WUMPUS WORLD PROGRAM

https://colab.research.google.com/drive/1-OLtOzgzuVc8c_Yqd7lCPJkAsgwSt9h-?usp=sharing

CODE

main.py Share Run

```python
import random

class WumpusWorld:
    def __init__(self, size=4):
        self.size = size
        self.grid = [[' ' for _ in range(size)] for _ in range(size
            )]
        self.player_pos = [0, 0]
        self.wumpus_pos = self.random_empty_cell()
        self.pit_pos = self.random_empty_cell()
        self.gold_pos = self.random_empty_cell()
        self.update_grid()

    def random_empty_cell(self):
        while True:
            cell = [random.randint(0, self.size-1), random.randint(0
                , self.size-1)]
            if cell != self.player_pos and self
                .grid[cell[0]][cell[1]] == ' ':
                return cell

    def update_grid(self):
        self.grid = [[' ' for _ in range(self.size)] for _ in range
            (self.size)]
        self.grid[self.player_pos[0]][self.player_pos[1]] = 'P'
        self.grid[self.wumpus_pos[0]][self.wumpus_pos[1]] = 'W'
        self.grid[self.pit_pos[0]][self.pit_pos[1]] = 'O'
        self.grid[self.gold_pos[0]][self.gold_pos[1]] = 'G'

    def display_grid(self):
        for row in self.grid:
            print(' '.join(row))
        print()

    def move_player(self, direction):
        x, y = self.player_pos
        if direction == 'up' and x > 0:
            x -= 1
        elif direction == 'down' and x < self.size - 1:
            x += 1
        elif direction == 'left' and y > 0:
            y -= 1
        elif direction == 'right' and y < self.size - 1:
            y += 1
```

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        else:
            print("Invalid move. Try again.")
            return False

        self.player_pos = [x, y]
        self.update_grid()
        return True

    def check_status(self):
        x, y = self.player_pos
        if [x, y] == self.wumpus_pos:
            print("You encountered the Wumpus! Game over.")
            return False
        elif [x, y] == self.pit_pos:
            print("You fell into a pit! Game over.")
            return False
        elif [x, y] == self.gold_pos:
            print("You found the gold! You win!")
            return False
        else:
            print("You're safe... for now.")
            return True

