

Programming Exam 5

Date/Time: 2024/4/30 08:10-09:00

(程式檔命名學號_quiz5.py，上傳至 Moodle PE5 上傳區)

Problem: Grid Editor

Create a Python program that allows the user to edit a 2D grid of values. The program should prompt the user for the size of the grid, and then create the grid with the given dimensions, initializing each cell to "_". The program then prints the initial state of the grid, with each row of the grid on a separate line and each cell separated by a space. Your program needs to allow the user to edit individual cells of the grid by prompting the user to enter the coordinates of the cell they want to edit, as well as the new value they want to set in that cell. The user should enter the coordinates as two comma-separated integers in format "row,col", with no spaces. The program should then update the corresponding cell in the grid with the user's new value. After updating the cell, the program will print the updated state of the grid. The loop should continue until the user enters "done" as the input for the cell coordinates.

Sample Input/Output

(以下是你程式執行後須印出的結果)

```
c:\workspace>python pe5_extra.py
Enter the size of the grid: 3
_ _ _
_ _ _
_ _ _
Enter the cell coordinates to edit: 0,0
Enter the new value for the cell: X
X _ _
_ _ _
_ _ _
Enter the cell coordinates to edit: 1,2
Enter the new value for the cell: O
X _ O
_ _ _
_ _ _
Enter the cell coordinates to edit: 2,2
Enter the new value for the cell: K
X _ O
_ _ K
_ _ _
Enter the cell coordinates to edit: done
c:\workspace>
```

```
c:\workspace>python pe5_extra.py
Enter the size of the grid: 5
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
Enter the cell coordinates to edit: 3,3
Enter the new value for the cell: H
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ H _
_ _ _ _ _
Enter the cell coordinates to edit: 4,0
Enter the new value for the cell: G
_ _ _ _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ H _
G _ _ _ _
Enter the cell coordinates to edit: 0,2
Enter the new value for the cell: X
_ _ X _ _
_ _ _ _ _
_ _ _ _ _
_ _ _ H _
G _ _ _ _
Enter the cell coordinates to edit: done
c:\workspace>
```

(繳交是交 pe5.py 檔，不是交截圖)

Note: You need to write comments (註解) for each part in your code.