

```
import json
import os
from datetime import datetime

class Task:
    def __init__(self, description, priority, due_date=None, completed=False):
        self.description = description
        self.priority = priority
        self.due_date = due_date
        self.completed = completed

    def __str__(self):
        status = "Completed" if self.completed else "Pending"
        return f"{self.description} - Priority: {self.priority}, Due: {self.due_date}, Status: {status}"

class ToDoList:
    def __init__(self):
        self.tasks = []

    def add_task(self, task):
        self.tasks.append(task)

    def remove_task(self, task_index):
        del self.tasks[task_index]

    def mark_task_completed(self, task_index):
        self.tasks[task_index].completed = True

    def save_tasks(self, filename):
        with open(filename, "w") as f:
            json.dump([task.__dict__ for task in self.tasks], f)
```

```
def load_tasks(self, filename):  
    if os.path.exists(filename):  
        with open(filename, "r") as f:  
            data = json.load(f)  
            self.tasks = [Task(**task) for task in data]
```

```
def main():  
    filename = "tasks.json"  
    todo_list = ToDoList()  
    todo_list.load_tasks(filename)
```

```
while True:  
    print("\n===== ToDo List =====")  
    for i, task in enumerate(todo_list.tasks):  
        print(f"{i + 1}. {task}")
```

```
print("\nMenu:")  
print("1. Add Task")  
print("2. Remove Task")  
print("3. Mark Task as Completed")  
print("4. Save and Quit")
```

```
choice = input("Enter your choice: ")
```

```
if choice == "1":  
    description = input("Enter task description: ")  
    priority = input("Enter task priority (high/medium/low): ")  
    due_date = input("Enter due date (YYYY-MM-DD): ")  
    if due_date:  
        due_date = datetime.strptime(due_date, "%Y-%m-%d").date()
```

```
task = Task(description, priority, due_date)
```

```
todo_list.add_task(task)
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elif choice == "2":
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    task_index = int(input("Enter task number to remove: ")) - 1
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    todo_list.remove_task(task_index)
```

```
elif choice == "3":
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    task_index = int(input("Enter task number to mark as completed: ")) - 1
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    todo_list.mark_task_completed(task_index)
```

```
elif choice == "4":
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    todo_list.save_tasks(filename)
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    print("Tasks saved.....!")
```

```
    break
```

```
else:
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```
    print("Invalid choice. Please try again.")
```