In [2]:

```
import json
import os

# Define the file where tasks will be saved
TASKS_FILE = 'tasks.json'


def load_tasks():
    """Load tasks from a JSON file."""
    if os.path.exists(TASKS_FILE):
        with open(TASKS_FILE, 'r') as file:
            return json.load(file)
    return []


def save_tasks(tasks):
    """Save tasks to a JSON file."""
    with open(TASKS_FILE, 'w') as file:
        json.dump(tasks, file, indent=4)


def add_task(tasks):
    task = input("Enter the task: ")
    tasks.append({"task": task, "completed": False})
    save_tasks(tasks)
    print("Task added successfully!")


def view_tasks(tasks):
    if not tasks:
        print("No tasks available!")
    else:
        for i, task in enumerate(tasks, 1):
            status = "Done" if task['completed'] else "Not Done"
            print(f"{i}. {task['task']} - {status}")


def update_task(tasks):
    view_tasks(tasks)
    task_num = int(input("Enter the task number to update: ")) - 1
    if 0 <= task_num < len(tasks):
        tasks[task_num]['task'] = input("Enter the new task description: ")
        save_tasks(tasks)
        print("Task updated successfully!")
    else:
        print("Invalid task number!")


def delete_task(tasks):
    view_tasks(tasks)
    task_num = int(input("Enter the task number to delete: ")) - 1
    if 0 <= task_num < len(tasks):
        tasks.pop(task_num)
        save_tasks(tasks)
        print("Task deleted successfully!")
    else:
        print("Invalid task number!")


def mark_task_completed(tasks):
    view_tasks(tasks)
    task_num = int(input("Enter the task number to mark as complete: ")) - 1
    if 0 <= task_num < len(tasks):
        tasks[task_num]['completed'] = True
        save_tasks(tasks)
        print("Task marked as completed!")
    else:
        print("Invalid task number!")


def main():
    tasks = load_tasks()

    while True:
        print("\nTo-Do List Application")
        print("1. Add Task")
        print("2. View Tasks")
        print("3. Update Task")
        print("4. Delete Task")
        print("5. Mark Task as Completed")
        print("6. Exit")

        choice = input("Choose an option: ")

        if choice == '1':
            add_task(tasks)
        elif choice == '2':
            view_tasks(tasks)
        elif choice == '3':
            update_task(tasks)
        elif choice == '4':
            delete_task(tasks)
        elif choice == '5':
            mark_task_completed(tasks)
        elif choice == '6':
            print("Exiting the application.")
            break
        else:
            print("Invalid choice! Please choose again.")


if __name__ == "__main__":
    main()
```

```
To-Do List Application
1. Add Task
2. View Tasks
3. Update Task
4. Delete Task
5. Mark Task as Completed
6. Exit
Choose an option: 1
Enter the task: study
Task added successfully!

To-Do List Application
1. Add Task
2. View Tasks
3. Update Task
4. Delete Task
5. Mark Task as Completed
6. Exit
Choose an option: 2
1. study - Done
2. study - Not Done
3. study - Not Done

To-Do List Application
1. Add Task
2. View Tasks
3. Update Task
4. Delete Task
5. Mark Task as Completed
6. Exit
Choose an option: 6
Exiting the application.
```

In [ ]: