

Rules of the game

“Battle Field” is played on a 7x7 grid, with each team having 21 pieces (including men, bombs and a flag) at their disposal. The cells in the grid are named as shown: top left is A1 and bottom right is G7. The cells D2 and D6 are lakes; you can’t position a piece on these cells any time during the game.

A1	A2					A7
B1						B7
	X				X	
F1						F7
G1	G2					G7

Each piece gets a role and rank during the game. The roles assigned are as follows:

Role	Number of pieces	Rank	Symbol	Specific details
Flag	1	-	F	This is the piece to take. It is not allowed to move the flag.
Bomb	4	-	B	It is not allowed to move a bomb; only the miner takes a bomb, all other pieces will be destroyed.
General	1	1	G	Highest piece in rank; can only be captured by the spy.
Colonel	2	2	C	
Lieutenant	3	3	L	
Miner	4	4	M	The miner is capable of capturing a bomb.
Rider	5	5	R	
Spy	1	6	S	The spy can capture the current highest piece of opponent, but he will be captured by every other piece when attacked.

When the game is started, each team has to produce an output containing a single string reflecting the positioning of their pieces during the start of the game.

For example, if the desired positioning is as follows:

FBBBBRR (C1-C7 / E1-E7)

RRRSMML (B1-B7 / F1-F7)

MCCGLLM (A1-A7 / G1-G7)

Then the required string that the player would output when the game starts would be:

FBBBBRRRRRSMMLMCCGLLM

After producing the output, one of the players gets the word “START” from the judge. That player is assigned the colour red, and he makes the first move for the game. The opponent is assigned blue colour. A move is represented with a 5 character string: The name of the initial place, a minus-sign and the name of the destination (for example A3-B3 or C2-C3). All alphabets will be strictly upper case.

After every move, by either of the players, the judge sends an output to both the players, first containing the move that has been played on one line; followed by the symbols of the **blue and red player respectively** participating in the attack, in case of an attack; Or “* *” otherwise(in case there is no attack), on the next line. E.g., if the blue miner attacks the red rider during any move, or even if a red rider attacks a blue miner, both the players get “M R” as output from the judge, after the move. Both the players are required to update the board status in their codes respectively. In case there’s no attack, both players get a “* *”.

- Players move in turn, red making the first move.
- Red will always be on upper side of the board.
- All pieces of both the teams will remain hidden from their opponents initially. An opponent's piece will only be revealed after an attack is made from either side, involving that piece.
- Pieces are moved one cell at a time, top, bottom, left or right, only to a valid position.
- The lakes (D2 and D6) are forbidden cells.
- No more than one piece may stand on a square.
- A bomb and the flag cannot move from their position.
- A player can attack an opponent’s piece by moving one of its pieces to the position where the opponent’s piece is placed.
- If pieces of equal ranks attack each other, both the pieces are removed from the board.
- The lower-ranking piece loses the attack and will be removed from the game board. If the attacking piece is the winning piece, it will be placed in the cell of the removed piece. If the attacked piece is the winning piece, it will remain in its cell.

- A piece with better rank can capture any piece with lower rank (subject to conditions specified by other rules).
- The spy can capture the current best ranked piece of the opponent. E.g., if the opponent's general has already been captured, the spy can capture the colonel, and so on. Everyone else can capture the spy.
- Any piece that attacks a bomb loses the attack; the only exception is the miner. When a miner attacks a bomb, the bomb loses and the miner takes its place.
- If a player's flag is attacked, he loses the game.
- If a player has no valid moves left, he loses the game.
- In a game where each player has made 100 moves each, the player having less number of captured pieces will be declared the winner. If equal number of pieces are left, game will result in a draw.
- When a player has no available move left, he should give the output as "MERCY".
- All inputs will be from standard input and all outputs will be on standard output.
- A code which performs an invalid move will automatically lose the game.
- The maximum time allotted to each player to make a move is 2 seconds per move, failing which he shall lose the game.