CSCI 325 Team Project: Calendar

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Project Abstract:

The most essential thing that documents our hours and minutes is the calendar. We are creating an interactable calendar that will allow users to control their schedules, document appointments, and manage their time. This calendar offers the user full control of their personal times and prevents them from overbooking appointments. The calendar will be accurate, including leap years and holidays.

Team Members (Github Username):

1. Karina Quick (noseypringles)

2. Jeffrey Wedding (jwedding20)

3. Chamberlain Gibson (chamberlain-gibson)

4. Ricardo Harris (RHarris87345)

Technologies we Plan to Use:

1. Netbeans

2. GitHub

Project Description:

The Calendar Program will allow users to create, manage, and view their own personal calendars. The Calendar Program will allow users to have control over their calendars that display their appointments. The user will begin will adding a calendar name, title, date, time, description, and place of the appointment. Our GUI will resemble common features found in Microsoft Outlook Calendar or Google Calendar. Below we've included several mockup illustrations of our eventual GUI.

Mock GUI:

1) Open Calendar for the user (defaulted to Month Display):

Create Appointment

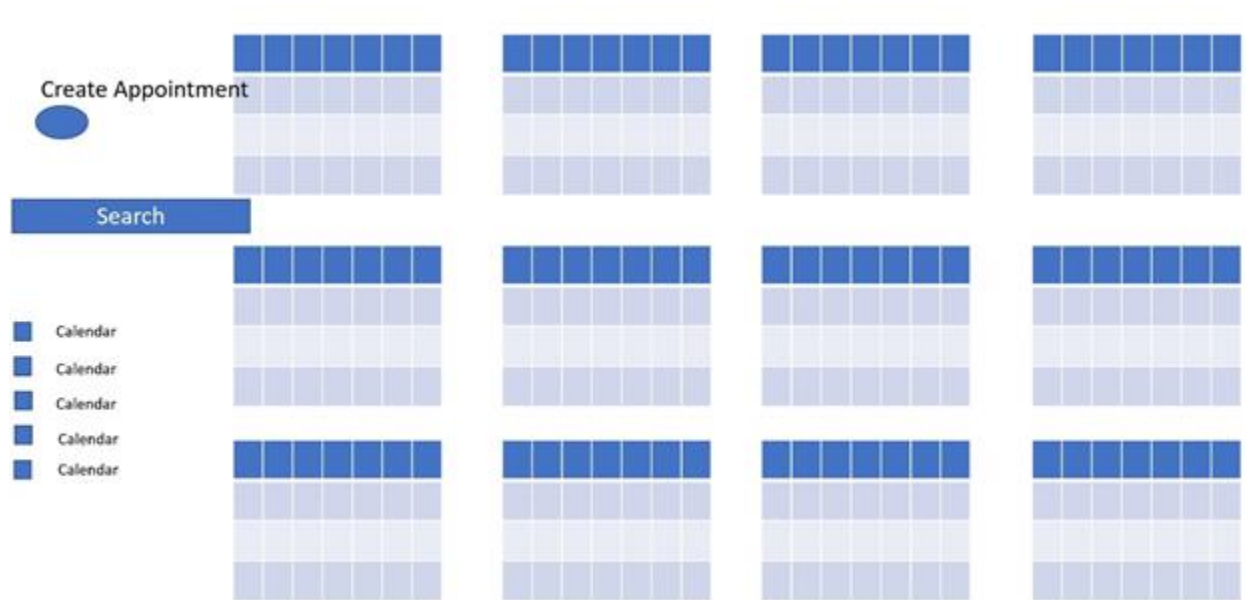| Search			Display Month				
Calendars			**1**	**2**	**3**	**4**	**5**
■ Calendar	6	7 Appointment	8	9	1 Appointment	11	12
■ Calendar	13	14	15	16	17	18	19
■ Calendar	20	21	22	2 Appointment	24	2 Appointment	26
■ Calendar	27	28	29	30	31		

2) Display Day:

Create Appointment

Search   Display Day

		Scroll wheel
■ Calendar	10:00am — Appointment	
■ Calendar	10:15am	
■ Calendar	10:30am — Appointment	
■ Calendar	10:45am	
■ Calendar	11:00am	
■ Calendar	11:15am — Appointment	
	11:30am	

3) Display Year

4) Find Appointment Results:

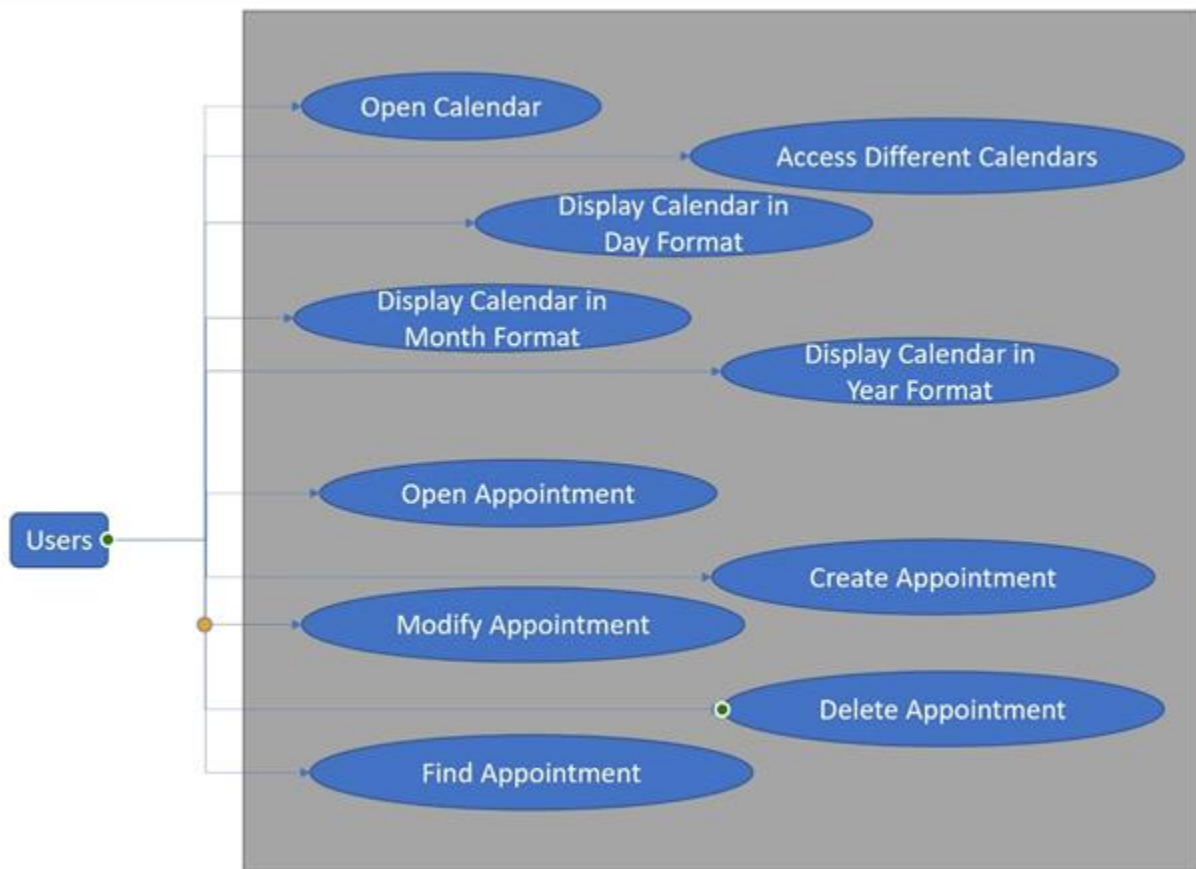5) Create Appointment / Change Appointment / Delete Appointment

Division of Labor:

- DayEvent.java (Ricardo Harris, Chamberlain Gibson):
    - Object class that defines an all-day event, including the elements:
        - Calendar Name
            - String value containing the calendar name of an event
        - Title
            - Title of the event
        - Month
        - Day
        - Year
        - Description
            - Description of the event
        - Location
            - Location of the event
    - Includes holidays
- TimeAppointment.java (Ricardo Harris, Chamberlain Gibson):
    - Object class extending DayEvent.java to include time windows. Adds the elements:
        - Start Hour
        - Start Minute
        - End Hour
        - End Minute
- Calendar.java (Ricardo Harris):
    - Object class defining a calendar as two Array Lists:
        - One of Day Events
        - One of Time Appointments
- MasterCalendar.java (Ricardo Harris):
    - Object class extending Calendar.java to create a master calendar
        - Contains all events and appointments
        - Saved and loaded to and from text files
        - Creates custom calendars based on search conditions
        - Adds all appointments
            - Validates Time Appointments before adding
- CustomCalendar.java (Ricardo Harris):
    - Object class extending Calendar.java to define custom calendars
    - Made from Master Calendar
    - Adds two Array Lists made of:
        - Indexes of Day Events on Master Calendar
        - Indexes of Time Appointments on Master Calendar
    - Can merge Custom Calendars

