

todolist.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             with open(TASKS_FILE, "r") as file:
14                 self.tasks = json.load(file)
15         else:
16             self.tasks = []
17
18     def save_tasks(self):
19         with open(TASKS_FILE, "w") as file:
20             json.dump(self.tasks, file, indent=4)
21
22     def add_task(self, task):
23         self.tasks.append({"task": task, "completed": False})
24         self.save_tasks()
25         print(f"Added task: {task}")
26
27     def list_tasks(self):
28         if not self.tasks:
29             print("No tasks found.")
30             return
31         print("\nTo-Do List:")
32         for idx, task in enumerate(self.tasks, 1):
33             status = "✓" if task["completed"] else "X"
34             print(f"{idx}. [{status}] {task['task']}")
35
36     def mark_complete(self, index):
37         if 0 <= index < len(self.tasks):
38             self.tasks[index]["completed"] = True
39             self.save_tasks()
40             print(f"Marked task {index + 1} as completed.")
41         else:
42             print("Invalid task number.")
43
44     def delete_task(self, index):
45         if 0 <= index < len(self.tasks):
46             task = self.tasks.pop(index)
47             self.save_tasks()
48             print(f"Deleted task: {task['task']}")
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49     else:
50         print("Invalid task number.")
51
52 def main():
53     todo = ToDoList()
54     while True:
55         print("\n===== TO-DO LIST MENU =====")
56         print("1. Add Task")
57         print("2. View Tasks")
58         print("3. Mark Task as Completed")
59         print("4. Delete Task")
60         print("5. Exit")
61
62         choice = input("Enter your choice (1-5): ")
63
64         if choice == '1':
65             task = input("Enter task description: ")
66             todo.add_task(task)
67         elif choice == '2':
68             todo.list_tasks()
69         elif choice == '3':
70             todo.list_tasks()
71             try:
72                 index = int(input("Enter task number to mark complete: ")) - 1
73                 todo.mark_complete(index)
74             except ValueError:
75                 print("Invalid input.")
76         elif choice == '4':
77             todo.list_tasks()
78             try:
79                 index = int(input("Enter task number to delete: ")) - 1
80                 todo.delete_task(index)
81             except ValueError:
82                 print("Invalid input.")
83         elif choice == '5':
84             print("Goodbye!")
85             break
86         else:
87             print("Invalid choice. Please choose from 1 to 5.")
88
89 if __name__ == "__main__":
90     main()
91
```