

## Requirement Analysis

Project Vision: We will be making a Calendar application that can recognize multiple people, support chatting or comments, recognize event proposals, allow votes on times, recognize resources, and disallow scheduling of two groups to the same resources. We may add or change some features in the future, but this is the baseline we have so far.

### Functional:

1. The **system** should recognize a host who will have the ability to add people to the calendar through e-mail, or some other form and adjust or restrict the administrative access of other members of the Calendar.
2. The **User Host** should be able to set and restrict access for different members
  - a. The System should let the host start with the highest level of access and be able to promote or demote the authority level of other members,
3. They **system** should recognize new members of the Calendar as having the lowest access( adjustable by the host)
4. The User Members of the lowest priority are only able to view the events on the Calendar and comment on event discussions.
5. The **User Member** should only be able to view events and allocated resources
6. They **System** should be able to recognize the resources that are available for each day, and whether or not those resources are in use
7. The **System** should support Host facilitated discussion boards per event that host can adjust to be open or closed to responses.
8. The **system** should support voting, between members of appropriate access level, on which resources should be used for an event given time-slots that can be voted on, and automatically disqualify resources that have passed.
9. The user Host should be able to add events and initiate votes on available time slots.

### Non-Functional:

- All forms of communication are expressed in English
- All event dates are posted and formatted according to the Gregorian calendar
- The timezone standard will be in Central Daylight Time

## Fully Dressed Use Cases

| Use Case Identification and History |   |                    |           |
|-------------------------------------|---|--------------------|-----------|
| <b>Use Case ID:</b>                 | Add Event                                   | <b>Version No:</b> | 1.0       |
| <b>End Objective:</b>               | An event is added to the calendar           |                    |           |
| <b>Created by:</b>                  | Jason Wu                                    | <b>On (date):</b>  | 9/27/2021 |
| <b>Last Update by:</b>              | Jason Wu                                    | <b>On (date):</b>  | 9/27/2021 |
| <b>Approved by:</b>                 |   | <b>On (date):</b>  |           |
| <b>User/Actor:</b>                  | Admin                                       |                    |           |
| <b>Trigger:</b>                     | Admin wants to add an event to the calendar |                    |           |
| <b>Frequency of Use:</b>            | Whenever admin wants to add an event        |                    |           |

| Preconditions   |
|---|
| It is possible for an event to be added to the Calendar |

| Basic Flow |   |   |
|------------|---|---|
| Step       | User Actions  | System Actions  |
| 1          | Member prompts system to add an event                     | Checks member access level; Allows admin/host access  |
| 2          | admin/host creates event                                  | Prompts for voting or no voting   |
| 3          | No vote   | Prompts for which dates/resources to schedule   |
| 4          | Schedule resources  | No conflicts found, allocate resources to event; prompt for event name, location, description |
| 5          | admin/host inputs event title, location, description info | Event title, location, and description are set;   |
| 6          | Clicks “done”   | Event is added onto Calendar, where details can be viewed through the UI                      |

| Alternate Flow |  |  |
|----------------|--|--|
| Step           | User Actions   | System Actions   |
| 3.a.1          | Basic flow from step 3<br>Vote                                     | Sends notification to applicable members, and prompts for voting time  |
| 3.a.2          | Host/admin inputs resources to be voted on                         | opens up voting interface on the side of the window and sends notification to members and prompts them to vote |
| 3.a.3          | Host/admin votes then waits for users to vote within allotted time | System closes voting and counts votes;   |
| 3.a.4          | Go to Basic Flow Step 3  |  |

| Alternate Flow |                         |   |
|----------------|-------------------------|---|
| Step           | User Actions            | System Actions                                |
| 4.a.1          | Basic Flow step 4       | Conflicts Found; prompt for time change       |
| 4.a.2          | Go to Basic Flow Step 3 | Prompt for resources, go to Basic Flow Step 4 |

| Alternate Flow |  |   |
|----------------|--|---|
| Step           | User Actions                           | System Actions  |
| 5.a.1          | Basic Flow step 5<br>No title is input | Set Event Title = Event Description;<br><br>If no description, Set Event Title = Event; |
| 5.a.2          | Go to Basic Flow Step 5                |   |

| Alternate Flow |  |                |
|----------------|--|----------------|
| Step           | User Actions                                 | System Actions |
| 5.b.1          | Basic Flow step 5<br>No description is input | No action      |
| 5.b.2          | Go to Basic Flow Step 5                      |                |

| Alternate Flow |   |                     |
|----------------|---|---------------------|
| Step           | User Actions                              | System Actions      |
| 5.c.1          | Basic Flow step 5<br>No location is input | Prompt for Location |
| 5.c.2          | Go To Basic Flow Step 5                   |                     |

| Exception Flow |   |  |
|----------------|---|--|
| Step           | User Actions  | System Actions   |
| 2-6.a.1.       | At any point during event creation, user may click "Cancel" | Cancel Event Creation. All input data is lost, Calendar remains unchanged from before Add Event Prompt |

| Post conditions                   |
|-----------------------------------|
| 1. New event is added to Calendar |

| Fully-dressed use case             |   |                    |           |
|------------------------------------|---|--------------------|-----------|
| <b>Use Case ID:</b>                | Host facilitated event discussion board                         | <b>Version No:</b> | 1.0       |
| <b>End Objective:</b>              | A discussion thread has been opened for a particular event      |                    |           |
| <b>Created by:</b>                 | Jacob Senior  | <b>On (date):</b>  | 9/27/2021 |
| <b>Last Update by:</b>             | Jacob Senior  | <b>On (date):</b>  | 9/27/2021 |
| <b>Approved by:</b>                |   | <b>On (date):</b>  |           |
| <b>Stakeholders and Interests:</b> | Any admin   |                    |           |
| <b>Trigger:</b>                    | Admin wants a task to add a discussion thread to an event       |                    |           |
| <b>Frequency of Use:</b>           | Any time the admin wants to add a discussion thread to an event |                    |           |

| Preconditions  |
|--|
| The desired event the admin is trying to access already exists |

| Basic Flow |  |   |
|------------|--|---|
| Step       | User Actions   | System Actions  |
| 1          | The admin selects an existing event                    | The system redirects the admin to the discussion thread for the event   |
| 2          | The admin chooses to open the event's discussion board | Check the permissions of the user to ensure they are an admin. Prompt the admin if they want the discussion to be public or private               |
| 3          | The admin chooses public                               | The discussion board is opened for public discussion. The system prompts the admin for a discussion board title                                   |
| 4          | The admin does not add a title to the event            | The discussion thread's title is set to the event name. The discussion thread for the event is updated and the members are notified of the change |

| Alternate Flow |              |                |
|----------------|--------------|----------------|
| Step           | User Actions | System Actions |



