

Murder Mystery

A horrible murder happened last night, and there are already 4 suspects

The officers are trying to keep it confidential, but many people have a lot of doubts:

This is a really nice neighbourhood, I can not believe this happened.

Paula D.Á

Everyone has to keep calm, the police are trying to do the best they can.

Javier P.R

I know the victim, and I won't stop until I find the murderer.

Ana P.B

These are the news that your boss puts on your desk, and he gives you your last opportunity. If you don't solve the case in 10 days until the trial, you are fired.

First things first, you have to interrogate the suspects and visit the crime scene. It won't be easy to solve the case, you will have to overcome some difficult challenges and riddles. But be careful with your actions, as your reputation will also be on the line.

CASE GENERATION

The case will be The Mansion. Also, 2 more cases can be implemented: student apartment and the retirement home, if necessary.

If there is more than one case, one will be picked randomly to be your final case. A description of the events of the murder and a map will be provided:

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*      +       POOL   +
*      +               +           GARDEN
*      ++++++
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(Map of the Mansion)

In each case there is a victim that will always be the same, and a murderer among 4 suspects that will be picked randomly.

PLAY

Keep going room by room until you complete all the games (one per room). You need to have the dices on your side, which will help you observe the clues to uncover the mystery.

Also be careful with your actions because each of them will consume your energy, and spending too many tries at a game will decrease your reputation.

An example of a room:

Choosing between a, b, c or d zone (d is the one which unlocks the game):

If you go to one zone, you observe (throws automatically a dice) and the dice is 1, 2 or 3; you won't know if it's useful or not. So you should keep going to the zones until you observe them carefully.

If you go to one a, b or c, you observe and the dice is 4, 5 or 6; you will know that they are not useful, so it will be absurd to keep going there. So you should keep going to other zones until you observe them carefully.

If you go to d, you observe and the dice is 4, 5 or 6; you will unlock the game.

THE PLAYER

After choosing your name, you will start the case with 100 reputation points and 20 energy per day. Each action will discount one energy point and every 5 tries on each game, you will lose 10 reputation points.

When you enter a room there will be a maximum of 4 accessible objects, and one of them will contain the minigame. You will be able to choose one of them. Then, you will throw your dice and depending on your result you will be able to observe them correctly (you will unlock the game or discard the object) or you will have doubts and need to throw them again.

Your main goal is to solve the case as fast as possible and keep your reputation above 0.

Moreover, after finishing one room, you can write on your detective notes whatever you think it's useful.

THE GAMES

Some of the games will have a random difficult:

- **Decrypt some codes:** Caesar Cipher, morse code, hangman and some passwords that may be required during the game.
- **Sequences** of numbers, sequences of figures.
- **Combinations** to create a given result.
- **Riddles** that will be implemented in some minigames.
- **Random games:** Guessing if the next card is higher or lower

In each room there will be a game to complete, and you will have a number of tries to do it. Winning or losing the game will determine the veracity of the clues you will receive, and you will also be given a code after finishing it to open the next room.

Also, randomly after finishing a room a paper with a clue can appear but you don't know if the information is true or false

THE VICTIM

Madame: Widowed woman in her early sixties, set for life given the fortune that fell on her hands once her husband passed away. Found dead in the pool of her brand-new summer house's backyard, after hosting a housewarming party for her social circle. The autopsy report is yet to be delivered.

Her life was filled with social gatherings, in which she got to make ties with very powerful and diverse characters, which is how she got to know the family she married into. To her last day, she continued enjoying these kinds of parties and events, being a wonderful host and organizer.

However, not everyone was in good graces with her, given how her last celebration became her demise. Her private affairs are not that known, but she was said to enjoy spending her time with her two cats, Diamond and Coco, and going on shopping sprees with her friends. Her only son testified that she wasn't perfect as his mother, but neither was she such a bad person to deserve this.

That one party that came to be the last, that one cocktail that led to tragedy, is what you need to bring light upon.

Are you up to take this case, detective?

SUSPECTS

All the suspects will have some motive to kill the victim, but only one is the murderer. Would you be able to guess it?

Each suspect will have a file with their name, surname, age, relationship with the victim and police record. The weapon can vary among a selection, and one is chosen to be the murder weapon.

