

MazeGame step 2.py

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1  '''
2  Refactored adventure game to improve code readability and maintainability.
3  the game functions are:
4  - Load game data from JSON file
5  - Display room description
6  - Handle movement between rooms
7  - Handle item interaction (get and drop)
8  - Handle passcode input
9  - Main game loop
10
11  '''
12
13  import json
14
15  # Load game data from JSON file
16  def load_game_data(filename):
17      with open(filename, "r") as file:
18          return json.load(file)
19
20  game_data = load_game_data("game_data.json")
21  rooms = game_data["rooms"]
22  current_room = game_data["start"]
23  inventory = []
24
25  def display_room():
26      print(f"You appear to be in the {current_room}")
27      print(rooms[current_room].get("Desc", "No description available.))
28
29      if "Item" in rooms[current_room]:
30          print(f"There is a {rooms[current_room]['Item']} in the room")
31      else:
32          print("The room is empty")
33
34      if inventory:
35          print(f"You have {len(inventory)} items: {' '.join(inventory)}")
36      else:
37          print("You have no items!")
38
39  def handle_movement(direction):
40      global current_room
41      if direction in rooms[current_room]:
42          current_room = rooms[current_room][direction]
43          print(f"You moved {direction}")
44      else:
45          print("You can't go that way.")
46
47  def handle_item_interaction(action, item):
48      if action == "Get":
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49     if "Item" in rooms[current_room] and rooms[current_room]["Item"].lower() ==
item.lower():
50         if item not in inventory:
51             inventory.append(item)
52             del rooms[current_room]["Item"]
53             print(f"{item} retrieved!")
54         else:
55             print(f"You already have the {item}.")
56     else:
57         print(f"Can't find {item}.")
58     ## Add drop action
59
60     ## Are there any other actions??
61
62 def main():
63     global current_room
64     while True:
65         display_room()
66         user_input = input("Enter command\n").strip().split(" ")
67
68         if not user_input:
69             continue
70
71         action = user_input[0].title()
72         argument = " ".join(user_input[1:]).title() if len(user_input) > 1 else ""
73
74         if action == "Exit":
75             print("Goodbye!")
76             break
77         elif action == "Go" and argument in ["North", "South", "East", "West", "Up",
"Down", "Out", "In"]:
78             handle_movement(argument)
79         elif action in ["Get", "Drop"] and argument:
80             handle_item_interaction(action, argument)
81         elif action == "Passcode" and argument == "8915" and current_room == "Library":
82             print("Lock unlocked!")
83         else:
84             print("Invalid command.")
85
86 if __name__ == "__main__":
87     main()
88
```