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SCHEDULE MANAGER

TIME IS POWER. SCHEDULE IT RIGHT!

10-05-2025

MAIN FEATURES OF THE SCHEDULE MANAGER:

MVC PATTERN:

- Model: Contains the data and logic
- View: GUI components
- Controller: Event handlers and user interactions

EVENT MANAGEMENT

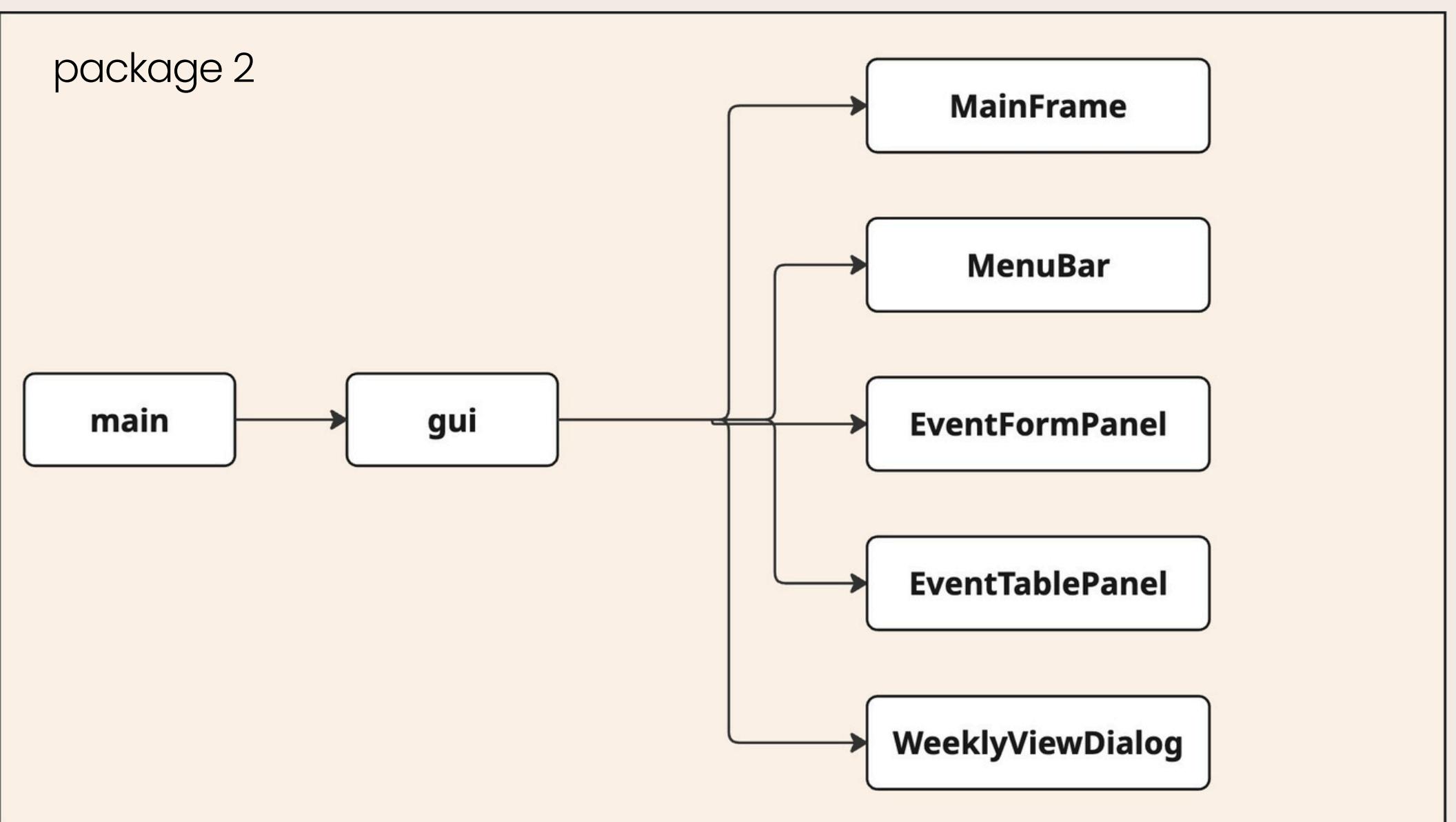
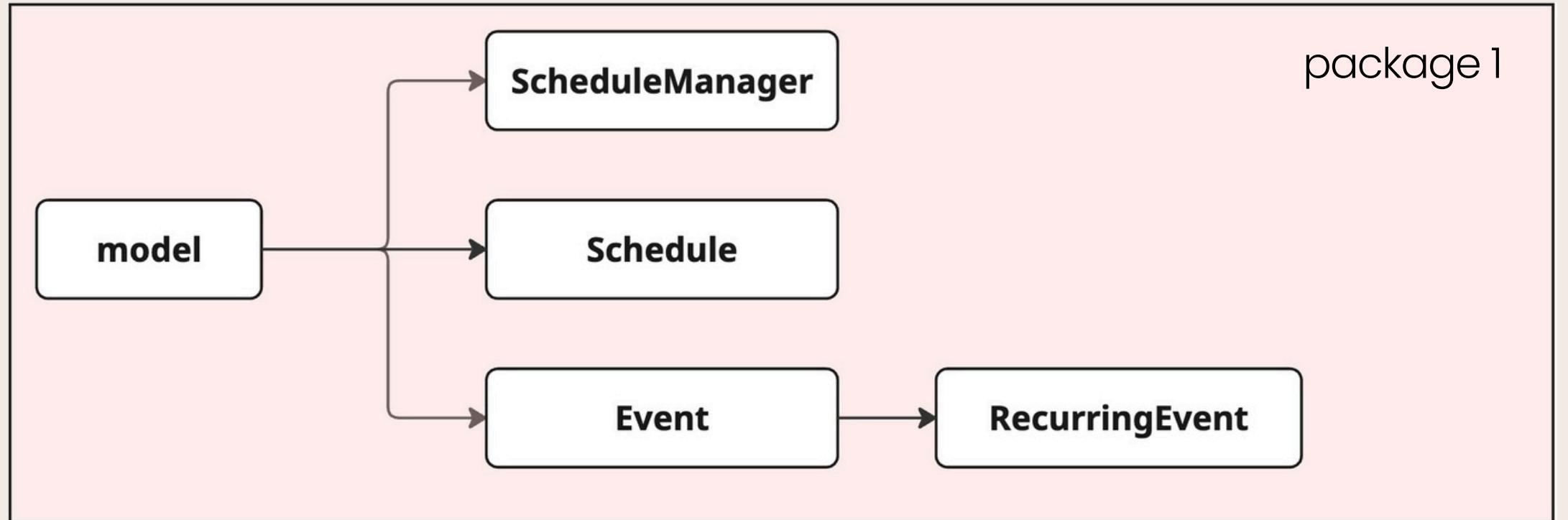
WEEKLY CALENDAR VIEW