|              |   |  |
|--------------|---|--|
| <b>2.a.1</b> | User does not have admin privileges               | The system outputs an error message to the user  |
| <b>2.a.2</b> | The user accepts the error prompt                 | The request is cancelled   |
| <b>3.a.1</b> | The admin chooses private                         | The discussion thread is opened, but is not open to the public for comments. The system prompts the admin for a discussion board title |
| <b>4.a.1</b> | A title was not provided for the discussion board | The title of the event is used as the title of the discussion board  |

|   |
|---|
| Post conditions                                     |
| 1. A discussion board for the event has been opened |

| Use Case Identification and History |  |                    |           |
|-------------------------------------|--|--------------------|-----------|
| <b>Use Case Name:</b>               | Add New Member   | <b>Version No:</b> | 1.0       |
| <b>End Objective:</b>               | A new person is added to the calendar  |                    |           |
| <b>Created by:</b>                  | Zane Pitzer  | <b>On (date):</b>  | 9/27/2021 |
| <b>Last Update by:</b>              | Zane Pitzer  | <b>On (date):</b>  | 9/27/2021 |
| <b>Approved by:</b>                 | Jason Wu   | <b>On (date):</b>  | 9/27/2021 |
| <b>Users/Actors:</b>                | <p>Host/Administration Officer</p> <ul style="list-style-type: none"> <li>- This person is the leader, or one of the leaders, of the calendar. This person is responsible for adding/removing people from the calendar and adding events to be voted on to the calendar</li> </ul> <p>New Member</p> <ul style="list-style-type: none"> <li>- This is the person being added to the calendar</li> <li>- They are responsible for joining the calendar once invitation is sent to them</li> </ul> |                    |           |
| <b>Scope:</b>                       | Calendar System  |                    |           |

|                          |   |
|--------------------------|---|
| <b>Frequency of Use:</b> | Every time a new member needs to be added to the calendar |
|--------------------------|---|

|  |
|--|
| <b>Preconditions</b>                               |
| The calendar instance has been created by the host |

| <b>Basic Flow</b> |  |  |
|-------------------|--|--|
| <b>Step</b>       | <b>User Actions</b>  | <b>System Actions</b>  |
| <b>1</b>          | Host/Administration Officer wants to add someone new to the calendar | none   |
| <b>2</b>          | Host/Administration Officer opens the calendar                       | Displays home page of calendar for a Host/Administration Officer |
| <b>3</b>          | Host/Administration Officer clicks on "Add New                       | Opens "Add New Member" popup page                                |

|          |   |   |
|----------|---|---|
|          | Member” button on home page of calendar   |   |
| <b>4</b> | Host/Administration Officer types in email of new member  | <p>Inside “Add New Member” popup page box 1:</p> <ul style="list-style-type: none"> <li>- Gives Host/Administration Officer the option to type in the email of the possible new member in first box</li> </ul>  |
| <b>5</b> | Host/Administration Officer selects priority of new member to be a basic member                 | <p>Inside “Add New Member” popup page box 2:</p> <ul style="list-style-type: none"> <li>- Sets a default priority of the possible new member as a basic member</li> <li>- Setting the new user as a basic member makes it so that they can only vote on the possible events added by the Host/Administration Officer</li> </ul> |
| <b>6</b> | Host/Administration Officer sends invitation to new member by pressing “Send Invitation” button | “Send Invitation” button sends the invitation via email to the possible new member; member accepts  |

Alternate Flow: Host/Administration Officer sets priority of new member as Administration Officer

| Step  | User Actions   | System Actions   |
|-------|--|--|
| 5.a.1 | Host/Administration Officer selects priority of new member to Administration Officer | <p>Inside “Add New Member” popup page box 2:</p> <ul style="list-style-type: none"> <li>- Sets a default priority of the possible new member as a basic member, but gives the option for the Host/Administration Officer to change their priority Administration Officer</li> <li>- Setting the priority as Administration officer gives the new member the same priority and internal calendar abilities as the Host and other Administration Officers in that they can create events to be voted on and add new members to the calendar, as well as vote on possible events</li> </ul> |

Alternate Flow: Invitation is not accepted by user after 24 hours

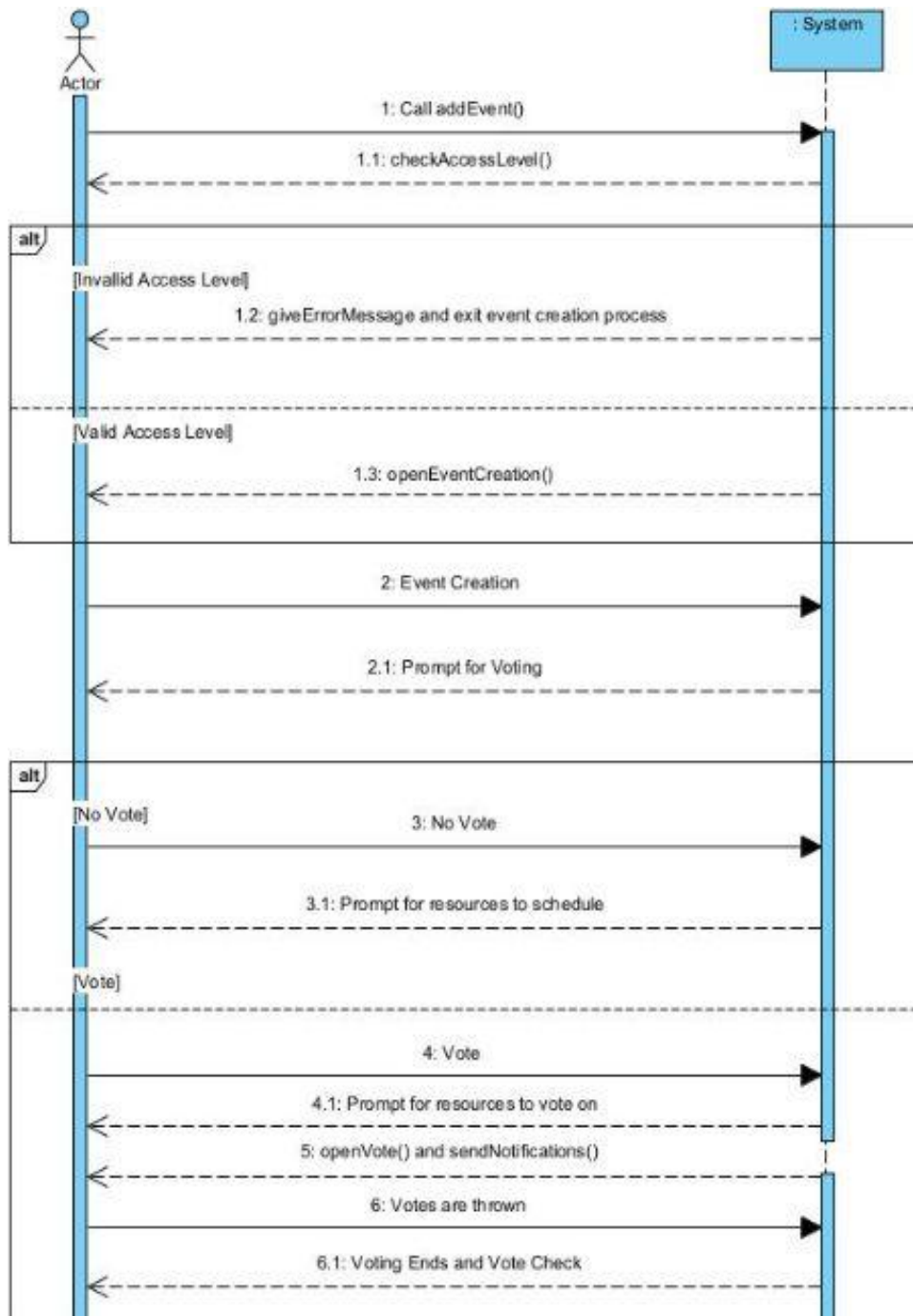
| Step         | User Actions  | System Actions   |
|--------------|---|--|
| <b>6.a.1</b> | Possible new member still has not accepted the invitation sent to them after 24 hours         | The invitation times out and the sent email is no longer valid to join the calendar  |
| <b>6.a.2</b> | Host/Administration Officer resends the invitation to the possible new member; member accepts | Sends email to Host/Administration Officer who sent the invitation and gives them the option to resend invitation to possible new member |

