Projet mastermind python

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```python
import random
import os #permet d'utiliser les fonctions du systeme

def clear():#creation d'une fonction qui efface le terminal de python
    os.system("clear")

# Fonction pour afficher le mastermind
def print_mastermind_board(passcode, guess_codes, guess_flags):


    print("----------------------------------------")
    print("\t        MASTERMIND")
    print("----------------------------------------")

    print("    |", end="")
    for x in passcode:
        print("\t" + x[:3], end="")

    for i in reversed(range(len(guess_codes))):
        print("\n----------------------------------------")
        print(guess_flags[i][0], guess_flags[i][1], "|")


        print(guess_flags[i][2], guess_flags[i][3], end=" |")
        for x in guess_codes[i]:
            print("\t" + x[:3], end="")
    print("\n----------------------------------------")

# The Main function
if __name__ == '__main__':
    colors = ["ROUGE", "VERT", "JAUNE", "BLEU", "NOIR", "ORANGE","BLANC" ,"VIOLET" ,"FUCHSIA"]
    colors_map = {1:"ROUGE", 2:"VERT", 3:"JAUNE", 4:"BLEU", 5:"NOIR", 6:"ORANGE", 7:"BLANC" , 8:"VIOLET" , 9:"FUCHSIA"}
    random.shuffle(colors)
    passcode = colors[:4]
    chances = 8
    show_passcode = ['UNK', 'UNK', 'UNK', 'UNK']
    guess_codes = [['-', '-', '-', '-'] for x in range(chances)]
    guess_flags = [['-', '-', '-', '-'] for x in range(chances)]
    clear()
    turn = 0
    while turn < chances:

        print("----------------------------------------")
        print("\t\tMenu")
        print("----------------------------------------")
        print("Enter code using numbers.")
        print("1 - ROUGE, 2 - VERT, 3 - JAUNE, 4 - BLEU, 5 - NOIR, 6 - ORANGE, 7 - BLANC, 8 - VIOLET, 9 - FUCHSIA")
        print("Exemple: ROUGE JAUNE ORANGE NOIR ---> 1 3 6 5")
        print("----------------------------------------")
        print_mastermind_board(show_passcode, guess_codes, guess_flags)

        # Accepter l'entree du joueur
        try:
            code = list(map(int, input("Entrer votre choix = ").split()))
        except ValueError:
            clear()
            print("\tMauvais choix!! Essayez encore!!")
            continue

        # Vérifier si il y a 4 nombre
        if len(code) != 4:
            clear()
            print("\tMauvais choix!! Essayez encore!!")
            continue

        # Vérifier si chaque numéro saisi correspond à un numéro
        flag = 0
        for x in code:
            if x > 9 or x < 1:
                flag = 1

        if flag == 1:
            clear()
            print("\tMauvais choix!! Essayez encore!!")
            continue

        # Stockage de l'entrée du joueur
        for i in range(4):
            guess_codes[turn][i] = colors_map[code[i]]

        # Processus pour appliquer des indices en fonction de l'entrée du joueur
        dummy_passcode = [x for x in passcode]

        pos = 0

        # Boucle pour mettre en place des indices pour le mouvement du joueur
        for x in code:
            if colors_map[x] in dummy_passcode:
                if code.index(x) == passcode.index(colors_map[x]):
                    guess_flags[turn][pos] = 'R'
                else:
                    guess_flags[turn][pos] = 'B'
                pos += 1
                dummy_passcode.remove(colors_map[x])

        random.shuffle(guess_flags[turn])


        # Verifier la condition de vicoire
```

```
        if guess_codes[turn] == passcode:
            clear()
            print_mastermind_board(passcode, guess_codes, guess_flags)
            print("Félicitations!! TU AS GAGNE!!")
            break

        # Update turn
        turn += 1
        clear()
# Verifier la condition de défaite
if turn == chances:
    clear()
    print_mastermind_board(passcode, guess_codes, guess_flags)
    print("TU AS PERDU!!")
```

```
----------------------------------------
                Menu
----------------------------------------
Enter code using numbers.
1 - ROUGE, 2 - VERT, 3 - JAUNE, 4 - BLEU, 5 - NOIR, 6 - ORANGE, 7 - BLANC, 8 - VIOLET, 9 - FUCHSIA
Exemple: ROUGE JAUNE ORANGE NOIR ---> 1 3 6 5
----------------------------------------
----------------------------------------
                MASTERMIND
----------------------------------------
    |   UNK     UNK     UNK     UNK
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------

Entrer votre choix =
```

```python
import random
import os #permet d'utiliser les fonctions du systeme

def clear():#creation d'une fonction qui efface le terminal de python
    os.system("clear")

# Fonction pour afficher le mastermind
def print_mastermind_board(passcode, guess_codes, guess_flags):
    print("----------------------------------------")
    print("\t        MASTERMIND")
    print("----------------------------------------")
    print("    |", end="")
    for x in passcode:
        print("\t" + x[:3], end="")
    for i in reversed(range(len(guess_codes))):
        print("\n----------------------------------------")
        print(guess_flags[i][0], guess_flags[i][1], "|")
        print(guess_flags[i][2], guess_flags[i][3], end=" |")
        for x in guess_codes[i]:
            print("\t" + x[:3], end="")
    print("\n----------------------------------------")
```

```
----------------------------------------
                MASTERMIND
----------------------------------------
    |   NOI     BLA     FUC     VER
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
```

```python
# The Main function
if __name__ == '__main__':
    colors = ["ROUGE", "VERT", "JAUNE", "BLEU", "NOIR", "ORANGE","BLANC" ,"VIOLET" ,"FUCHSIA"]
    colors_map = {1:"ROUGE", 2:"VERT", 3:"JAUNE", 4:"BLEU", 5:"NOIR", 6:"ORANGE", 7:"BLANC" , 8:"VIOLET" , 9:"FUCHSIA"}
    random.shuffle(colors)
    passcode = colors[:4]
    chances = 8
    show_passcode = ['UNK', 'UNK', 'UNK', 'UNK']
    guess_codes = [['-', '-', '-', '-'] for x in range(chances)]
    guess_flags = [['-', '-', '-', '-'] for x in range(chances)]
    clear()
    turn = 0
    while turn < chances:

        print("----------------------------------------")
        print("\t\tMenu")
        print("----------------------------------------")
        print("Enter code using numbers.")
        print("1 - ROUGE, 2 - VERT, 3 - JAUNE, 4 - BLEU, 5 - NOIR, 6 - ORANGE, 7 - BLANC, 8 - VIOLET, 9 - FUCHSIA")
        print("Exemple: ROUGE JAUNE ORANGE NOIR ---> 1 3 6 5")
        print("----------------------------------------")
        print_mastermind_board(show_passcode, guess_codes, guess_flags)

        # Accepter l'entree du joueur
        try:
            code = list(map(int, input("Entrer votre choix = ").split()))
        except ValueError:
            clear()
            print("\tMauvais choix!! Essayez encore!!")
            continue

        # Vérifier si il y a 4 nombre
        if len(code) != 4:
            clear()
            print("\tMauvais choix!! Essayez encore!!")
            continue

        # Vérifier si chaque numéro saisi correspond à un numéro
        flag = 0
        for x in code:
            if x > 9 or x < 1:
                flag = 1

        if flag == 1:
            clear()
            print("\tMauvais choix!! Essayez encore!!")
            continue
```

```
----------------------------------------
                Menu
----------------------------------------
Enter code using numbers.
1 - ROUGE, 2 - VERT, 3 - JAUNE, 4 - BLEU, 5 - NOIR, 6 - ORANGE, 7 - BLANC, 8 - VIOLET, 9 - FUCHSIA
Exemple: ROUGE JAUNE ORANGE NOIR ---> 1 3 6 5
----------------------------------------
----------------------------------------
                MASTERMIND
----------------------------------------
    |   UNK     UNK     UNK     UNK
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------
- - |
- - |   -       -       -       -
----------------------------------------

Entrer votre choix =
```

```python
# Stockage de l'entrée du joueur #moi
for i in range(4):
    guess_codes[turn][i] = colors_map[code[i]]

# Processus pour appliquer des indices en fonction de l'entrée du j
dummy_passcode = [x for x in passcode]

pos = 0

# Boucle pour mettre en place des indices pour le mouvement du joue
for x in code:
    if colors_map[x] in dummy_passcode:
        if code.index(x) == passcode.index(colors_map[x]):
            guess_flags[turn][pos] = 'R'
        else:
            guess_flags[turn][pos] = 'B'
        pos += 1
        dummy_passcode.remove(colors_map[x])

random.shuffle(guess_flags[turn])


# Verifier la condition de vicoire
if guess_codes[turn] == passcode:
    clear()
    print_mastermind_board(passcode, guess_codes, guess_flags)
    print("Félicitations!! TU AS GAGNE!!")
    break

# Update turn
turn += 1
clear()
er la condition de défaite
```

```python
        clear()
# Verifier la condition de défaite
if turn == chances:
    clear()
    print_mastermind_board(passcode, guess_codes, guess_flags)
    print("TU AS PERDU!!")
```

```
----------------------------------------

R R |
R R |    ROU     JAU     NOI     BLE

----------------------------------------

- R |
R B |    ROU     VER     JAU     BLE

----------------------------------------

Félicitations!! TU AS GAGNE!!
```

```
- - |
- - |    JAU      BLE      BLE      BLE
----------------------------------------
B - |
- B |    BLE      ORA      BLA      NOI
----------------------------------------
- B |
- - |    VER      BLE      NOI      ORA
----------------------------------------
- - |
B - |    VER      JAU      BLE      NOI
----------------------------------------
- - |
B - |    ROU      VER      JAU      BLE
----------------------------------------
- - |
- B |    ROU      VER      JAU      BLE
----------------------------------------
TU AS PERDU!!
```

```
----------------------------------------
Entrer votre choix = +
       Mauvais choix!! Essayez encore!!
----------------------------------------
              Menu
----------------------------------------
Enter code using numbers.
1 - ROUGE, 2 - VERT, 3 - JAUNE, 4 - BLEU, 5 - NOIR, 6 - ORANGE, 7 - BLANC, 8 - VIOLET, 9 - FUCHSIA
Exemple: ROUGE JAUNE ORANGE NOIR ---> 1 3 6 5
----------------------------------------
----------------------------------------
              MASTERMIND
----------------------------------------
   |  UNK    UNK    UNK    UNK
----------------------------------------
- - |
- - |  .     .     .     .
```

Merci pour votre attention