EVENT TABLE DISPLAY

SCHEDULE EXPORT AND
SAVE

APPLICATION FEATURES

STRUCTURE OF SOURCE CODE



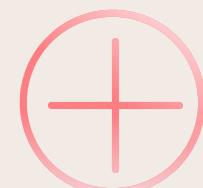
CHALLENGES IN DEVELOPMENT



HANDLING RECURRING EVENTS LOGIC



WEEKLY VIEW MANAGEMENT



HTML EXPORT FORMATTING

Event - individual event model

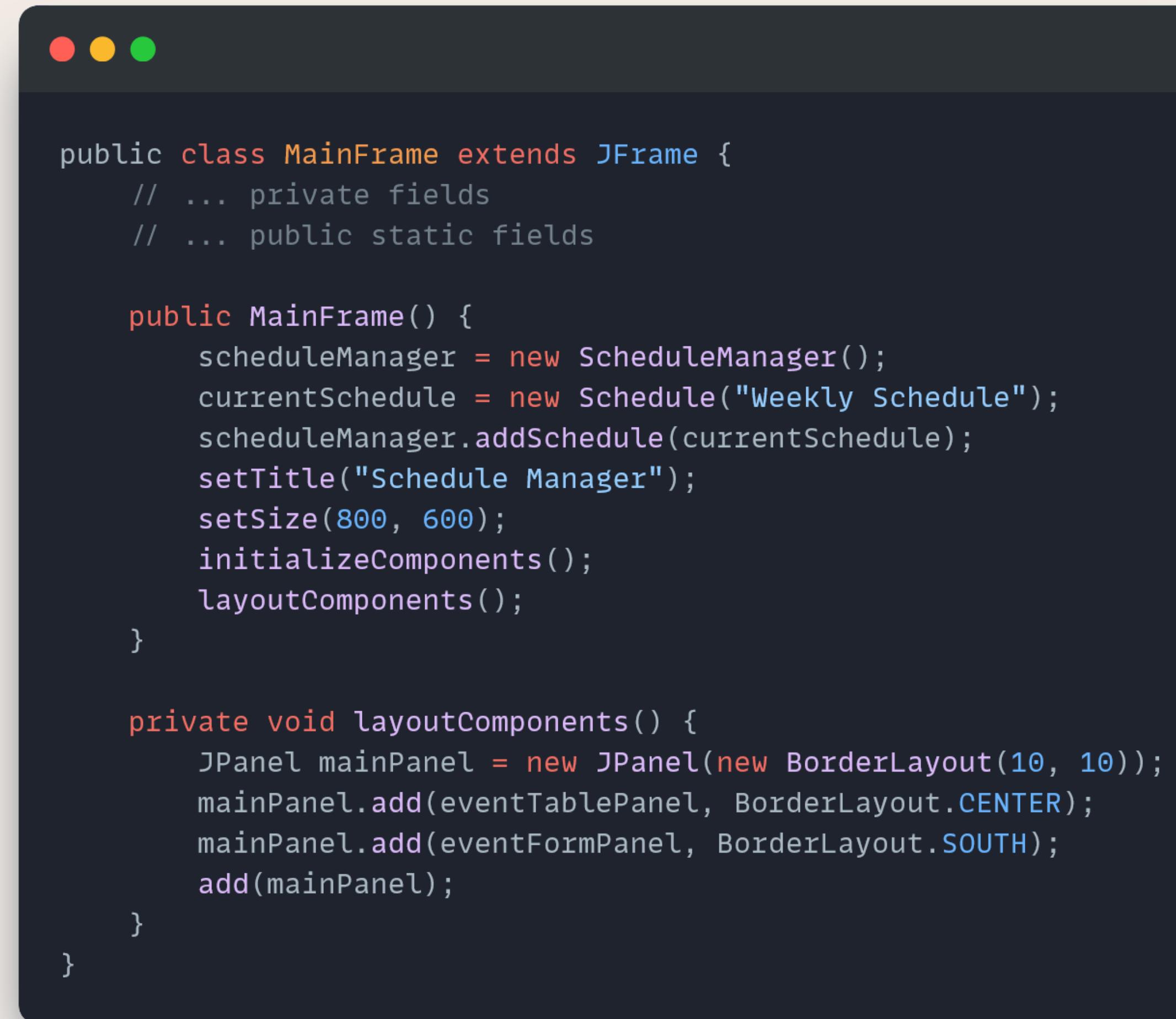


```
public class Event {  
    // ... private fields  
    // ... private static finals fields  
  
    public Event(String t, LocalDateTime s, LocalDateTime e, String l) {  
        this.title = t;  
        this.start = s;  
        this.end = e;  
        this.location = l;  
    }  
  
    public String getFormattedTimeRange() {  
        if (start == null || end == null) return "";  
        String dateStr = start.format(DATE_FORMAT);  
        String startTimeStr = start.format(TIME_FORMAT);  
        String endTimeStr = end.format(TIME_FORMAT);  
        return dateStr + " " + startTimeStr + " - " + endTimeStr;  
    }  
}
```

Schedule - core data model

```
public class Schedule {  
    // ... private fields  
  
    public Schedule(String name) {  
        this.name = name;  
        this.events = new ArrayList<>();  
    }  
  
    public boolean addEvent(Event newEvent) {  
        // returns false when null / overlap  
        events.add(newEvent);  
        return true;  
    }  
  
    public boolean removeEvent(String title) {  
        // ... implementation  
    }  
  
    public ArrayList<Event> getEvents() {  
        return events;  
    }  
}
```

MainFrame - core application window