| Alternate Flow: Host/Administration Officer wants to cancel invitation |  |   |
|--|--|---|
| Step   | User Actions   | System Actions  |
| <b>6.b.1</b>   | Host/Administration Officer wants to cancel the invitation send to possible new member | none  |
| <b>6.b.2</b>   | Host/Administration Officer goes to "Members" page                                     | Displays page of all members currently part of the calendar   |
| <b>6.b.3</b>   | Host/Administration Officer goes to "Pending" page                                     | Displays page of all members who have had an invitation sent to them but have not yet accepted the invitation |

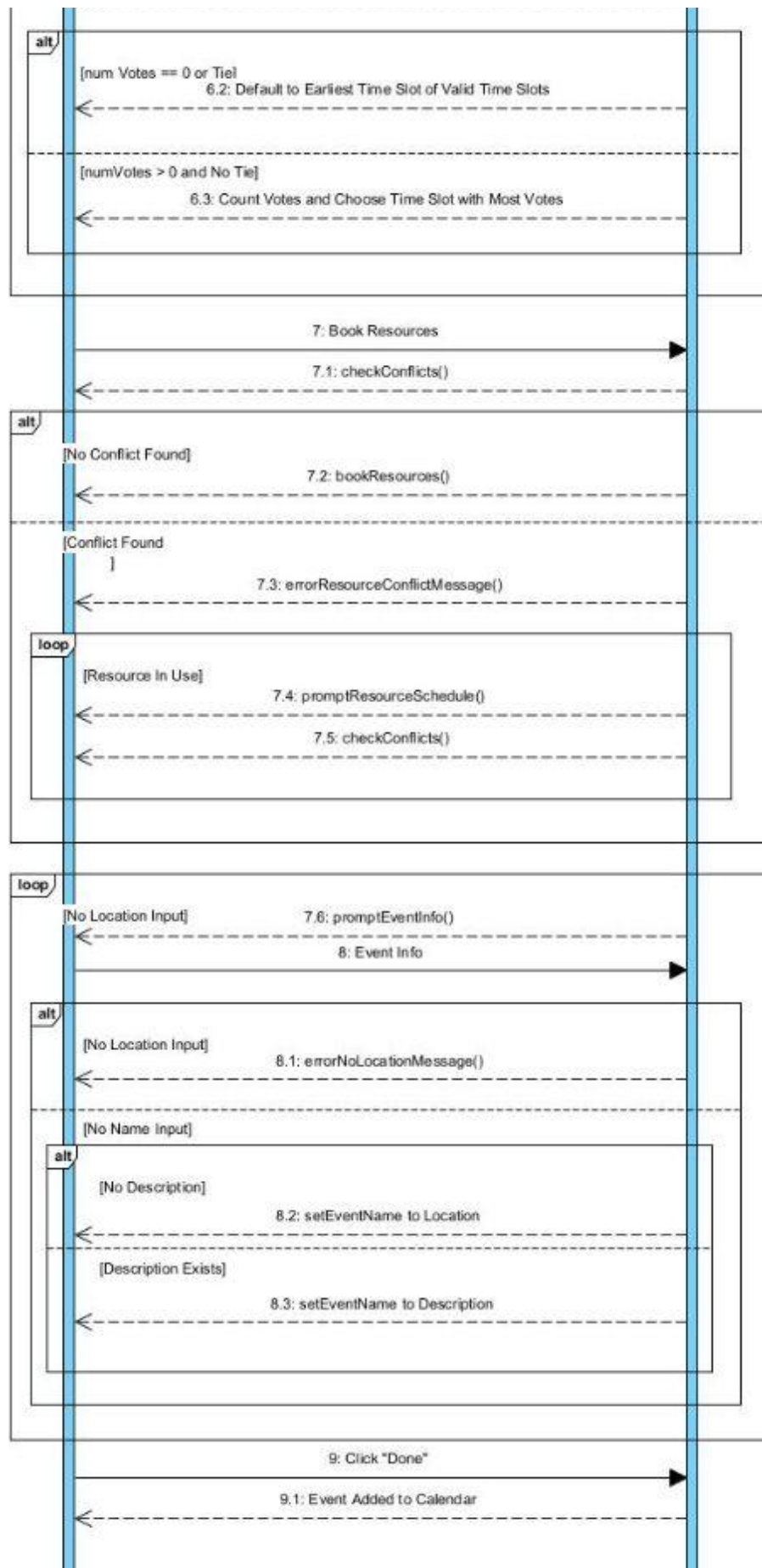
|              |   |   |
|--------------|---|---|
| <b>6.b.4</b> | Host/Administration Officer presses “cancel invitation” button next to the possible new member that they want to cancel the invitation to | “cancel invitation” button both makes the link to join the calendar in the invitation email invalid and also sends a new email to the possible member whose invitation was canceled telling them so |
|--------------|---|---|

| Post conditions                                   |
|---|
| 1. A new basic member is now part of the calendar |

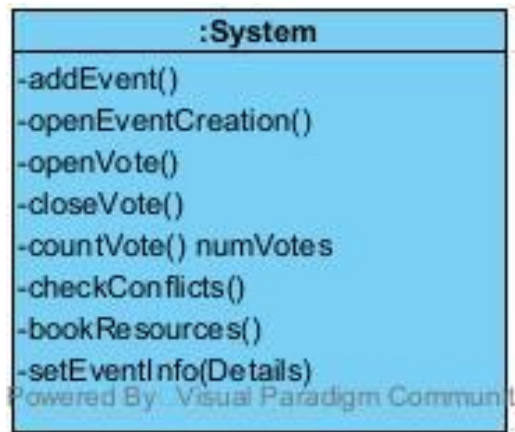
## SSD - UC - Add Event







## Operation Contracts: UC - Add Event



Name: addEvent()

