

Tasks1.py

```
1 import json
2 import os
3
4 TASKS_FILE = "tasks.json"
5
6 class ToDoList:
7     def __init__(self):
8         self.tasks = []
9         self.load_tasks()
10
11     def load_tasks(self):
12         if os.path.exists(TASKS_FILE):
13             try:
14                 with open(TASKS_FILE, "r") as file:
15                     self.tasks = json.load(file)
16             except json.JSONDecodeError:
17                 print("Error: Could not decode tasks file. Starting with an empty list.")
18                 self.tasks = []
19         else:
20             self.tasks = []
21
22     def save_tasks(self):
23         try:
24             with open(TASKS_FILE, "w") as file:
25                 json.dump(self.tasks, file, indent=4)
26         except Exception as e:
27             print(f"Error saving tasks: {e}")
28
29     def add_task(self, task):
30         if task.strip():
31             self.tasks.append({"task": task.strip(), "completed": False})
32             self.save_tasks()
33             print(f"✅ Added task: {task}")
34         else:
35             print("⚠️ Task description cannot be empty.")
36
37     def list_tasks(self):
38         if not self.tasks:
39             print("📭 No tasks found.")
40             return
41         print("\n📝 To-Do List:")
42         for idx, task in enumerate(self.tasks, 1):
43             status = "✓" if task["completed"] else "X"
44             print(f"{idx}. [{status}] {task['task']}")
45
46     def mark_complete(self, index):
47         if 0 <= index < len(self.tasks):
48             if self.tasks[index]["completed"]:
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49         print("📌 Task is already marked as completed.")
50     else:
51         self.tasks[index]["completed"] = True
52         self.save_tasks()
53         print(f"✅ Marked task {index + 1} as completed.")
54     else:
55         print("❌ Invalid task number.")
56
57     def delete_task(self, index):
58         if 0 <= index < len(self.tasks):
59             task = self.tasks.pop(index)
60             self.save_tasks()
61             print(f"🗑 Deleted task: {task['task']}")
62         else:
63             print("❌ Invalid task number.")
64
65     def main():
66         todo = ToDoList()
67         while True:
68             print("\n===== TO-DO LIST MENU =====")
69             print("1. ➕ Add Task")
70             print("2. 📋 View Tasks")
71             print("3. ✅ Mark Task as Completed")
72             print("4. 🗑 Delete Task")
73             print("5. 🚪 Exit")
74
75             choice = input("Enter your choice (1-5): ").strip()
76
77             if choice == '1':
78                 task = input("Enter task description: ")
79                 todo.add_task(task)
80             elif choice == '2':
81                 todo.list_tasks()
82             elif choice == '3':
83                 todo.list_tasks()
84                 try:
85                     index = int(input("Enter task number to mark complete: ")) - 1
86                     todo.mark_complete(index)
87                 except ValueError:
88                     print("❌ Invalid input. Please enter a number.")
89             elif choice == '4':
90                 todo.list_tasks()
91                 try:
92                     index = int(input("Enter task number to delete: ")) - 1
93                     todo.delete_task(index)
94                 except ValueError:
95                     print("❌ Invalid input. Please enter a number.")
96             elif choice == '5':
97                 print("👋 Goodbye!")
98                 break

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99         else:
100             print("❌ Invalid choice. Please choose a number from 1 to 5.")
101
102 if __name__ == "__main__":
103     main()
104
105
```