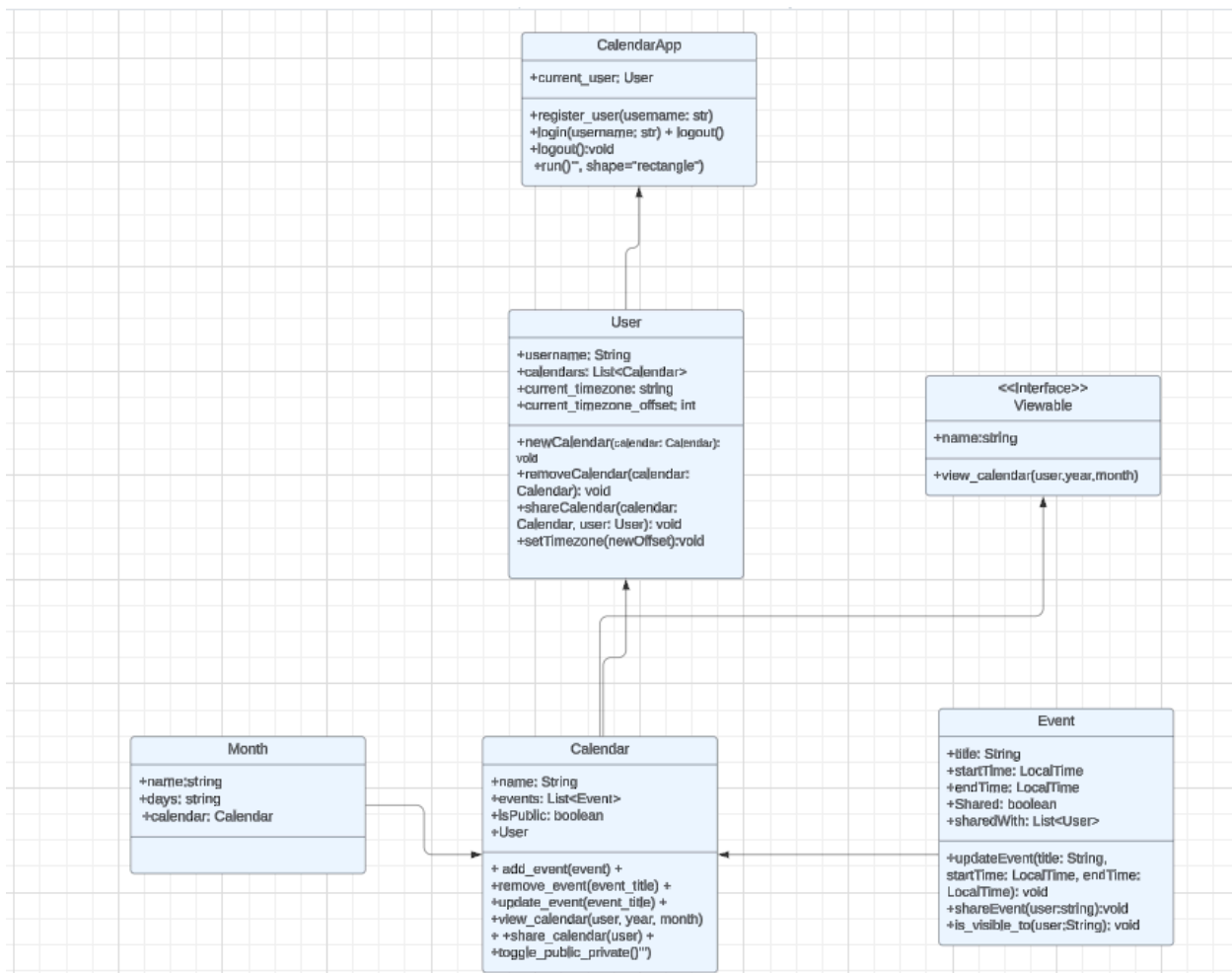


Revised UML Document



Link to UML:

https://lucid.app/lucidchart/c80a0964-5ad2-4763-86a8-66590e1cd28d/edit?viewport_loc=-28%2C-136%2C3747%2C1534%2CHWEp-vi-RSFO&invitationId=inv_aacaa7a5-f396-496e-88c3-ad28b5cefd08

1. CalendarApp (Main Application)

Attributes:

`+current_user: User` → Tracks the currently logged-in user.

Methods:

`+register_user(username: str)` → Registers a new user.

`+login(username: str)` → Logs in a user.

`+logout()` → Logs out the current user.

+run() → Runs the application.

Relationship:

It has a direct association with the User class since it manages user authentication and interactions.

2. User

Attributes:

+username: String → The user's unique identifier.

+calendars: List<Calendar> → A list of calendars that belong to the user.

+current_timezone: string → The user's time zone.

+current_timezone_offset: int → The user's timezone offset.

Methods:

+newCalendar(calendar: Calendar): void → Creates a new calendar.

+removeCalendar(calendar: Calendar): void → Removes an existing calendar.

+shareCalendar(calendar: Calendar, user: User): void → Shares a calendar with another user.

+setTimezone(newOffset): void → Updates the user's timezone.

Relationship:

A one-to-many relationship with Calendar (one user can own multiple calendars).

3. Calendar

Attributes:

+name: String → The calendar's name.

+events: List<Event> → List of events in the calendar.

+isPublic: boolean → Indicates if the calendar is public.

+User → Reference to the owner.

Methods:

+add_event(event) → Adds an event.

+remove_event(event_title) → Removes an event by title.

+update_event(event_title) → Updates an existing event.

+view_calendar(user, year, month) → Displays events for a given month.

+share_calendar(user) → Shares the calendar with another user.

+toggle_public_private() → Switches between public and private mode.

Relationship:

Composition with Event (Calendar has a list of events).

Association with User (Each calendar belongs to a user).
Implements Viewable.

4. Event

Attributes:

- +title: String → The event name.
- +startTime: LocalTime → Start time.
- +endTime: LocalTime → End time.
- +Shared: boolean → Whether the event is shared.
- +sharedWith: List<User> → List of users who have access to the event.

Methods:

- +updateEvent(title: String, startTime: LocalTime, endTime: LocalTime): void → Updates the event details.
- +shareEvent(user: String): void → Shares the event with another user.
- +is_visible_to(user: String): void → Checks if a user can view the event.

Relationship:

Association with Calendar (An event belongs to a specific calendar).
Association with User (Events can be shared with specific users).

5. Month

Attributes:

- +name: String → Name of the month.
- +days: String → Represents the days.
- +calendar: Calendar → Reference to the associated calendar.

Relationship:

Association with Calendar (Each month belongs to a calendar).

6. Viewable (Interface)

Attributes:

- +name: String → Name of the viewable item.

Methods:

- +view_calendar(user, year, month) → Defines a contract for displaying a calendar.

Relationship:

Implemented by the Calendar class to ensure the method view_calendar() is available.