Responsibilities: start creation of a possible new event

Pre-conditions: Admin tries to add a new event to the Calendar

Post-conditions: New event is added to the Calendar

Name: openEventCreation()

Responsibilities: Allows admin to set details of event creation

Pre-conditions: Admin tries to add a new event to the Calendar

Post-conditions: New event has details set

Name: openVote()

Responsibilities: Allows voting on time slots/resources

Pre-conditions: Admin wants to allow member voting

Post-conditions: Voting board is open to member interaction

Name: closeVote()

Responsibilities: Closes voting on specific vote

Pre-conditions: Admin wants to close vote, or voting time has ended

Post-conditions: Voting board has votes and is closed to member interaction

Name: countVotes() numVotes

Responsibilities: Counts and stores total votes, and votes per time slot

Pre-conditions: Voting board has closed

Post-conditions: votes are tallied, and total number of votes are returned

Name: checkConflicts()

Responsibilities: Checks to see if a time slot/period is open

Pre-conditions: a time slot is about to be booked

Post-conditions: time slot availability is checked and returned

Name: bookResources()

Responsibilities: Occupies specified time slots

Pre-conditions: Time slots to be booked have been input/voted on

Post-conditions: specified time slots are now booked

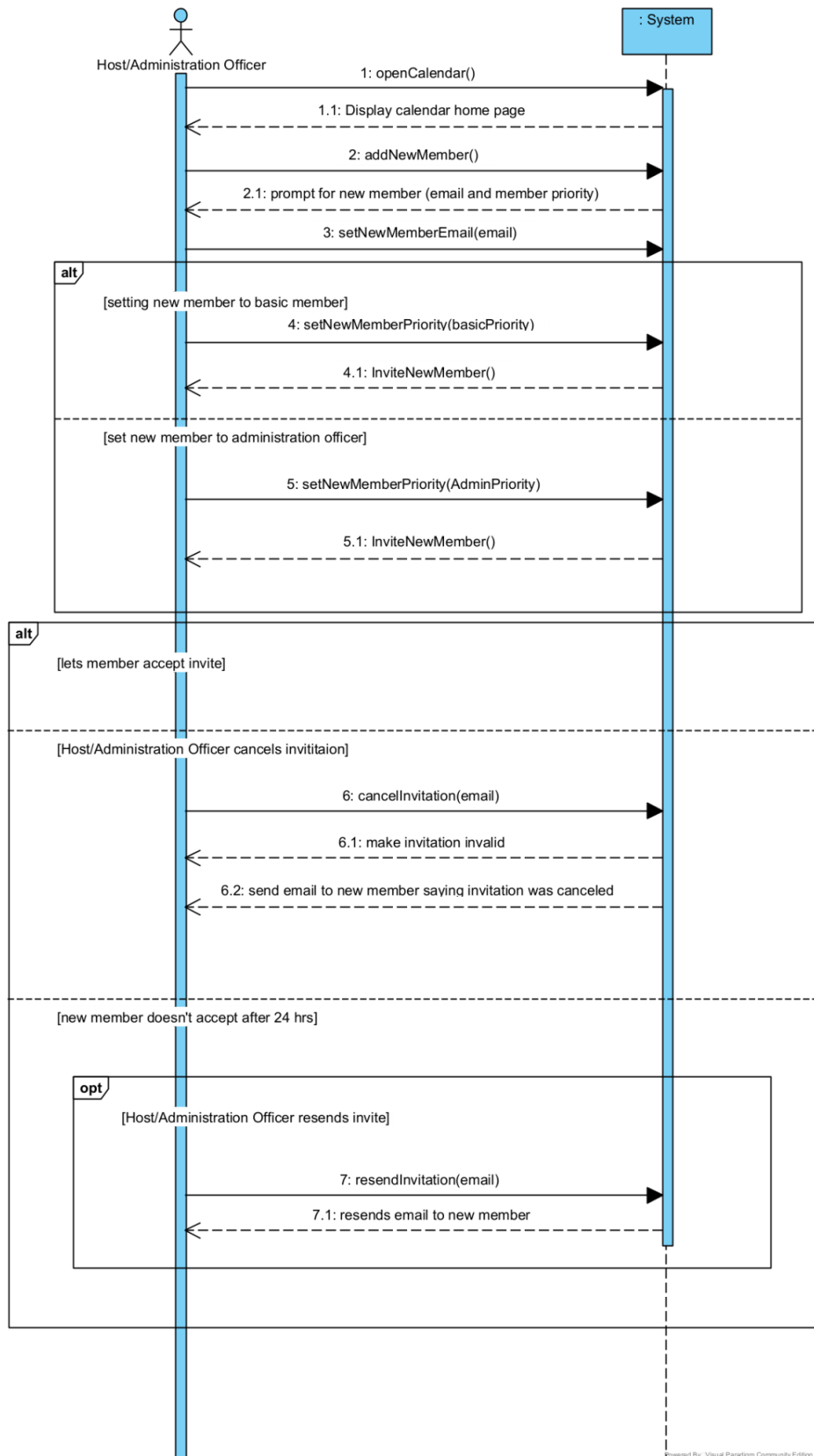
Name: setEventInfo(Details)

Responsibilities: Sets the Event's name, description, and Location

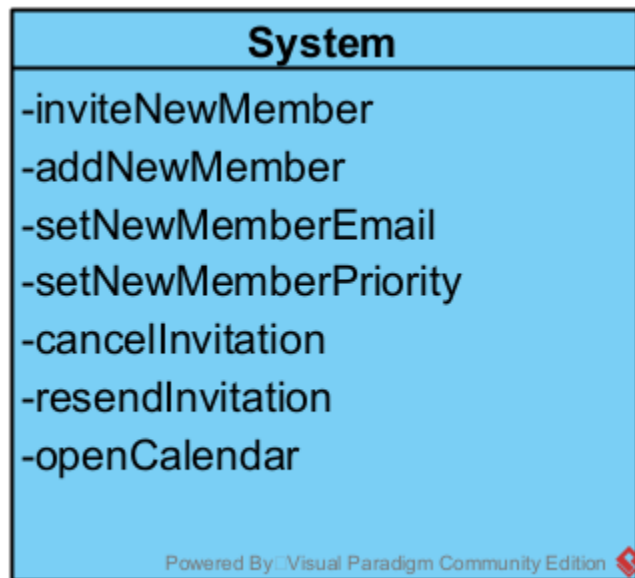
Pre-conditions: Admin wants to set details for new event

Post-conditions: Event's name and location are set, Event's description might be set

## SSD - UC - Add New Member



## Operation Contracts: UC – Add New Member



Name: inviteNewMember()

Responsibilities: send the invite (via email) to the possible new member

Pre-conditions: Admin member input the priority and email of the new member

Post-conditions: invitation is sent to member

Name:

addNewMember()

