SIENAcollege
Computer Science

34th Annual High School Programming Contest

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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