- SidebarGUI.java (Ricardo Harris):
  - JPanel that creates a sidebar with the following capabilities:
    - Button to create a new appointment
      - AppointmentDisplayGUI.java
    - Button to bring up FindGUI.java
    - Updating checkbox list containing all Calendar Names from the master calendar
  - Passes Array List of selected Calendar Names to DisplayMonthGUI.java and DisplayDayGUI.java
- AppointmentDisplayNewGUI.java (Karina Quick):
  - JPanel that creates a window for creating appointments
  - Updates the Master Calendar
- AppointmentDisplayEditGUI.java (Karina Quick):
  - JPanel that creates a window for creating, modifying, and deleting appointments
  - Updates the Master Calendar
- FindGUI.java (Jeff Wedding):
  - JPanel that does the following:
    - Asks the user for a search term
    - Creates a Custom Calendar of all appointments containing the search term in the title
    - Displays those appointments to the user
      - Allows appointment selection to open and populate AppointmentDisplayGUI.java.
- DisplayMonthGUI.java (Chamberlain Gibson):
  - JPanel that displays all appointments of the selected calendar name on the selected month
    - All appointments are buttons that open and populate AppointmentDisplayGUI.java.
- DisplayDayGUI.java (Jeff Wedding):
  - JPanel that displays all appointments of the selected calendar name on the selected date
    - All appointments are buttons that open and populate AppointmentDisplayGUI.java.
- DisplayYearGUI.java (Chamberlain Gibson):
  - JPanel that displays the entirety of the selected year
    - Does not display any appointments, as scope is too large.

- CalendarProjectMain.java:
  - JFrame that displays all GUI jPanels, enabling cross-implementality
    - Needs to be able to do and switch between the following:
      - open SidebarGUI.java and DisplayDayGUI.java when called from SidebarGUI.java
      - open SidebarGUI.java and DisplayMonthGUI.java when called from SidebarGUI.java
      - open FindGUI.java when called from SidebarGUI.java
      - open AppointmentDisplayEditGUI.java when called from DisplayDayGUI.java or DisplayMonthGUI.java
      - open AppointmentDisplayNewGUI.java when called from Sidebar.java

UML Use Case Diagram:

Use Case Descriptions:

Use Case (Name):	Open Calendar
ID:	01
Scope:	DisplayMonthGUI.java, SidebarGUI.java
Priority:	1/10
Summary:	Open Calendar will display the Calendar centered on the current month, including any appointments for the current month.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is opened.
Trigger:	Calendar Program is opened.
Normal Flow:	Displays the Calendar GUI centered on the current month.
Sub Flows:	Calendar Program loads appointments saved during previous sessions, Custom Calendars generated.
Alternate Flow/ Exceptions:	Calendar Program unable to load files – loads empty.
Post-Conditions:	Calendar ready for interface.
Open Issues:	

Use Case (Name):	Access Different Calendars
ID:	02
Scope:	SidebarGUI.java
Priority:	2/10
Summary:	The calendar program will enable you to display different Calendars.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is open to either Year, Month or Day format.
Trigger:	Date, Format and/or Calendar chosen.
Normal Flow:	Calendar Program displays chosen Calendars from selected range.
Sub Flows:	Runs to DisplayDayGUI.java, DisplayMonthGUI.java or DisplayYearGUI.java based on Format selection, Custom Calendars generated.
Alternate Flow/ Exceptions:	
Post-Conditions:	Appointments within chosen conditions displayed for interaction.
Open Issues:	

Use Case (Name):	Display Calendar in Day Format
ID:	03
Scope:	SidebarGUI.java, DisplayDayGUI.java
Priority:	3/10
Summary:	Calendar Program will display appointments from selected Calendar on selected Date.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is open to either Year, Month or Day format.
Trigger:	Day format, Date, and Calendars chosen.
Normal Flow:	Calendar Program displays appointments from chosen Calendars on chosen Date in Day Format.
Sub Flows:	Custom Calendars generated.
Alternate Flow/ Exceptions:	
Post-Conditions:	Appointments within chosen conditions displayed for interaction.
Open Issues:	

