

YISHUN INNOVA JUNIOR COLLEGE

2020 JC 2 Mid-Year Exam, Question 4

In a computer game, a player ("O") moves around a 10 meters by 11 meters grid to collect a prize ("P"). The hidden prize is placed at a random position within the grid.

Starting from the center of a grid, the player moves left, right, up or down according to a direction entered by the user. The game is turn-based; a user enters the direction, their player move one position in that direction. If the direction entered is invalid, then the player does not move. The grid is displayed after each move. When the player reaches the position of the prize, the message "You got the Prize in n steps!", where n is the value from the counter.

The program code of the game is provided in `maze.py`, run it and examine how the code execute the game. Do not amend the program code provided.

Using the template provided, **write the server and client program codes** for this turn-based game.

The following is sample output at the client side:

```
.....  
.....  
.....  
.....  
.....  
...O....  
.....  
.....  
.....  
.....  
.....
```

Enter U(p), D(own), L(eft), R(ight) or Q(uit) :

Save your code as `TASK4_Client_<your name>.py` and `TASK4_Server_<your name>.py`. [20]