Responsibilities: to set the priority and email of the new member

Pre-conditions: the calendar exists and is open

Post-conditions: email invite will be sent to new member

Name: setNewMemberEmail(email)

Responsibilities: set the member email

Pre-conditions: a new member was created

Post-conditions: email is set

Name: setNewMemberPriority(priority)

Responsibilities: set the member priority

Pre-conditions: a new member was created

Post-conditions: priority is set

Name: cancelInvitation(email)

Responsibilities: cancel the invitation sent to the possible new member

Pre-conditions: invitation was sent to possible new member

Post-conditions: invitation is made invalid and email is sent to possible new member stating that

Name: resendInvitation(email)

Responsibilities: resend the same invitation just sent to the possible new member

Pre-conditions: possible new member did not accept invitation after 24-hours

Post-conditions: invitation is sent again to the possible new member

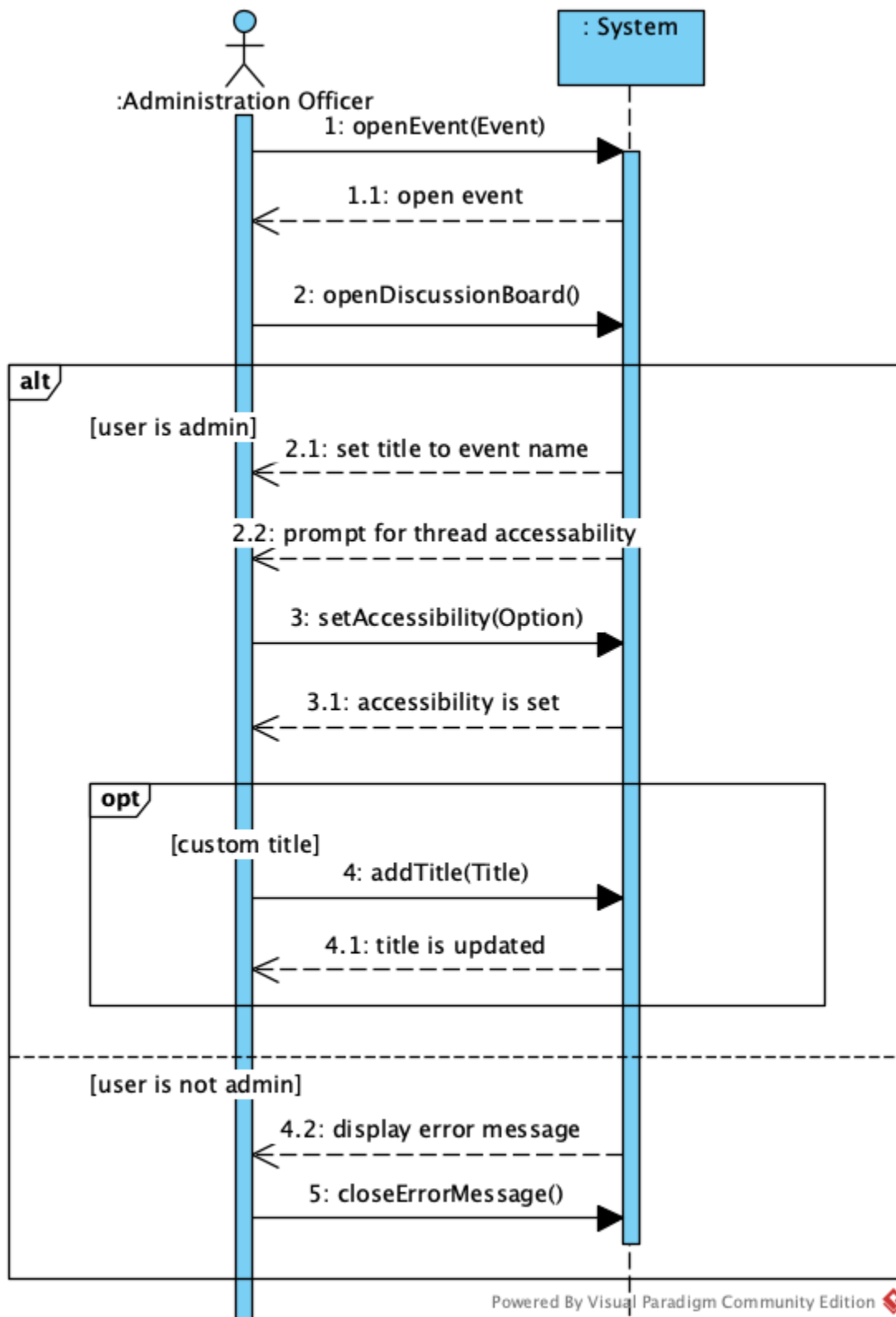
Name: openCalendar()

Responsibilities: open the calendar to the home page

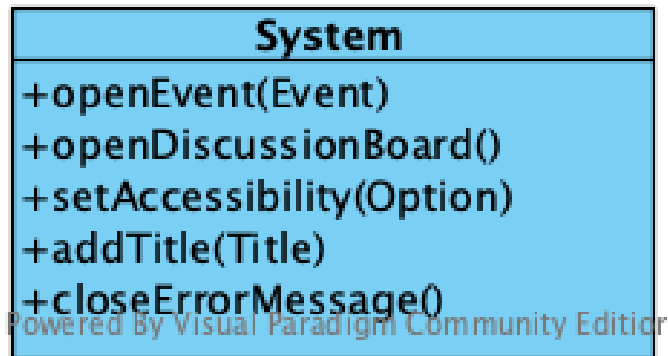
Pre-conditions: the calendar exists

Post-conditions: the calendar is opened to home page

## SSD - UC - Host facilitated event discussion board



## Operation Contracts: UC - Host facilitated event discussion board



Name: openEvent(Event)

Responsibilities: Display the selected event's details to the user

Pre-conditions: The event exists

Post-conditions: The event details are displayed to the user

Name: openDiscussionBoard()

Responsibilities: Opens the discussion board of the given event

Pre-conditions: The given event already exists

Post-conditions: The discussion board for the event has been opened

Name: setAccessibility(Option)

Responsibilities: Sets the accessibility of the discussion board to private or public

Pre-conditions: The event already exists; The option is either public or private

Post-conditions: The accessibility settings of the discussion board have been set

Name: addTitle(Title)