    def play(self):
        print("Welcome to the Wumpus World!")
        while True:
            self.display_grid()
```

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            if self.move_player(move):
                if not self.check_status():
                    break
        print("Game over.")

if __name__ == "__main__":
    game = WumpusWorld()
    game.play()
```
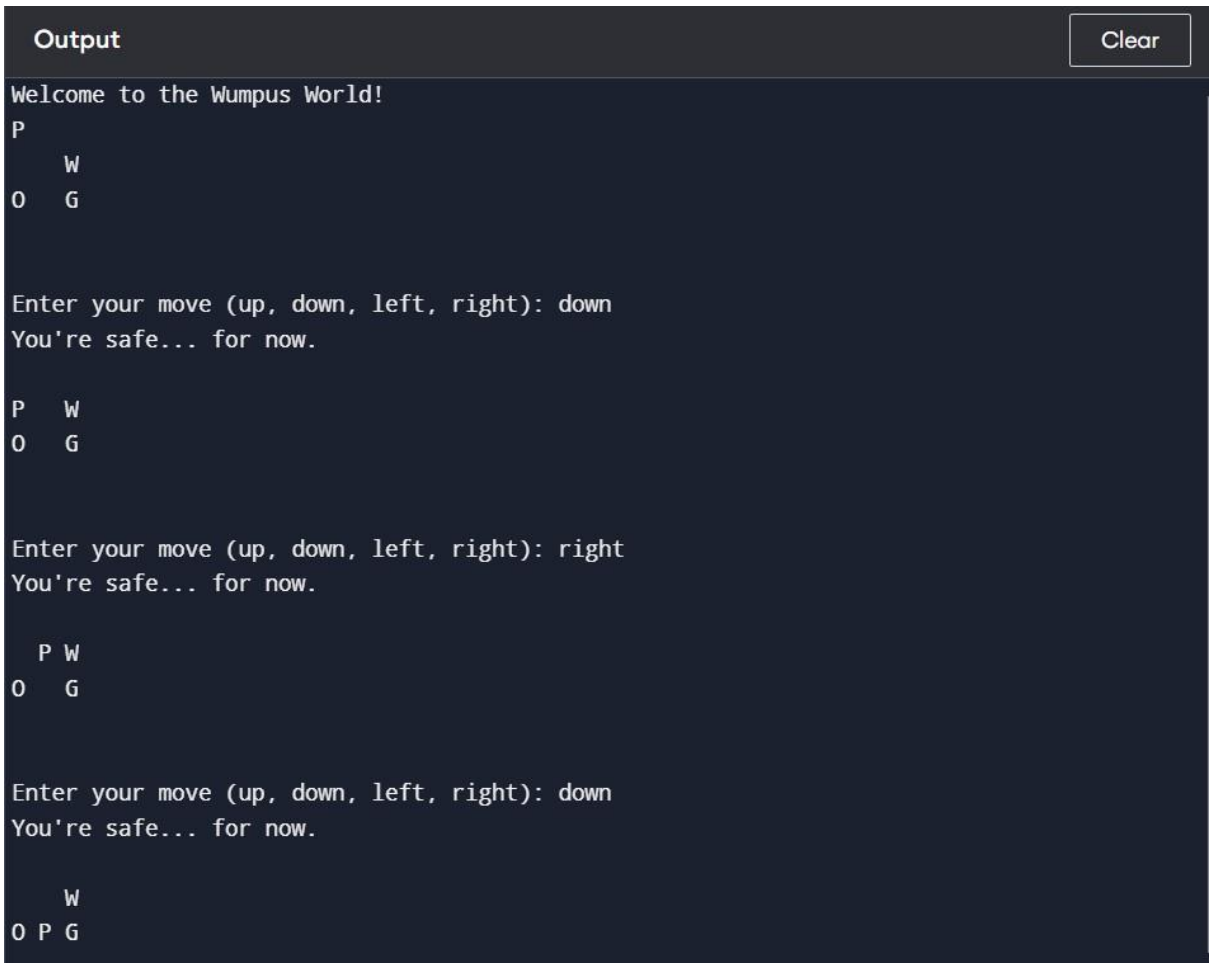
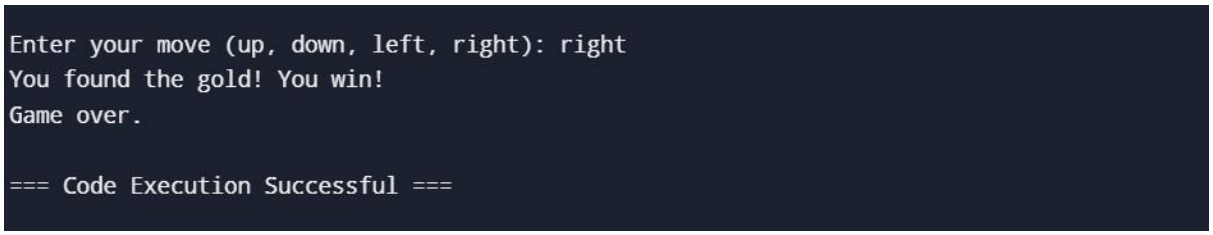
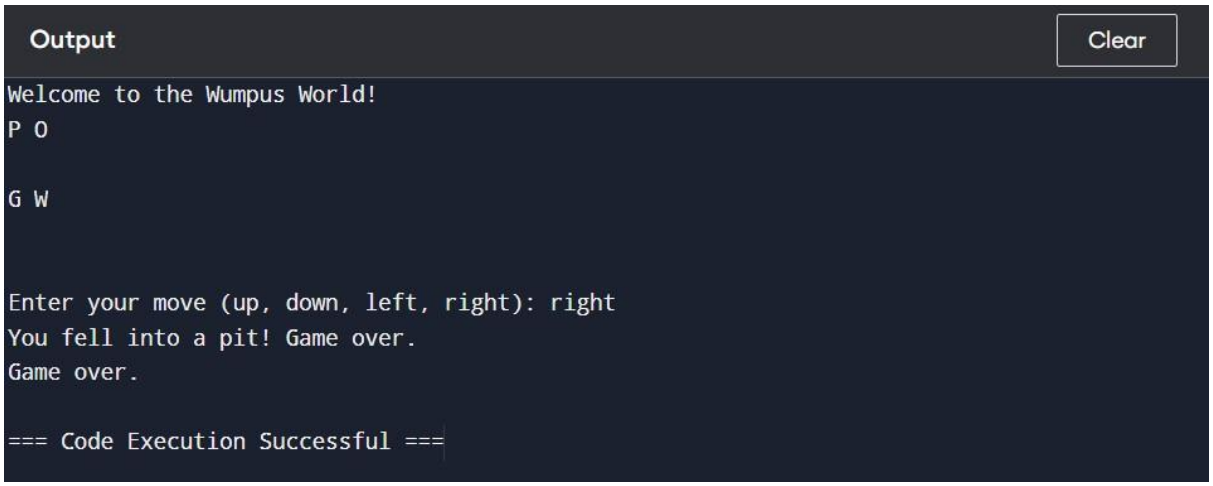

OUTPUT 1A


Output
Clear
Welcome to the Wumpus World!
P
W
O G
Enter your move (up, down, left, right): down
You're safe... for now.
P W
O G
Enter your move (up, down, left, right): right
You're safe... for now.
P W
O G
Enter your move (up, down, left, right): down
You're safe... for now.
W
O P G


Enter your move (up, down, left, right): right
You found the gold! You win!
Game over.
=== Code Execution Successful ===

OUTPUT 1B



OUTPUT 1C