Murder Mystery

Program description

Our Python game, "Murder Mystery," is an interactive murder mystery adventure. Set in a grand mansion, the player/user assumes the role of a detective tasked with solving the murder of the mansion's owner, found poisoned. The game unfolds through a Python program with a Turtle-based frontend, offering a visually engaging experience. Players investigate by interacting with 4 unique suspects - an illegal immigrant French cook, a sketchy servant with a gambling addiction, the extravagant ex-wife, and the indifferent son eyeing his inheritance. The mansion's 6 key rooms, from the kitchen to the library, provide clues and evidence.

Story

1. Setting:

"Another day, another case," you say to yourself as you drive past the mansion's gate with the sun high in the sky. The driveway bows out into a circle along with a swarm of police cars. You exit your car and see the words "Regal Estates" stamped into the driveway. One of the most well-known families for centuries. "Detective sir, the premise has been secured and the suspects are right over here in the courtyard. Only one death; the master of the house. Cause of death: poisoned tea. Here's our file for our questioning, though it's only their background. The mansion is ready for your investigation," says the police officer. After thanking him, you walk towards the courtyard and see the suspects.

-There's the ex-wife, a woman whose spending basically forced the divorce. The file notes that she did not get the divorce alimony. On her face, you can see only a single tear descending.
-A French cook, who is desperately crying over his master's death. He seems to have no papers at all. An illegal immigrant…
-The mansion servant. A mysterious man, but carries himself well. His eyes dart back and forth in thought. Could he be trying to think of who is the culprit?
-Last of all, the son dressed head-to-toe in designer brands. He seems indifferent, but he seems to be the most on edge.

It is up to me to figure out this mystery. Where should I start first?

2. 4 Suspects:
   - Illegal immigrant French **cook** - threatened to deport him for making bad sushi
   - Sketchy **servant** - gambling addict, lots of debt. Stole from mansion, got caught
   - **Ex-wife** divorced her for spending too much money
   - **Son** - wants the inheritance

3. 7 Places:
   - Kitchen
   - Living room
   - Master bedroom

- Recreational room
- Bathroom
- Library
- Outside

4. <u>Mansion Layout:</u>
   - **Floor 1:**
     - bathroom: Unknown white powder in the sink
     - Kitchen: The kettle is still on.
     - Library: A foreign passport without visa. (cook)
   - **Floor 2:**
     - Recreational room: A bunch of fancy shoes boxes (son)
     - Dining room: Family Crest (servant)
     - Master bedroom: A love letter between the cook and the ex-wife. (Ex-wife)
   - **Courtyard:** the place for listening the alibis of suspects

5. <u>Alibis:</u>
   - **Servant**: I was still in the dining room setting the table for lunch. The master does love his afternoon tea however. Maybe check the library yourself to see what you can find, sir.
   - **Cook**: I just finished cooking in the kitchen! There's no way it was me, I had no time to prepare tea on top of lunch for the master!
   - **Ex-Wife**: I've only just arrived to pick up my belongings in the master bedroom. Preposterous claims will do you no good here, detective.
   - **Son**: My new shoes just came in and I was putting them on in the rec room, bro. I wanted to use the bathroom but someone was in there causing a ruckus.

6. <u>Room Description:</u>
   - **Courtyard**: Beyond the gilded gates of the courtyard lies the great mansion of the Regal Estates. Normally bustling with the activities of wealthy socialites, only the blinding lights of siren lights and dark blue of police officers remain. The four suspects stand before you. Who should I talk to now?
   - **Dining Room**: The grand table makes its presence known in this room with its size. From one end to the other, this table is adorned with magnificently aged chairs. However, the table is half set up as if someone was interrupted in the middle of it. In this room, you can see: Family Insignia, Tableware, Windows
     - **Family Insignia**: This insignia belongs to the Master's family. What could it be doing here?
     - **Tableware**: The tableware is well kept and made of silver. Nothing out of the ordinary
     - **Windows**: All the windows are closed but the curtains are drawn back. Doesn't seem like anyone could have entered.

- **Kitchen**: The kitchen is neat and tidy, exactly what one would expect from a high classFrench cook. Looking around, you find: Boiling Kettle, Food pantry, Utensils
    - **Boiling Kettle**: The kettle is still boiling and left on. Someone must have forgotten this or left in a hurry.
    - **Food Pantry**: Fresh produce and grains occupy the pantry. Nothing seems tampered here.
    - **Utensils**: None of these utensils seem to be in disarray. In fact, most of them were in the washing machine that just finished, ready for lunch.
- **Library**: The scene of the crime. The master lies here face down after choking on the poison. Books and maps adorn the shelves and walls. After paying your respects, you find: Bookshelves, Suspicious papers
    - **Bookshelves**: Through many of these books, a common theme seems to be fantasy and romance. The master was quite the avid reader.
    - **Suspicious papers**: These papers were scattered on the table in a corner of the library. Within this stack of papers, you find a foreign passport from the cook. The papers seem to be about the cook's deportation…
- **Master** bedroom: A place of deluxe comfort. The luxurious bed with satin sheets looks undisturbed. Ornate dressers don the perimeter. After pacing around the room, you find: Dresser, Drawer, Wardrobe
    - **Dresser**: Many different types of clothes and accessories. Some drawers contain clothes that belong to a woman.
    - **Drawer**: On top of a drawer is a letter addressed to the ex-wife professing their love. No name on this letter, but there are some water marks on the paper.
    - **Wardrobe**: The master contained a small variety of outfits. Suits and ties are scattered about, with only a few ready to be worn.
- **Recreational** room: A room for fun, and fun it is. It's got a pool table, an air hockey table, a ping pong table, and a table for board games. Though it's for games, there also seems to be a large horde of designer brand shoe boxes here. After collecting yourself, you look in the room to find: Toy corner, Package, Pool Table, TV
    - **Toy Corner**: There are a ton of toys meant for children of different ages. This must be where the children come to play if he has guests over.
    - **Package**: There seems to be a package that has not been open yet. It is addressed to the son.
    - **Pool Table**: The pool table seems to be one of the finest around. It appears that all of the solids are in the pockets.
    - **TV**: The TV shows a basketball game. Maybe I can watch the game later tonight.
- **Bathroom**: A grand bathroom, one only for the finest of masters. Looking around there seems to be some water on the floor by the sink. After perusing this room, you find: Medicine cabinet, Bath, Toilet