Responsibilities: Sets the title of the event's discussion board

Pre-conditions: The given event already exists

Post-conditions: The title of the event has been set

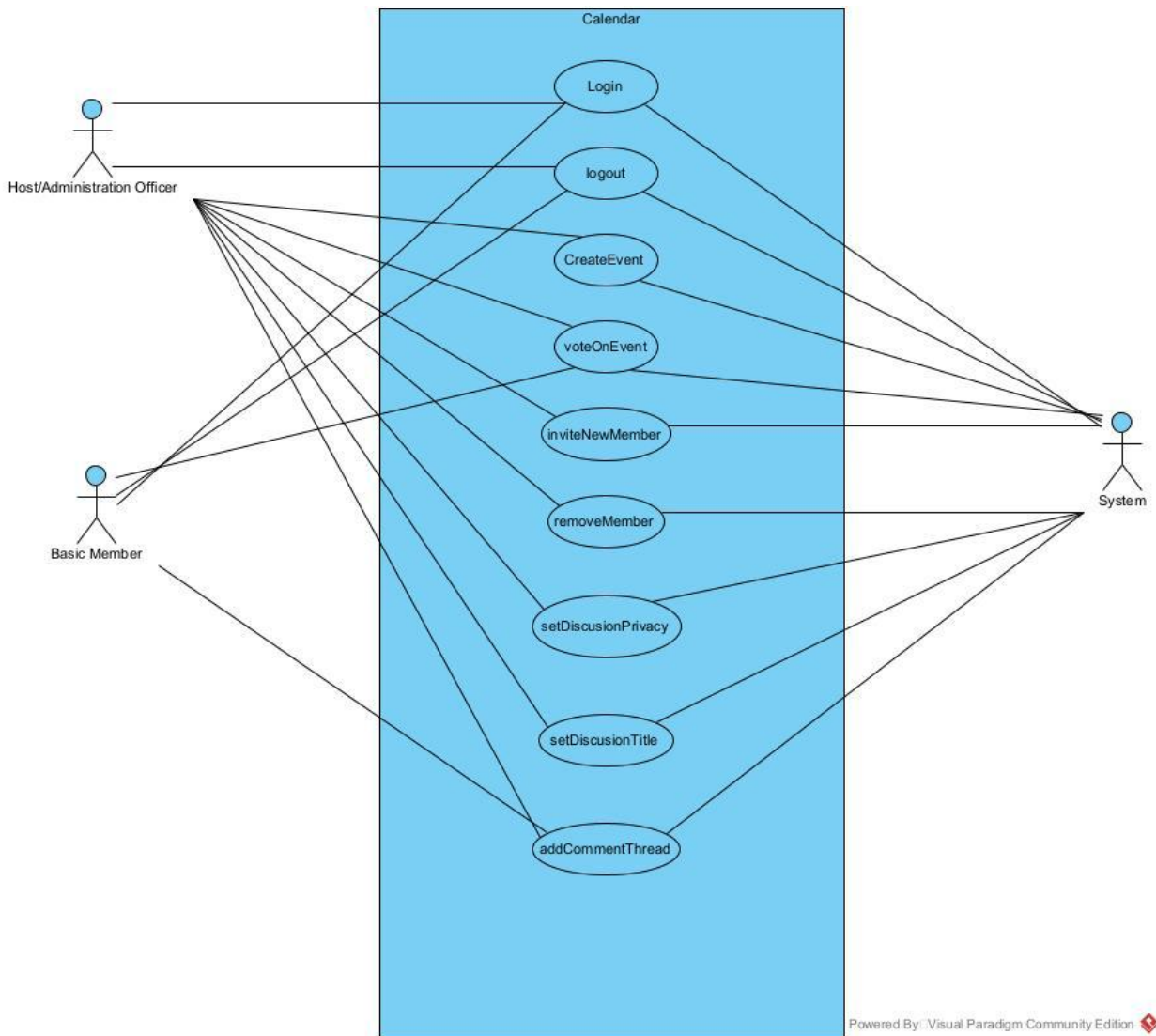
Name: `closeErrorMessage()`

Responsibilities: Closes an error message displayed to the user

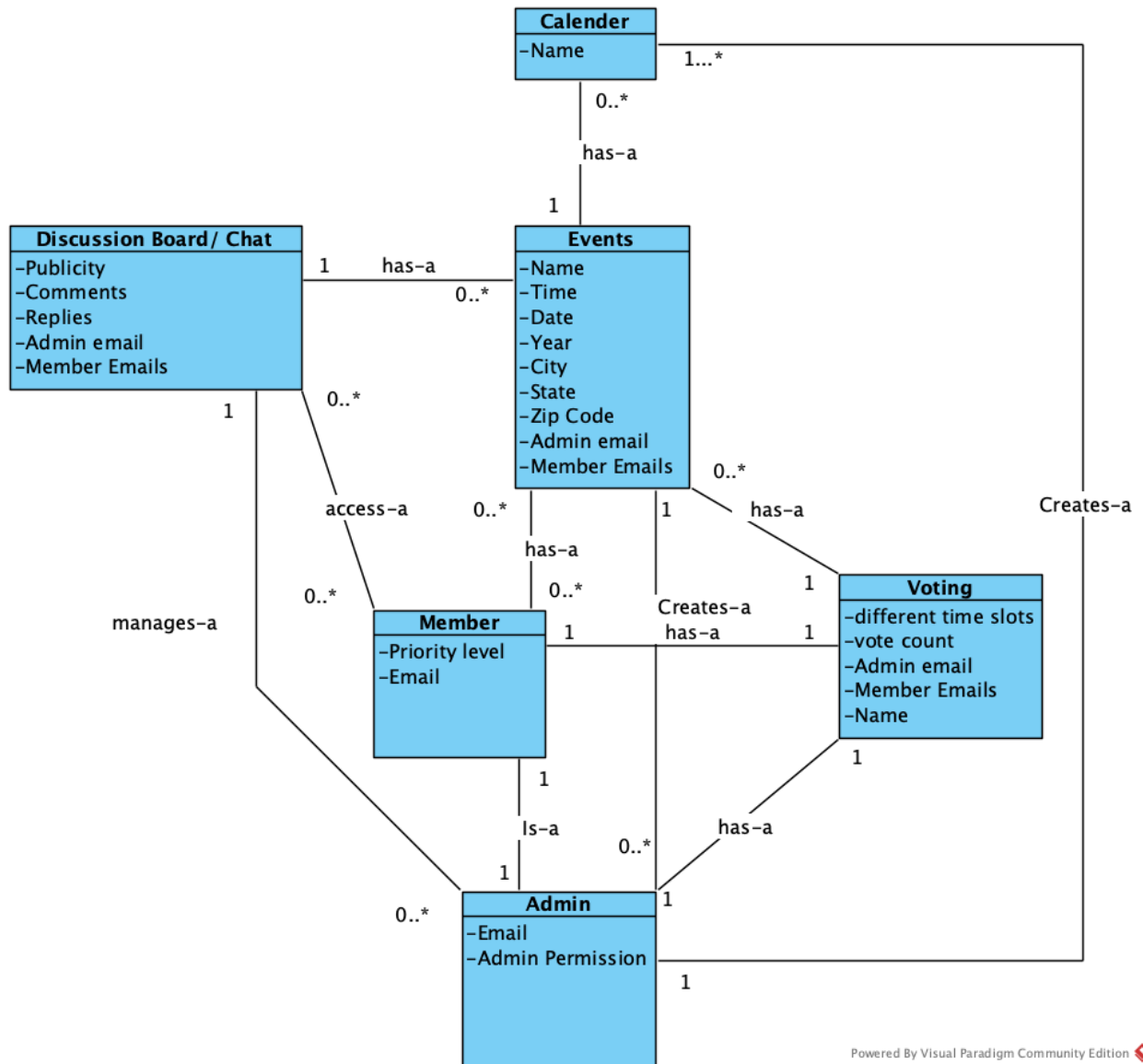
Pre-conditions: The given error message exists

