

PROJECT – 2

```
import json

# Global list to store tasks

tasks = []

# Function to add a new task

def add_task(task_description):

    tasks.append({"description": task_description, "completed": False})

# Function to edit an existing task

def edit_task(task_index, new_description):

    if 0 <= task_index < len(tasks):

        tasks[task_index]["description"] = new_description

    else:

        print("Invalid task number.")

# Function to delete a task

def delete_task(task_index):

    if 0 <= task_index < len(tasks):

        tasks.pop(task_index)

    else:

        print("Invalid task number.")

# Function to mark a task as complete

def mark_task_complete(task_index):

    if 0 <= task_index < len(tasks):

        tasks[task_index]["completed"] = True

    else:

        print("Invalid task number.")

# Function to display all tasks

def display_tasks():

    if not tasks:

        print("No tasks to display.")

    for i, task in enumerate(tasks):

        status = "Completed" if task["completed"] else "Incomplete"

        print(f"{i + 1}. {task['description']} - {status}")
```

Function to save tasks to a file

```
def save_tasks_to_file(filename="tasks.json"):
    with open(filename, "w") as file:
        json.dump(tasks, file)
```

Function to load tasks from a file

```
def load_tasks_from_file(filename="tasks.json"):
    global tasks
    try:
        with open(filename, "r") as file:
            tasks = json.load(file)
    except FileNotFoundError:
        tasks = []
```

Main function to run the task manager

```
def main():
    load_tasks_from_file()
    while True:
        print("\nTask Manager")
        print("1. Add Task")
        print("2. Edit Task")
        print("3. Delete Task")
        print("4. Mark Task as Complete")
        print("5. Display Tasks")
        print("6. Save Tasks")
        print("7. Load Tasks")
        print("8. Exit")
        choice = input("Choose an option: ")
        if choice == "1":
            task_description = input("Enter task description: ")
            add_task(task_description)
        elif choice == "2":
            display_tasks()
            try:
                task_index = int(input("Enter task number to edit: ")) - 1
                new_description = input("Enter new description: ")
```

```

        edit_task(task_index, new_description)

    except ValueError:

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

elif choice == "3":

    display_tasks()

    try:

        task_index = int(input("Enter task number to delete: ")) - 1

        delete_task(task_index)

    except ValueError:

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

elif choice == "4":

    display_tasks()

    try:

        task_index = int(input("Enter task number to mark as complete: ")) - 1

        mark_task_complete(task_index)

    except ValueError:

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

elif choice == "5":

    display_tasks()

elif choice == "6":

    save_tasks_to_file()

    print("Tasks saved successfully.")

elif choice == "7":

    load_tasks_from_file()

    print("Tasks loaded successfully.")

elif choice == "8":

    save_tasks_to_file()

    print("Exiting the program. Tasks saved successfully.")

    break

else:

    print("Invalid option. Please try again.")

if __name__ == "__main__":

    main()

```

OUTPUT:

```
Python 3.12.5 (tags/v3.12.5:ff3bc82, Aug 6 2024, 20:45:27) [MSC v.1940 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\nagav\Desktop\MOTIONCUT\PROJECT-2.py

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 1
Enter task description: PLAYING GAMES.

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 1
Enter task description: DOING HOMEWORK.

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 1
Enter task description: DOING HOMEWORK.

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 3
1. PLAYING GAMES. - Incomplete
2. DOING HOMEWORK. - Incomplete
Enter task number to delete: 2

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 5
1. PLAYING GAMES. - Incomplete

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 5
1. PLAYING GAMES. - Incomplete

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 4
1. PLAYING GAMES. - Incomplete
Enter task number to mark as complete: 1

Task Manager
1. Add Task
2. Edit Task
3. Delete Task
4. Mark Task as Complete
5. Display Tasks
6. Save Tasks
7. Load Tasks
8. Exit
Choose an option: 5
1. PLAYING GAMES. - Completed
```

