import json

import os

from datetime import datetime

TODO\_FILE = "todo.json"

def load\_todo():

if os.path.exists(TODO\_FILE):

with open(TODO\_FILE, "r") as file:

return json.load(file)

else:

return []

def save\_todo(todo\_list):

with open(TODO\_FILE, "w") as file:

json.dump(todo\_list, file, indent=2)

def display\_todo():

todo\_list = load\_todo()

if not todo\_list:

print("No tasks in the to-do list.")

else:

for index, task in enumerate(todo\_list, start=1):

status = "Done" if task["done"] else "Not Done"

print(f"{index}. {task['title']} - Due: {task['due\_date']} - Priority: {task['priority']} - Status: {status}")

def add\_task():

title = input("Enter task title: ")

due\_date\_str = input("Enter due date (YYYY-MM-DD): ")

priority = input("Enter priority (High, Medium, Low): ").capitalize()

try:

due\_date = datetime.strptime(due\_date\_str, "%Y-%m-%d").date()

except ValueError:

print("Invalid date format. Please use YYYY-MM-DD.")

return

new\_task = {"title": title, "due\_date": due\_date\_str, "priority": priority, "done": False}

todo\_list = load\_todo()

todo\_list.append(new\_task)

save\_todo(todo\_list)

print("Task added successfully!")

def update\_task():

display\_todo()

try:

task\_index = int(input("Enter the task number to update: ")) - 1

except ValueError:

print("Invalid input. Please enter a number.")

return

todo\_list = load\_todo()

if 0 <= task\_index < len(todo\_list):

updated\_task = todo\_list[task\_index]

updated\_task["done"] = not updated\_task["done"]

save\_todo(todo\_list)

print("Task updated successfully!")

else:

print("Invalid task number. Please enter a valid task number.")

def delete\_task():

display\_todo()

try:

task\_index = int(input("Enter the task number to delete: ")) - 1

except ValueError:

print("Invalid input. Please enter a number.")

return

todo\_list = load\_todo()

if 0 <= task\_index < len(todo\_list):

del todo\_list[task\_index]

save\_todo(todo\_list)

print("Task deleted successfully!")

else:

print("Invalid task number. Please enter a valid task number.")

def main():

while True:

print("\n===== To-Do List =====")

print("1. Display To-Do List")

print("2. Add Task")

print("3. Update Task (Toggle Done/Not Done)")

print("4. Delete Task")

print("5. Quit")

choice = input("Enter your choice (1-5): ")

if choice == "1":

display\_todo()

elif choice == "2":

add\_task()

elif choice == "3":

update\_task()

elif choice == "4":

delete\_task()

elif choice == "5":

print("Exiting the To-Do List application. Goodbye!")

break

else:

print("Invalid choice. Please enter a number between 1 and 5.")

if \_\_name\_\_ == "\_\_main\_\_":

main()