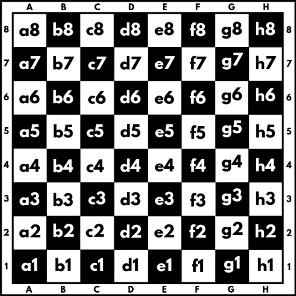
# 02. Pawn Wars



A chessboard has 8 rows and 8 columns. Rows, also called ranks, are marked from number 1 to 8, and columns are marked from A to H. We have a total of 64 squares. Each square is represented by a combination of letters and a number (a1, b1, c1, etc.). In this problem colors of the board will be ignored.

We will play the game with two pawns, **white (w)** and **black (b)**, where they can:

* **Only** move **forward** in a **straight** **line**:
  + - White (**w**) moves from the 1st rank to the 8th rank direction.
    - Black (**b**) moves from 8th rank to the 1st rank direction.
* Can move only 1 square at a time.
* Can **capture** another pawn **in** **from of them** **only** **diagonally**:

When a pawn reaches the **last rank** (for the **white one - this is the 8th** rank, and **for the black one - this is the 1st** rank), can be **promoted** to a **queen**.

Two pawns (**w** and **b**) will be placed on two random squares of the bord. The **first** **move is always made by the white pawn** (**w**), then black moves (b), then white (w) again, and so on.

Some rules apply when moving paws:

* If the **two pawns** **interact diagonally**, the player, in turn, **must** **capture** the opponent's pawn. When a pawn **captures another pawn**, the **game is ove**r.
* If no capture is possible, the pawns **keep on moving** until **one** of them **reaches the last rank**.

### Input

* On 8 **lines**, you will receive **each row with its 8 columns, each element separated by a single space:**
  + **Empty** **positions** are marked with **"-"**.
  + **White** pawn is marked with **"w"**
  + **Black** pawn is marked with **"b"**

### Output

Print either one of the following:

* **If a pawn captures the other**, print:
  + "**Game over! {White/Black} win, capture on {square}.**"
* **If a pawn reaches the last rank**, print:
  + "**Game over! {White/Black} pawn is promoted to a queen at {square}.**"

## Constraints

* The input will always be valid.
* The matrix will always be 8x8.
* There will be no case where two pawns are placed on the same square.
* There will be no case where two pawns are placed on the same column.
* There will be no case where black/white will be placed on the last rank.

## Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| - - - - - - b -  - - - - - - - -  - - - - - - - -  - - - - - - - -  - - - - - - - -  - w - - - - - -  - - - - - - - -  - - - - - - - - | Game over! White pawn is promoted to a queen at b8. |  |
| - - - - - - - -  - - - - - - - -  - - - - - - - -  - - - - - - - -  - - - - - - - -  b - - - - - - -  - w - - - - - -  - - - - - - - - | Game over! White win, capture on a3. |  |

matrix **=** []  
board\_size **=** 8  
w\_row, w\_col, b\_row, b\_col **=** 0, 0, 0, 0  
  
**for** row **in** range(board\_size)**:** matrix.**append**(input().**split**())  
  
**if "w" in** matrix[row]**:** w\_row, w\_col **=** row, matrix[row].**index**(**"w"**)  
 **elif "b" in** matrix[row]**:** b\_row, b\_col **=** row, matrix[row].**index**(**"b"**)  
  
**while True:****if** (w\_row **-** 1, w\_col **-** 1) **==** (b\_row, b\_col) **or** (w\_row **-** 1, w\_col **+** 1) **==** (b\_row, b\_col)**:** print(**f"Game over! White win, capture on {**chr(97 **+** b\_col)**}{**abs(b\_row **-** 8)**}."**)  
 **break  
 else:** w\_row **-=** 1  
**if** w\_row **== -**1**:** print(**f"Game over! White pawn is promoted to a queen at {**chr(97**+** w\_col)**}8."**)  
 **break****if** (b\_row **+** 1, b\_col **-** 1) **==** (w\_row, w\_col) **and** (b\_row **-** 1, b\_col **+** 1) **==** (w\_row, w\_col)**:** print(**f"Game over! Black win, capture on {**chr(97 **+** w\_col)**}{**abs(w\_row **-** 8)**}."**)  
 **break  
 else:** b\_row **+=** 1  
  
**if** b\_row **==** 8**:** print(**f"Game over! Black pawn is promoted to a queen at {**chr(97 **+** b\_col)**}1."**)  
 **break**