mport json

class Task:

    def \_\_init\_\_(self, title, description, category):

        self.title = title

        self.description = description

        self.category = category

        self.completed = False

    def mark\_completed(self):

        self.completed = True

def save\_tasks(tasks):

    with open('tasks.json', 'w') as f:

        json.dump([task.\_\_dict\_\_ for task in tasks], f)

def load\_tasks():

    try:

        with open('tasks.json', 'r') as f:

            return [Task(\*\*data) for data in json.load(f)]

    except FileNotFoundError:

        return []

def main():

    tasks = load\_tasks()

    while True:

        print("\n1. Add Task\n2. View Tasks\n3. Mark Task Completed\n4. Delete Task\n5. Exit")

        choice = input("Choose an option: ")

        if choice == '1':

            title = input("Task Title: ")

            description = input("Task Description: ")

            category = input("Task Category: ")

            tasks.append(Task(title, description, category))

        elif choice == '2':

            for idx, task in enumerate(tasks, start=1):

                status = "Completed" if task.completed else "Pending"

                print(f"{idx}. {task.title} ({task.category}) - {status}")

        elif choice == '3':

            task\_num = int(input("Task number to mark as completed: "))

            tasks[task\_num - 1].mark\_completed()

        elif choice == '4':

            task\_num = int(input("Task number to delete: "))

            del tasks[task\_num - 1]

        elif choice == '5':

            save\_tasks(tasks)

            break

if \_\_name\_\_ == "\_\_main\_\_":

    main()