- ○ **Medicine Cabinet**: This must be where the poison was obtained. There is a source of white powder along the sink. Whoever did this did it in a rush. Cyanide is our poison.
- ○ **Bath**: No one seems to have used the bath since this morning. Water is mostly dried up along the edges.
- ○ **Toilet**: Nothing seems to be out of the ordinary with this toilet.

7. <u>Answer:</u>
   - **If cook gets chosen**
   "Alright alright, I did it! It was me who killed the master. I just wanted to get my papers and live with my loved one, but the master was about to deport me! He was the one that hired me too! Of course I had to kill him", the cook shouts frantically. The police officers apprehend the criminal and nod to you. "Great work detective, you've solved another case. I can't imagine someone getting the best of you. Head home today, you've done this city a whole lot of good." You walk to your car and get ready for your drive home. You say to yourself, "Another case solved."
   - **If ex-wife or son gets chosen**
   "How can I be the murderer? Did you even do your job right? Listen to me!", they cry. The officers round them up and place them in one of the cruisers. "Listen, I'm no detective and I'm not one to judge, but I don't know about this decision sir. We'll take them in. I just hope you're right." You storm off to your car. Of course you're right, all the evidence leads to them doesn't it? "Another case…", you mutter to yourself.
   - **If servant is chosen**
   "So you figured it out, did you, Mr. Detective? Yes, it was me. I'm actually the brother of the master of the house. However, I was forced into servitude not long after I was born simply because I was the second son. I wanted wealth and fame. But I wanted to right the wrongs that have plagued my past. So I planted the idea that the son would attain the inheritance. Me and the son both informed the ex-wife about a plan to pin it on someone else. Luckily for us, the cook was in love with his ex-wife. I convinced the cook that the ex-wife was looking for a lover and told him that he was the only one that could make her happy by killing the master. His only choice was to poison the master and gain his papers after getting away with it. I made sure the master would not suspect a thing. Take me in, officers. My family's fame will end here." You ascertained the mastermind behind it all. Of course it had to be the servant, the family crest belongs to him. The Son wanted the inheritance to support his spending. The ex-wife wanted the money from the divorce alimony. The cook was in love with the ex-wife and wanted to be with her. All the evidence makes sense. "Sir you've done some outstanding work today," says the officer. "You are a detective with no equal. After we take these criminals in, let us celebrate at the pub again. Drinks on me." You walk off and get into your car. With a smile on your face, you say to yourself, "Another day, another case"

8. Behind the truth:
    The ultimate murderer is the **servant**. The servant is the long lost brother of the owner who was exiled from the family after dishonoring them, and he wants revenge and to claim his family's wealth back. So he told the **son** about the inheritance he will get after the owner dies. The **son** was intrigued by the inheritance and told his mother, the **ex-wife**, about it. The **ex-wife**, whom the owner divorced for her excessive spending habits, wanted her old lifestyle back, so decided to make a deal with the **cook**, an illegal immigrant from France who is in love with the ex-wife. The **cook**, in exchange for marrying her to be the new head of the family, killed the owner with poisoned tea.
    The **cook** is the technically correct murderer and gets you a good ending. The **servant** is the ultimate murderer and gets you the best ending.
    Owner is killed by poisoned tea while reading in the library. All suspects have the ability to make tea. Tea set in the master bedroom. Cook looks suspicious but he says that the owner always makes his own tea.

Program Files

FrontEnd.py - the frontend part of the program
MurderMystery.py - the main driver of the program
Introduction.txt - content for the program: the introduction of story
Mansion.json - content for the program
Suspects.json - content for the program

Program Functions

- Frontend:
    - clean_text(): remove the previous text as the user answer new question
    - prompt_question(title, question): ask the user what to do next
    - print_setting(): print out the setting of this story
    - print_floorplan(): print out the floor plan, using print_rectangle(), print_room(), print_room_text()
    - print_rectangle(name, color, length, width): print out rectangles for floors and stairs
    - print_room(room, direction, length, width, door):print out the room
    - print_room_text(room): print out the name of the room
    - print_conversation(title, content, options): print out everything on Turtle in conversation box
    - draw_evidence(title): draw the suspect's name or evidence's title in floor plan when it is detected
    - initialize(): initialize the frontend

- Backend:
    - createMansion():creates mansion dictionary, which contains all the rooms, objects and dialogue

- printOptions(options): prints all options in a list of options
- chooseOption(options, title, question): choose an option from a list
- decide(mansion, currentRoom): take an action in the current room
- goToRoom(mansion): go to a different room
- deduceMurderer(): make the final choice of suspect
- playGame(): main function to run the whole program