Your boss has been kind enough to take some notes for you when he was interrogating the suspects himself, all of which were at the party that night:

COMMISSIONER'S NOTES:
ABOUT THE SUSPECTS:

Bob - Brother in law:

After the sudden death of Madame's deceased husband, (or in order words, after she inherited most of his money and left), he is the only one from his side of the family that has remained in contact. He may be the only one we can actually reach to know how that marriage really went honestly. There's nothing that special about him besides his last name, just a single, middle-upper class guy in his 60s who lives his life flaunting the little fortune he has. His reaction was... I don't know how to feel about it. His eyes seemed to lose some of their brightness, yet he went on answering my questions as if this was another Tuesday.

Veronica - Madame's Best Friend:

Seems to me as another case of "I am your bestie, now pay". She seemed to enjoy the gossip though, I bet you'll be able to get some useful info from her if you play your cards properly. In any case, she is a bit younger compared to Madame and Bob, still in her early 50s, happily married with two adult children, living not that far away from the house the murder happened in. She quitted her job almost 7 years ago, at the time when her husband got promoted to CEO in the firm he works at. She was the one that cried the most when she was told about the victim's passing.

Matthew - Madame's Son:

Telling the truth, that child gives me the creeps at times. It's just, when I talked to him, his mind seemed to doze somewhere else, and his eyes... kinda death if you ask me. I mean, he just turned 20, seems like the Madame and her husband got a surprise later in their lives, don't you think? I don't know about the father, but given that he perished when he was 10, he might not remember that much; but his mother didn't sound like someone specially attached to him. Nevertheless, he came across as a bit of a brat, the stereotypical rich child. But I think there's more to him. In any case, that's just rich people and their business. And to be honest, he looked sad and upset when he was told about what happened, leaving about to turn into a crying mess if I had to take a guess.

Lilian - Madame's housekeeper:

She lives near wherever the Madame is at, having however a room for herself everywhere they go; that sounds exhausting. She seemed to be the closest one to her though, given that she came

along to help with the housewarming party without getting any extra pay. She may know more than she gets credit for, if you know what I mean. Maybe even more than Veronica, who knows? After all, having served her for years must have paid off with lots of rich people's stories to talk about, don't you think? She seemed pretty shocked when we told her the bad news though. But even then, her voice was cold and calm, as she is known to be a very collected person. Guess keeping her composure is a must in her line of work.

THE TRIAL

Once you reach your deadline, which means your time is over, you will need to expose your conclusions to the almighty judge (before the trial you can read your notes for the last time to remember your clues: who is the killer, which is the murder weapon, and the main motive).

Counterpoints may be made by the suspect, so be prepared to prove the truth behind your arguments! Your performance here will affect your result.

CHEATS MODE

You can also enable cheats mode in the games to automatically solve each minigame individually, by writing "MMCM" (Murder Mystery Cheats Mode).

END OF GAME

At the end of the trial, the judge will expose the real truth behind the case for everyone to know. Afterwards, your punctuation will be measured in a scale from 0 to 120 in regards to several key factors:

- Whether or not you got to resolve the case.
- Your level of reputation.
- How much time it took you to go to the trial.
- Your performance on the trial.

Inspector Adams

ORGANIZATION

EXTERNAL MODULES

- **Random:** This external python module is used to produce pseudo-random numbers. It will be implemented in several places:
 - Deciding which of the suspects is the killer.
 - Some minigames will require random values or picking randomly a question.

- Assigning random codes to unlock the other rooms.
- Determining if you observe carefully or not.
- Returning a wrong clue from a random suspect.