```
public class MainFrame extends JFrame {
    // ... private fields
    // ... public static fields

    public MainFrame() {
        scheduleManager = new ScheduleManager();
        currentSchedule = new Schedule("Weekly Schedule");
        scheduleManager.addSchedule(currentSchedule);
        setTitle("Schedule Manager");
        setSize(800, 600);
        initializeComponents();
        layoutComponents();
    }

    private void layoutComponents() {
        JPanel mainPanel = new JPanel(new BorderLayout(10, 10));
        mainPanel.add(eventTablePanel, BorderLayout.CENTER);
        mainPanel.add(eventFormPanel, BorderLayout.SOUTH);
        add(mainPanel);
    }
}
```

EventTablePanel - event display

```
public class EventTablePanel extends JPanel {  
    // ... private fields  
    // ... private static field  
  
    public EventTablePanel(Schedule schedule) {  
        this.schedule = schedule;  
        setLayout(new BorderLayout());  
        createTable();  
        add(new JScrollPane(eventTable), BorderLayout.CENTER);  
        refreshTable();  
    }  
  
    public void refreshTable() {  
        tableModel.setRowCount(0);  
        for (Event event : schedule.getEvents()) {  
            tableModel.addRow(new Object[]{  
                event.getTitle(),  
                event.getLocation(),  
                event.getFormattedStartDate(),  
                event.getFormattedStartTime() + " - "  
                    + event.getFormattedEndTime()  
            });  
        }  
    }  
}
```

