Project Report: Text-Based Adventure Game

1. Project Title

Text-Based Adventure Game in Python

2. Introduction

This project is a text-based adventure game implemented in Python. The game allows a player to explore a mansion, interact with objects, solve simple puzzles, and ultimately escape. It is designed as a choose-your-own-adventure game, emphasizing problem-solving, exploration, and decision-making.

3. Objectives

- Create a fun, interactive text-based game in Python.
- Implement a room-based navigation system with multiple exits.
- Allow the player to collect and use items to solve puzzles.
- Provide a simple story with a clear win condition.
- Improve understanding of Python programming concepts.

4. Scope

- Mansion with five rooms: Hall, Bedroom, Kitchen, Study, Exit.
- Collectable items: torch, knife, key.
- Simple puzzles like locked chest and main exit door.
- Commands: go, get, use, inventory, quit.
- Win condition: escape using required items.

5. Software and Tools

- Python 3.x
- Any Python IDE (VS Code, PyCharm, IDLE)
- Platform independent
- No external libraries required

6. System Design

- Dictionary 'rooms': stores room description, items, exits, puzzles
- List 'inventory': tracks collected items
- Game Flow:
    1. Show current room info
    2. Accept command
    3. Perform action
    4. Check puzzles
    5. End game on win/quit

7. Implementation
- Functions:
    - s(): displays room info
    - moving(direction): move player
    - get(item_name): pick up item
    - use(item_name): solve puzzle or unlock doors
    - starting(): main game loop

8. Challenges
- Flexible room/item system design
- Puzzle logic for inventory checks
- Robust user input handling

9. Future Enhancements
- More rooms, puzzles, items
- NPCs and dialogues
- Save/load game
- Scoring system
- Colored text or ASCII art

10. Conclusion

Project demonstrates text-based adventure in Python with loops, functions, dictionaries, lists, and conditionals. The game allows navigation, item collection, puzzle solving, and escape.

11. References

- Python Official Documentation: https://docs.python.org/3/

- Online tutorials and blogs