INTERNAL MODULES

- **Input/Output:** Will contain:
 - **Maps:** The module contains functions to:
 - Print the map with a legend with the rooms.
 - Assign to each room a code to unlock it.
 - Ask for the code of the room
 - **Transitions:** Also contains functions to:
 - Print the status of the player (energy and reputation).
 - Print the day when a day passes (energy is 0).
 - Check the energy and if it's lower than or equal to 0 a new day arrives, and your energy is restored.
 - Print the title of the game.
 - Print the story of the game.
 - Print a tutorial of the game if the user needs it.
 - Print the final credits.
 - Print a title when you go to a room.
 - Skip the game to the trial if 10 days passed or losing the game because reputation is lower than or equal to 0.
 - **Notes:** Moreover, it contains functions to:
 - Calculate the final score according to some parameters.
 - Create the detective notes.
 - Read a file and print it line by line.
 - Read your detective notes and write some useful or interesting data.
 - Writing the final score into a file.
 - **Inputs:** Additionally, it contains functions to:
 - Check that the input is an integer.
 - Check that the input is an integer in a range.
 - Check if a string is in a list.
 - Determine if you observe a zone carefully.
 - Ask for the player name.
 - **Characters:** Module containing functions with:
 - A dictionary of each suspect with their name, surname, age, gender, and clues for each room.
 - A function to select randomly a suspect.
 - A function to return a wrong clue from a random suspect.

- Different texts for each suspects: at the beginning of the trial, the explanation of why they kill her and their final words
- **Games:** A module containing the source code for all of the minigames used across the main game. Contains function to:
 - Check if an input is an integer or the cheats mode is activated.
 - Check if an input is an integer in a range or the cheats mode is activated.
 - **Caesar Cypher game:** a function to create the encrypted message, and another to play it with a random word.
 - **Morse game:** a function to create the encrypted message, and another to play it.
 - **Math sequence game:** a function to create a random sequence, and another one to play it.
 - **Lever game:** a function to print the state of the lever, another to check the solution and another one to play it.
 - **Psychotechnical test game:** a function to pick a random test, another to print the test and the different options; and another one to play it.
 - **Hangman game:** A function to print the hanged man, another to generate the word, and another to play it.
 - **Math figure sequence** (little flowers): A function to generate the values of the flowers, another to play one round, another to ask for the values and another to play several rounds.
 - **Quiz game:** A function to play the game one round and another to play it several rounds.
 - **Trial:** Contains functions to:
 - Ask for the murderer, the motive and the weapon
 - Write if the player didn't get right the motive and the weapon
 - Ask for the suspect to declare
 - Ask for the motive and the weapon
 - Play the game of the trial after you guess right the murderer, motive and weapon
 - Reduce your performance points by a number
 - Print the initial text and final text of the trial
 - Play the whole trial
- **Events:** Contains functions to:
 - **Interrogate** the suspects at the beginning

- Generate if after finishing a room you obtain an **extra clue**.
- **Play each room:** pool, casino, living room, master bedroom, library, kitchen, office, son's bedroom and bathroom.
- **Mansion:** Joins all the modules and this is the module where you play. The organization is:
 - **Assigning the codes** for the rooms
 - **Initializing** the reputation, energy and day
 - Printing the title, story and tutorial
 - Creating the detective notes
 - **Selecting a murderer** randomly and **asking the detective's name**
 - Playing the **interrogation**
 - Printing the full map and the day 0
 - **Going room by room** until the reputation is less than or equal to 0 or the day of the trial arrives. After each room the player can see his notes and write something
 - After all the rooms or if the condition before is met:
 - If the **reputation is lower than or equal to 0**, you **lose the game** and your boss fires you
 - If the **day is equal to 10 or you complete all the rooms**, you go to the **trial** to expose the murderer. Before entering you can read your notes again
 - Then your **final score** will be calculate it and you can see the file with all the final scores
 - Finally, the credits are printed

DATA STRUCTURES

- **Dictionaries and lists:** They will be used for the rooms and their codes; the minigames; organizing the information of the characters: *Suspect={"name":value,"surname":value,"age":value...}..*
- **Files:** Files will be used to read the notes that you have been writing and to write the final score.

PLANNED CODE

There will be a sheet containing the main game code, to which both the internal and external modules will be imported.

At the beginning, the player will assign a name for the detective. The following code will present a brief introduction to the story and, afterwards, the murderer will be randomly selected among the suspects, therefore picking the main storyline and giving a start to the game.

There will be 10 days per case, which will have a limited energy (20 points per day) that will be consumed by the actions of the player.

Firstly, the detective must proceed to interrogate the suspects.

The player must also find clues in order to uncover the murderer among the main suspects by completing minigames, which will also return codes in order to unlock other rooms in the house (being one minigame per room). When the energy is up, a new day will start, reducing the time left until the trial.