EventFormPanel - event creation

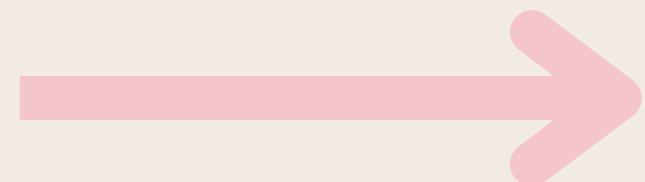


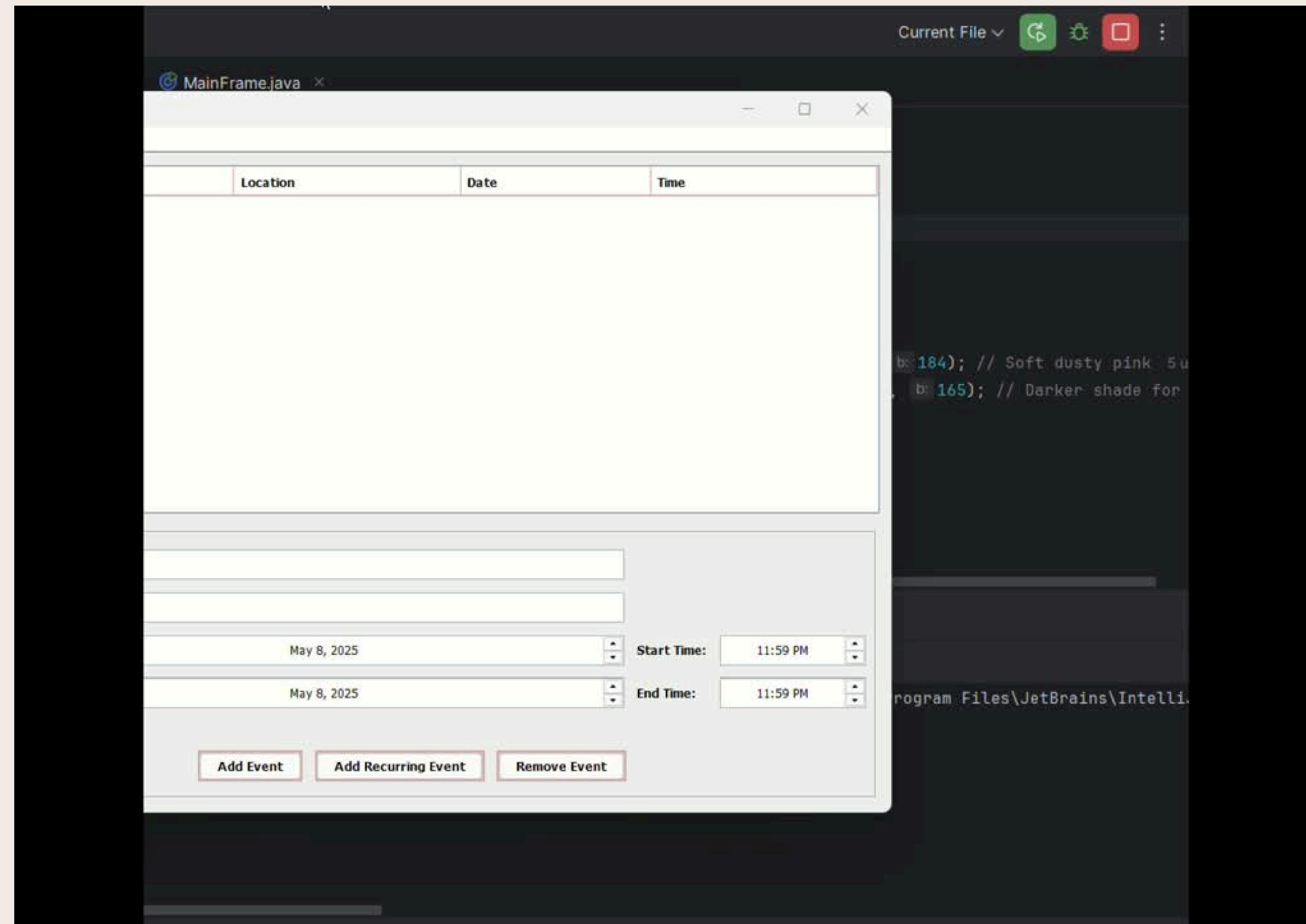
```
public class EventFormPanel extends JPanel {
    // ... private fields

    public EventFormPanel(Schedule s, EventTablePanel e) {
        this.schedule = s;
        this.eventTablePanel = e;
        setLayout(new GridBagLayout());
        setBorder(BorderFactory.createTitledBorder("Add New Event"));
        initializeComponents();
    }

    private void addEvent() {
        if (validateForm()) {
            LocalDateTime start = // ... date conversion
            LocalDateTime end = // ... date conversion
            Event event = new Event(/*... arguments */)
            if (schedule.addEvent(event)) {
                eventTablePanel.refreshTable();
                clearForm();
            }
        }
    }
}
```

Demonstration of the Application





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Thank You !

