

```
import json
import os
```

```
DATA_FILE = "tasks.json"
```

```
class TaskManager:
```

```
    def __init__(self):
        self.tasks = []
        self.load_tasks()
```

```
    def load_tasks(self):
        if os.path.exists(DATA_FILE):
```


```
        with open(DATA_FILE, "r") as file:
            self.tasks = json.load(file)
```

```
    else:
        self.tasks = []
```

```
    def save_tasks(self):
        with open(DATA_FILE, "w") as file:
            json.dump(self.tasks, file, indent=4)
```

```
    def add_task(self, title):
        task = {"title": title, "completed": False}
        self.tasks.append(task)
        self.save_tasks()
        print(f"Task added: {title}")
```

```
    def complete_task(self, index):
        if 0 <= index < len(self.tasks):
            self.tasks[index]["completed"] = True
            self.save_tasks()
            print(f"Task marked as completed: {self.tasks[index]['title']}")
        else:
            print("Invalid task number.")
```

```
    def delete_task(self, index):
        if 0 <= index < len(self.tasks):
            removed = self.tasks.pop(index)
            self.save_tasks()
            print(f"Deleted task: {removed['title']}")
        else:
            print("Invalid task number.")
```

```
    def list_tasks(self):
        if not self.tasks:
            print("No tasks found.")
        else:
            print("\nTasks:")
            for i, task in enumerate(self.tasks):
                status = "✓" if task["completed"] else "✗"
                print(f"{i}. [{status}] {task['title']}")
            print()
```

```
    def show_progress(self):
        if not self.tasks:
            print("No tasks to track progress.")
```

```

        return
    completed = sum(task["completed"] for task in self.tasks)
    total = len(self.tasks)
    percentage = (completed / total) * 100
    print(f"Progress: {completed}/{total} tasks completed ({percentage:.2f}%)\\n")

```

```
def main():
```

```
    manager = TaskManager()
```

```
    while True:
```

```
        print("\\n📅 Task Manager")
```

```
        print("1. Add Task")
```

```
        print("2. Complete Task")
```

```
        print("3. Delete Task")
```

```
        print("4. View Tasks")
```

```
        print("5. Show Progress")
```

```
        print("6. Exit")
```

```
    choice = input("Choose an option (1-6): ")
```

```
    if choice == "1":
```

```
        title = input("Enter task title: ")
```

```
        manager.add_task(title)
```

```
    elif choice == "2":
```

```
        manager.list_tasks()
```

```
        try:
```

```
            index = int(input("Enter task number to complete: "))
```

```
            manager.complete_task(index)
```

```
        except ValueError:
```

```
            print("Invalid input.")
```

```
    elif choice == "3":
```

```
        manager.list_tasks()
```

```
        try:
```

```
            index = int(input("Enter task number to delete: "))
```

```
            manager.delete_task(index)
```

```
        except ValueError:
```

```
            print("Invalid input.")
```

```
    elif choice == "4":
```

```
        manager.list_tasks()
```

```
    elif choice == "5":
```

```
        manager.show_progress()
```

```
    elif choice == "6":
```

```
        print("Exiting Task Manager. Goodbye!")
```

```
        break
```

```
    else:
```

```
        print("Invalid choice. Please enter a number from 1 to 6.")
```

```
if __name__ == "__main__":
```

```
    main()
```