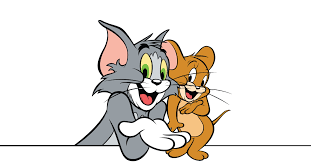
# 2. Exit Founder



*Tom and Jerry decided to play a game together. The game is a maze of which they need to find a way out. Monitor their moves closely and find out who the winner will be!*

First, you will be given the names **"Tom"** and **"Jerry"**, separated by a comma and a space **", "**. The order in which they are received determines the order in which they will take turns. The **first player starts first**.

Next, you will be given a matrix with **6 rows and 6 columns** representing the **maze board**. It consists of:

* **Only one Exit** - marked with the **"E"** letter
* **Trap** (one, many, or none) - marked with the **"T"** letter
* **Wall** (one, many, or none) - marked with the **"W"** letter
* **Empty positions** will be marked with **"."**

In the beginning, Tom and Jerry are **outside the board**. On **each line**, after the matrix is given, you will be receiving **coordinates** for **each of the players**. They will be **taking turns and stepping on different positions on the board** until **one of them** **find the Exit** or **falls into a Trap**. Here are the rules:

* If a player hits the letter **"E"**, he escapes the maze and **wins the game**.
  + Print **"{player} found the Exit and wins the game!"** and end the program.
* If the letter **"T"** is hit, the player falls into a Trap, **the game ends**, and **his** **opponent** **wins** automatically.
  + Print **"{player} is out of the game! The winner is {winner}."** and end the program.
* If the letter **"W"** is hit, the player hits a wall, and he needs to rest. The **player's next move is ignored**.
  + Print **"{player} hits a wall and needs to rest."**
* If a player steps on an **empty position** **"."**, nothing happens.
* Both players **can** step in the **same position** at the **same time**.

### Input

* On the first line, you will receive "**Tom"** and "**Jerry"** separated by **", "**. **The first player starts first.**
* **On the following 6 lines,** you will receive the **maze** **board** (**elements** will be **separated by a space**)
* On the following lines, you will be receiving **coordinates** in the format: **"({row}, {column})"**

### Output

* You should print the output as described above.
* The input coordinates will always be valid.

### Еxamples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| Tom, Jerry  . . T . . .  . . . . . .  . . W . . .  . . W . . E  . . . . . .  . T . W . .  (3, 2)  (1, 3)  (5, 1)  (5, 1) | Tom hits a wall and needs to rest.  Jerry is out of the game! The winner is Tom. | First is Tom. He moves to position (3, 2). He hits a wall and needs to rest.  Next is Jerry. He moves to position (1, 3). It is an empty position.  Tom's next move (5, 1) is ignored because he is resting.  Jerry moves to (5, 1). There is a trap, so he is out of the game. The program ends. |
| Jerry, Tom  . T . . . W  . . . . T .  . W . . . T  . T . E . .  . . . . . T  . . T . . .  (1, 1)  (3, 0)  (3, 3) | Jerry found the Exit and wins the game! |  |
| Jerry, Tom  . . . W . .  . . T T . .  . . . . . .  . T . W . .  W . . . E .  . . . W . .  (0, 3)  (3, 3)  (1, 3)  (2, 2)  (3, 5)  (4, 0)  (5, 3)  (3, 1)  (4, 4)  (4, 4) | Jerry hits a wall and needs to rest.  Tom hits a wall and needs to rest.  Tom hits a wall and needs to rest.  Jerry hits a wall and needs to rest.  Tom found the Exit and wins the game! |  |