Use Case (Name):	Display Calendar in Month Format
ID:	04
Scope:	SidebarGUI.java, DisplayDayGUI.java
Priority:	4/10
Summary:	Calendar Program will display appointments from selected Calendar on selected Month.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is open to either Year, Month or Day format.
Trigger:	Month format, Month, and Calendars chosen.
Normal Flow:	Calendar Program displays appointments from chosen Calendars on chosen Month in Month Format.
Sub Flows:	Custom Calendars generated.
Alternate Flow/ Exceptions:	
Post-Conditions:	Appointments within chosen conditions displayed for interaction.
Open Issues:	

Use Case (Name):	Display Calendar in Year Format
ID:	05
Scope:	SidebarGUI.java, DisplayDayGUI.java
Priority:	5/10
Summary:	Calendar Program will display blank calendar of selected Year.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is open to either Year, Month or Day format.
Trigger:	Year format and Year chosen
Normal Flow:	Calendar Program displays chosen year in Year format
Sub Flows:	
Alternate Flow/ Exceptions:	
Post-Conditions:	
Open Issues:	

Use Case (Name):	Open Appointment
ID:	06
Scope:	DisplayMonthGUI.java, DisplayDayGUI.java, AppointmentDisplayGUI.java
Priority:	6/10
Summary:	Calendar Program will open the editing window for the selected appointment.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is open to either Month or Day format.
Trigger:	Created Appointment is selected.
Normal Flow:	Selected Appointment prepopulated into AppointmentDisplayGUI.java
Sub Flows:	Associated index stored for modification.
Alternate Flow/ Exceptions:	
Post-Conditions:	Selected Appointment able to be modified or deleted.
Open Issues:	

Use Case (Name):	Create Appointment
ID:	07
Scope:	SidebarGUI.java, AppointmentDisplayGUI.java
Priority:	7/10
Summary:	Calendar Program will open the editing window for a new appointment.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is open to either Year, Month or Day format.
Trigger:	"Create Appointment" button clicked.
Normal Flow:	Default Appointment prepopulated into AppointmentDisplayGUI.java.
Sub Flows:	
Alternate Flow/ Exceptions:	
Post-Conditions:	New Appointment able to be created or discarded.
Open Issues:	

Use Case (Name):	Modify Appointment
ID:	08
Scope:	AppointmentDisplayGUI.java
Priority:	8/10
Summary:	Calendar Program will save all edits made to a selected appointment in AppointmentDisplayGUI.java
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Appointment selected from Find display, Month or Day display
Trigger:	"Save Appointment" button clicked.
Normal Flow:	AppointmentDisplayGUI.java adds the saved appointment to the master calendar.
Sub Flows:	AppointmentDisplayGUI.java removes the original appointment if present. Calendar program reopens Sidebar and Month displays.
Alternate Flow/ Exceptions:	
Post-Conditions:	New Appointment able to be created or discarded.
Open Issues:	

Use Case (Name):	Delete Appointment
ID:	09
Scope:	AppointmentDisplayGUI.java
Priority:	9/10
Summary:	Calendar Program deletes the appointment selected.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Appointment opened from Find, Day or Month format
Trigger:	Delete button clicked.
Normal Flow:	Appointment removed from master calendar.
Sub Flows:	Calendar program reopens Sidebar and Month displays.
Alternate Flow/ Exceptions:	
Post-Conditions:	New Appointment able to be created or discarded.
Open Issues:	

Use Case (Name):	Find Appointment
ID:	10
Scope:	SidebarGUI.java, FindGUI.java
Priority:	10/10
Summary:	Calendar Program deletes the appointment selected.
Primary Actor:	User
Supporting Actors:	User
Stakeholders:	User
Generalization:	
Include:	
Extend:	
Precondition:	Calendar Program is in Year, Month, or Day format.
Trigger:	"Search" button clicked from Sidebar.
Normal Flow:	User enters search term for Titles. Calendar Program returns selectable list of appointments to modify.
Sub Flows:	
Alternate Flow/ Exceptions:	
Post-Conditions:	
Open Issues:	

UML Relationship Map:

Class: Calendar

Open Calendar

-String Value: Calendar Name

- String Value: Title

- String value: Description

- String Value: Location

- Int value: Month

-Int Value: Year

TimeAppointment ( )

DayEvent ( )

Calendar

-Time appointments(events)

-Day(month, day, year)

CustomCalendar ( )

MasterCalendar ( )

CalendarProjectMain

-String Valve: Calendar Name

- String Value: Title

SidSideBarGUI ( )

Display Month GUI ( )

Appointment Display GUI ( )

Appointment Display Edit GUI ( )

Appointment New Display GUI ( )

Find Bar GUI ( )

DisplayDayGUI ( )