VaultofCodes

Mini Project

Develop a basic to-do list application using functions and data structures

Project Overview: Objective: Develop a simple to-do list application using Python with an emphasis on functions and data structures.

Code:

```
import uuid


# Initialize the task list
tasks = []


# Function to add a task
def add_task(task_description):
    task_id = str(uuid.uuid4())  # Generate a unique ID for the task
    tasks.append({
        'id': task_id,
        'task': task_description,
        'status': 'Incomplete'
    })
    print(f"Task added: {task_description}")


# Function to delete a task
```

```
def delete_task(task_id):
    global tasks
    tasks = [task for task in tasks if task['id'] != task_id]
    print(f"Task with ID {task_id} deleted.")

# Function to display the list of tasks
def display_tasks():
    if not tasks:
        print("No tasks available.")
        return
    for task in tasks:
        print(f"ID: {task['id']}, Task: {task['task']}, Status: {task['status']}")

# Function to mark a task as complete
def mark_task_complete(task_id):
    for task in tasks:
        if task['id'] == task_id:
            task['status'] = 'Complete'
            print(f"Task with ID {task_id} marked as complete.")
            return
    print(f"Task with ID {task_id} not found.")

# Example usage
if __name__ == "__main__":
    # Adding tasks
    add_task("Finish Python project")
```

```
add_task("Read a book")

# Displaying tasks
print("\nTasks List:")
display_tasks()

# Marking a task as complete
task_id_to_mark_complete = tasks[0]['id']  # Assume marking the first task as complete
mark_task_complete(task_id_to_mark_complete)

# Displaying tasks again
print("\nUpdated Tasks List:")
display_tasks()

# Deleting a task
task_id_to_delete = tasks[1]['id']  # Assume deleting the second task
delete_task(task_id_to_delete)

# Displaying tasks after deletion
print("\nFinal Tasks List:")
display_tasks()
```

Output:

```
PS D:\Python> py todolist.py
```

Task added: Finish Python project

Task added: Read a book

Tasks List:

ID: c14fb9b4-c186-4d99-a9f1-1347fe2986e3, Task: Finish Python project, Status: Incomplete

ID: b9291777-451d-494b-b027-dbd90c6654cb, Task: Read a book, Status: Incomplete

Task with ID c14fb9b4-c186-4d99-a9f1-1347fe2986e3 marked as complete.

Updated Tasks List:

ID: c14fb9b4-c186-4d99-a9f1-1347fe2986e3, Task: Finish Python project, Status: Complete

Tasks List:

ID: c14fb9b4-c186-4d99-a9f1-1347fe2986e3, Task: Finish Python project, Status: Incomplete

ID: b9291777-451d-494b-b027-dbd90c6654cb, Task: Read a book, Status: Incomplete

Task with ID c14fb9b4-c186-4d99-a9f1-1347fe2986e3 marked as complete.

Updated Tasks List:

ID: c14fb9b4-c186-4d99-a9f1-1347fe2986e3, Task: Finish Python project, Status: Complete

ID: b9291777-451d-494b-b027-dbd90c6654cb, Task: Read a book, Status: Incomplete

Task with ID b9291777-451d-494b-b027-dbd90c6654cb deleted.

Final Tasks List:

ID: c14fb9b4-c186-4d99-a9f1-1347fe2986e3, Task: Finish Python project, Status: Complete

PS D:\Python>