Post-conditions: The error message is closed

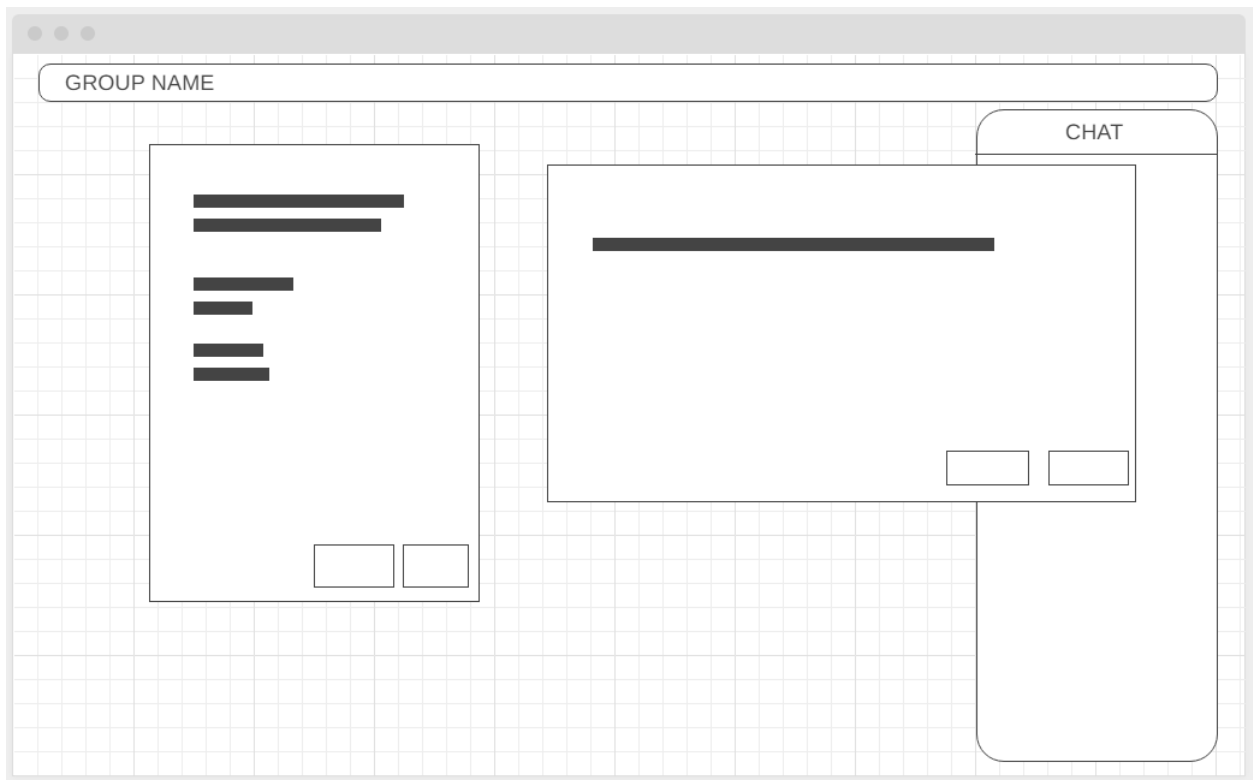
## Calendar Use Case Diagram



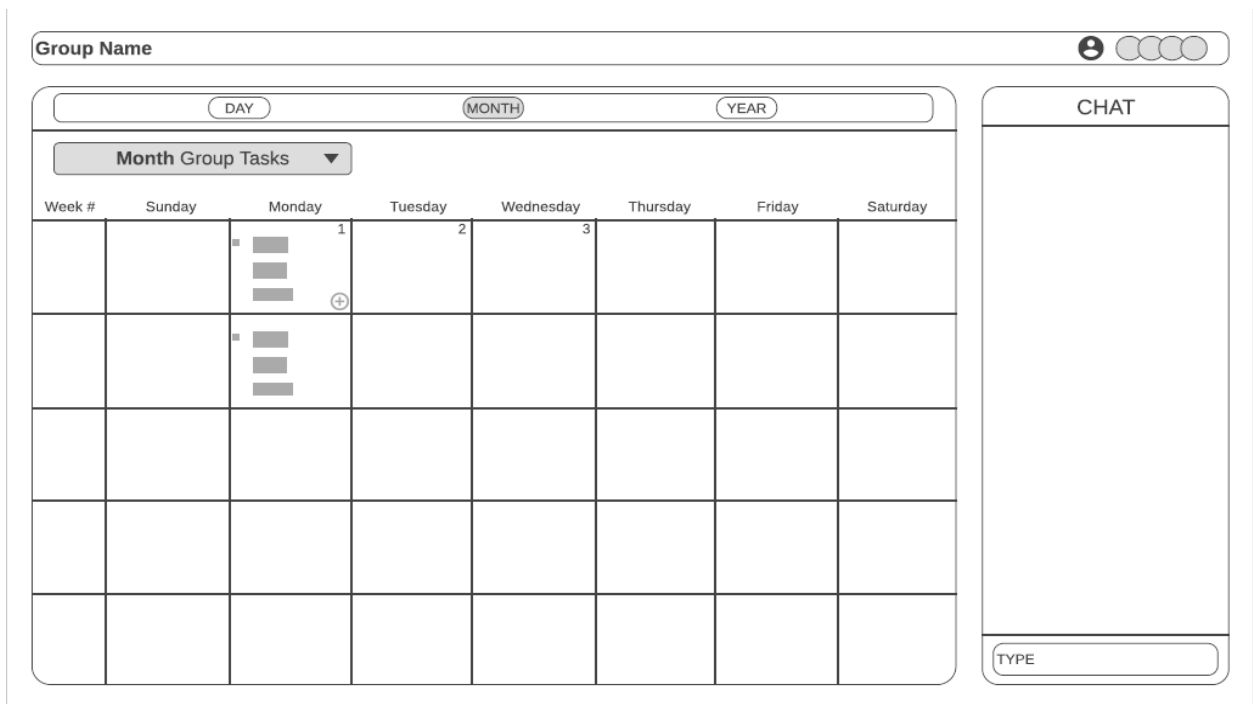
## Calendar Domain Model



## Wireframe



## User Interface Sketches



Group Name

DAY

MONTH

YEAR

Month Group Tasks

Week #

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

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CHAT

TYPE

Group Name

DAY

MONTH

YEAR

Month Group Tasks

Week #

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

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TYPE



## Time Cards:

Jacob Senior:

