Task Manager

import json

import os

# File where user data will be stored

DATA\_FILE = "user\_data.json"

def load\_data():

#Load user data from the JSON file.

#Returns an empty dictionary if the file doesn't exist.

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

with open(DATA\_FILE, "r") as f:

return json.load(f)

else:

return {}

def save\_data(data):

#Save the given data dictionary to the JSON file.

with open(DATA\_FILE, "w") as f:

json.dump(data, f, indent=4)

def user\_register(user\_data):

#Register a new user if the username doesn't already exist.

ans = input("Do you wish to register for the task manager? (Y/N): ")

if ans.upper() == 'Y':

username = input("Enter username: ")

if username in user\_data:

print("Username already exists. Please choose a different username.")

return

password = input("Enter password: ")

user\_data[username] = {"password": password, "tasks": []}

save\_data(user\_data)

print("Registration successful!")

def user\_login(user\_data):

#Authenticate user login based on stored credentials.

user\_id = input("Enter your username: ")

user\_pass = input("Enter your password: ")

if user\_id in user\_data and user\_data[user\_id]["password"] == user\_pass:

print("Login successful!")

return user\_id

else:

print("Invalid username or password.")

return None

def open\_task(tasks):

#Display running tasks and allow user to add or remove tasks.

print("\n\*\*\*\*\*\* You are running the following tasks \*\*\*\*\*\*\n")

if not tasks:

print("There are no tasks running.\n")

else:

for idx, task in enumerate(tasks, 1):

print(f"Task {idx}: {task}\n")

ans = input("Do you wish to enter another task? (Y/N): ")

if ans.upper() == 'Y':

enter\_task(tasks)

ans = input("Do you wish to remove a task? (Y/N): ")

if ans.upper() == 'Y':

remove\_task(tasks)

def enter\_task(tasks):

#Add a new task to the task list.

new\_entry = input("Enter task: ")

tasks.append(new\_entry)

print("\nUpdated Task List:")

for idx, task in enumerate(tasks, 1):

print(f"Task {idx}: {task}\n")

def remove\_task(tasks):

#Remove a task from the task list based on user input.

print("\nCurrent Task List:")

for idx, task in enumerate(tasks, 1):

print(f"Task {idx}: {task}\n")

try:

task\_index = int(input("Enter the task number you want to remove: "))

if 1 <= task\_index <= len(tasks):

removed = tasks.pop(task\_index - 1)

print(f"Task '{removed}' removed successfully.")

else:

print("Invalid task number.")

except ValueError:

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

print("\nUpdated Task List:")

for idx, task in enumerate(tasks, 1):

print(f"Task {idx}: {task}\n")

def main\_func():

#Main driver function for the task manager system.

print("\*\*\*\*\*\* Welcome to the Task Manager \*\*\*\*\*\*")

print("1. Register\n2. Login and Manage Tasks\n3. Exit\n")

user\_data = load\_data()

current\_user = None

while True:

try:

opt\_int = int(input("Enter option: "))

except ValueError:

print("Invalid input. Please enter a number corresponding to an option.")

continue

if opt\_int == 1:

user\_register(user\_data)

elif opt\_int == 2:

if current\_user is None:

current\_user = user\_login(user\_data)

if current\_user is not None:

print(f"\nWelcome, {current\_user}!")

print("Task Options:\n1. View tasks\n2. Add task\n3. Remove task\n4. Logout")

try:

task\_opt = int(input("Enter task option: "))

except ValueError:

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

continue

if task\_opt == 1:

open\_task(user\_data[current\_user]["tasks"])

save\_data(user\_data)

elif task\_opt == 2:

enter\_task(user\_data[current\_user]["tasks"])

save\_data(user\_data)

elif task\_opt == 3:

remove\_task(user\_data[current\_user]["tasks"])

save\_data(user\_data)

elif task\_opt == 4:

print(f"User '{current\_user}' logged out.")

current\_user = None

else:

print("Invalid task option.")

elif opt\_int == 3:

print("Exiting Task Manager. Goodbye!")

break

else:

print("Invalid option. Please choose from the menu.")

if \_\_name\_\_ == '\_\_main\_\_':

main\_func()

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