# 02. The Gambler



You will be given an integer **n** for the size of the **game board** (square shape). On the next **n** lines, you will receive the rows of the **board**. The gambler will start at a **random** position, marked with the letter '**G**' and have an **initial** **'entering the game'** amount of **100$**.

On each turn, **until command 'end'** is received, you will receive commands for the **direction**, in which the gambler should move. The commands will be "**up**", "**down**", "**left**" and "**right**".

* If a position with **'-' (dash)** is reached, it means that the field is empty and the gambler awaits its next direction.
* If the **position marked** with the letter **'W'** is reached the gambler takes it and adds **100$** to his amount
* If the **position marked** with the letter **'P'** (penalty) is reached **decrease** the gambler's total amount by **200$**
* If the **position marked** with the letter **'J'** is reached the gambler **wins** the jackpot and adds **100000$** to his amount and the game ends.
* If **the gambler leaves** the **boundaries of the board or** his **total amount** becomes **equal to or drops** below **0** (zero)**, he loses everything** and you should stop the program.

The current gambler position should be marked with **'G'**

When the gambler leaves a position marked with a letter it should be replaced by **'-' (dash)**

The program **ends** when one of **these four events** occurs:

* the gambler **leaves** the board boundaries
* command **'end'** is received
* the gambler's total winning amount is **equal to or drops below 0(zero)**
* the position **marked** with **'J'** is reached

### Input

* On the first line, you are given the integer **n** – the size of the matrix (board).
* The **next n lines** hold the values for every **row**.
* On each of the next lines, you will get a direction command.

### Output

* If you win the jackpot on the first and second lines print:
* **"You win the Jackpot!**

**End of the game. Total amount: {amount}$"**

* If you do not win the jackpot print:
* **"End of the game. Total amount: {amount}$"**
* If you leave the boundaries of the matrix or the gambler's amount becomes 0(zero) or below print:
* **"Game over! You lost everything!"**

### Constraints

* The **square matrix** (board) size will be between **[4…10].**
* Gambler's starting position will always be marked with '**G**'.
* There will always be a field marked with **'W'** and it may appear more than once.
* There will be always one field marked with '**J**'.
* There will always be one or two fields marked with **'P'**.
* You will always receive enough commands to end the game.
* Finally if **you** **have any amount print** the **matrix.**

### Examples

|  |  |  |
| --- | --- | --- |
| ****Input**** | ****Output**** | ****Comment**** |
| 4  W-GW  W--W  --P-  ----  down  down  end | **Game over! You lost everything!** | The movement starts from position **[0,2]** after receiving the command "**down**" the gambler moves to position **[1,2]** where there is a **'-'** (dash) field - nothing is happening. The next command is "**down**" again, the gambler lands on a **'P'** (penalty) field and since he has to pay **200$** his sum becomes negative (100 – 200 = -100) and therefore loses it. The game ends. |
| 4  G---  WWWW  P---  PJ--  right  right  right  down  left  left  end | **End of the game. Total amount: 400$**  **----**  **WG--**  **P---**  **PJ--** |  |
| 4  ---G  W-W-  ---P  --JW  left  down  down  down  right  end | **You win the Jackpot!**  **End of the game. Total amount: 100200$**  **----**  **W---**  **---P**  **--GW** |  |