output:  SPY REMOVED

###### Example 6: Input: GENERAL

###### GENERAL

######  Output:  BOTH REMOVED