There will also be events that will pop up randomly (depending on the reputation and other variables) along the course of the game. The detective may randomly come across some useful information, or to sabotage him.

Once the time is up, the trial will start. The player will be required to input their conclusions about the murderer, the weapon and the main motive of the crime. The suspect will deliver some counterpoints, being the player needed to prove their arguments in another final minigame.

At the end, the omnipotent judge will then proceed to reveal the truth about the case, and the final score will be calculated given the performance of the player along the whole course of game, and the accuracy of the results presented.

WORK ORGANIZATION

Paula	<ul style="list-style-type: none">- Adding the cheats mode in the games and in each room adding the keys and clues- Mansion- ask_code(room,rooms)- print_status(energy,reputation)- print_day(day)- check_energy(energy,day)- print_title()- print_story()- print_tutorial()- print_credits()- print_rooms(number_room)- skip_game(reputation,day,win)- create_notes()- read_file(name)- show_notes()- write_final_score(name,days,reputation,per_points,solved)- check_int(message)- check_int_in_range(message,minimum,maximum)- observe()
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	<ul style="list-style-type: none"> - return_clue(murderer,suspects,clue) - check_int_MMCM(message) - check_int_MMCM_in_range(message,min,max) - romano(message) - math_sequence() - morse(message) - psycho_test() - print_psycho_test(test) - print_psycho_solutions(solutions) - play_psycho(energy,reputation,day) - print_state_lever(lever) - check_solution(r,b,y,light) - lever_game(energy,reputation,day) - play_flw(energy,reputation,day) - play_cards(energy,reputation,day) - random_event(reputation,room_number,murderer,suspects) - pool(energy,reputation,murderer,suspects,rooms,day) - casino(energy,reputation,murderer,suspects,rooms,day) - living_room(energy,reputation,murderer,suspects,rooms,day)
Ana	<ul style="list-style-type: none"> - Video - print_full_map() - create_key() - assign_keys(list_rooms) - calculate_final_score(reputation,solved,time) - str_in_list(item,mylist) - ask_player_name() - sus_selection(suspects) - mySus_txt_init(mySus) - m_init_txt() - m_expose_txt(dect_name,motive) - m_final(mySus) - v_init_txt() - v_expose_txt(dect_name,motive) - v_final(mySus) - b_init_txt() - b_expose_txt(dect_name,motive) - b_final(mySus) - l_init_txt() - l_expose_txt(dect_name,motive) - l_final(mySus) - cc_init_txt() - play_CC(energy,reputation,day) - play_math_sequence(energy,reputation,day) - hanged_man(num) - hangman_word_generator() - hangman_init_text(word_let) - hangman_play(energy,reputation,day,word_let) - expose_murderer(dect_name,mySus,murderer,per_points)

	<ul style="list-style-type: none"> - bad_proof(dect_name,mySus,weapon,motive) - ask_for_sus(dect_name) - ask_for_proof(dect_name,mySus) - trial_g_init() - trial_game(dect_name,mySus) - low_points(per_points,minus) - trial_init_txt() - trial_ending(dect_name,mySus) - main_trial(dect_name,murderer) - master_bedroom(energy,reputation,murderer,suspects,rooms,day) - password() - library(energy,reputation,murderer,suspects,rooms,day)
Javier	<ul style="list-style-type: none"> - Video editing - play_morse(energy,reputation,day,murderer) - lit_flw_generator() - little_flowers(fl_list) - ask_flw_value(fl_list) - quizz_engine(energy,reputation,day) - highest_card_instructions() - highest_card_engine(type_of_figures,number_of_figures) - interrogation_text_init() - choose_character_to_interrogation(dect_name) - the_interrogation(dect_name, murderer) - the_office(energy,reputation,murderer,suspects,rooms,day) - the_sons_bedroom(energy,reputation,murderer,suspects,rooms,day) - the_bathroom(energy,reputation,murderer,day)

Everybody contributed into doing the characters and their clues.

CREDITS

This project is created by Ana Pérez Bango, Javier Pérez Rodríguez and Paula Díaz Álvarez.

We will use some symbols or titles and some games from:

-[piliapp](#)

-[patorkj](#)

-[manualpsicotecnicos](#)

Video:  MURDER-MYSTERY