Total hours Worked: 11 hours

Work Date: 9/27/2021 -

Time: 2:30 PM - 8:00 PM

11:30 PM - 12:00 AM

- Fully Dressed Use Case
- SSD
- Non-functional requirements

Work Date: 9/28/2021 -

Time: 7:00 PM - 11:00 PM

- Added Trello timecards
- Finished discussion board SSD
- Discussion board system operations/operation contracts
- Updated Issues
- Added members and assigned tasks to Gantt diagram

Work Date: 9/29/2021 -

Time: 2:30 PM -3:30

- Added progress to pdf
- Adjusted documentation formatting

Jason Wu:

Total hours Worked: 13 hours

Work Date: 9/27/2021 -

Time: 2:30 PM - 12:00 AM

- Project planning and managing
- Project Vision
- Project Presentation
- Fully Dressed Use Case

Work Date: 9/29/2021

Time: 2:30 PM - 6:00

- Add Event SSD
- Add Event System Operations
- Add Event System Contract Operations
- Added Iteration 1 Items to PDF

Zane Pitzer:

Total hours Worked: 9.5 hours

Work Date: 9/27/2021 -

Time: 3:30 PM - 12:00 AM

- Fully Dressed Use Case
- Use-Case Diagram for Use Case
- SSD
- Domain Model
- System Operations

Work Date: 9/29/2021

Time: 3:30 PM - 4:30 PM

- Fixed Add Member SSD
- Created Add Member Contract Operations
- Created Add Member System Operations

William Ding:

Total hours Worked: 4 hours

Work Date: 9/27/2021 -

Time: 8:00 PM - 12:00 AM

- Domain diagram for the project
- Issue Tracking
- Use case diagram
- Creation of use cases

Ricky Zhao:

Total hours Worked: 5.5 hrs

Work Date: 9/27/2021 -

Time Started: 8:00 PM - 1:30 AM

- Wireframe user interface sketch
- Interface design



## Issue tracking:

<https://github.com/lanewb/SE1-Something/issues>

- 2 group members sick for a time
- 1 member got in car accident
- Hard time meeting up all together as a team so far
- Gathering team members to work on the project
- Domain model errors
- Fully dressed use cases not uniformly formatted (alternate flow)
- Missing Use Case Diagrams

# Untitled Gantt Project

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Sep 29, 2021

<http://>

Project manager

Jason Wu

Project dates

Aug 26, 2021 - Dec 9, 2021

Completion

0%

Tasks

29

Resources

5

## Tasks

| Name                          | Begin date | End date |
|-------------------------------|------------|----------|
| Analysis                      | 8/26/21    | 11/10/21 |
| project vision                | 8/26/21    | 9/27/21  |
| team assebly                  | 8/26/21    | 8/26/21  |
| infrastructure initialization | 8/27/21    | 9/30/21  |
| requirement analysis          | 8/30/21    | 10/19/21 |
| use cases                     | 9/16/21    | 10/19/21 |
| system sequence diagrams      | 9/27/21    | 10/19/21 |
| traceability matrix           | 9/27/21    | 10/20/21 |
| system operations             | 9/27/21    | 10/21/21 |
| wireframes                    | 9/27/21    | 10/19/21 |
| domain model                  | 9/27/21    | 10/22/21 |
| presentation and reporting    | 9/28/21    | 9/28/21  |
| gantt diagram                 | 8/26/21    | 11/10/21 |
| Design                        | 9/27/21    | 10/29/21 |
| design model                  | 9/27/21    | 10/8/21  |
| sequence diagrams             | 10/4/21    | 10/14/21 |
| package diagrams              | 9/28/21    | 10/8/21  |
| GRAPS patterns                | 10/5/21    | 10/15/21 |
| test coverage                 | 10/8/21    | 10/26/21 |
| prototyping                   | 10/8/21    | 10/29/21 |
| presentation and reporting    | 10/26/21   | 10/26/21 |
| Implementation                | 9/27/21    | 12/8/21  |
| backend                       | 9/27/21    | 11/10/21 |
| user interface                | 9/30/21    | 11/11/21 |
| user input validation         | 11/1/21    | 11/12/21 |
| imports/exports               | 11/5/21    | 11/30/21 |
| unit-testing                  | 11/8/21    | 12/3/21  |

Tasks

| Name                       | Begin date | End date |
|----------------------------|------------|----------|
| documentation              | 9/30/21    | 12/7/21  |
| presentation and reporting | 11/23/21   | 12/8/21  |

Resources

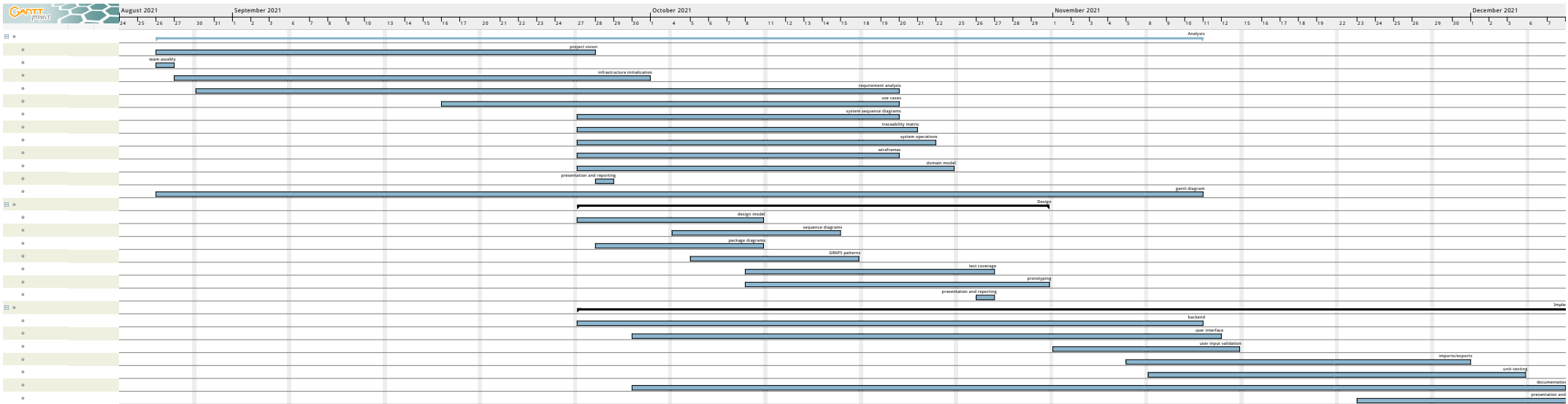
| Name         | Default role    |
|--------------|-----------------|
| Jacob Senior | developer       |
| Jason Wu     | project manager |
| Will Ding    | developer       |
| Zane Pitzer  | developer       |
| Ricky Zhao   | developer       |

# Untitled Gantt Project

## Gantt Chart

Sep 29, 2021

5



# Untitled Gantt Project

## Resources Chart

