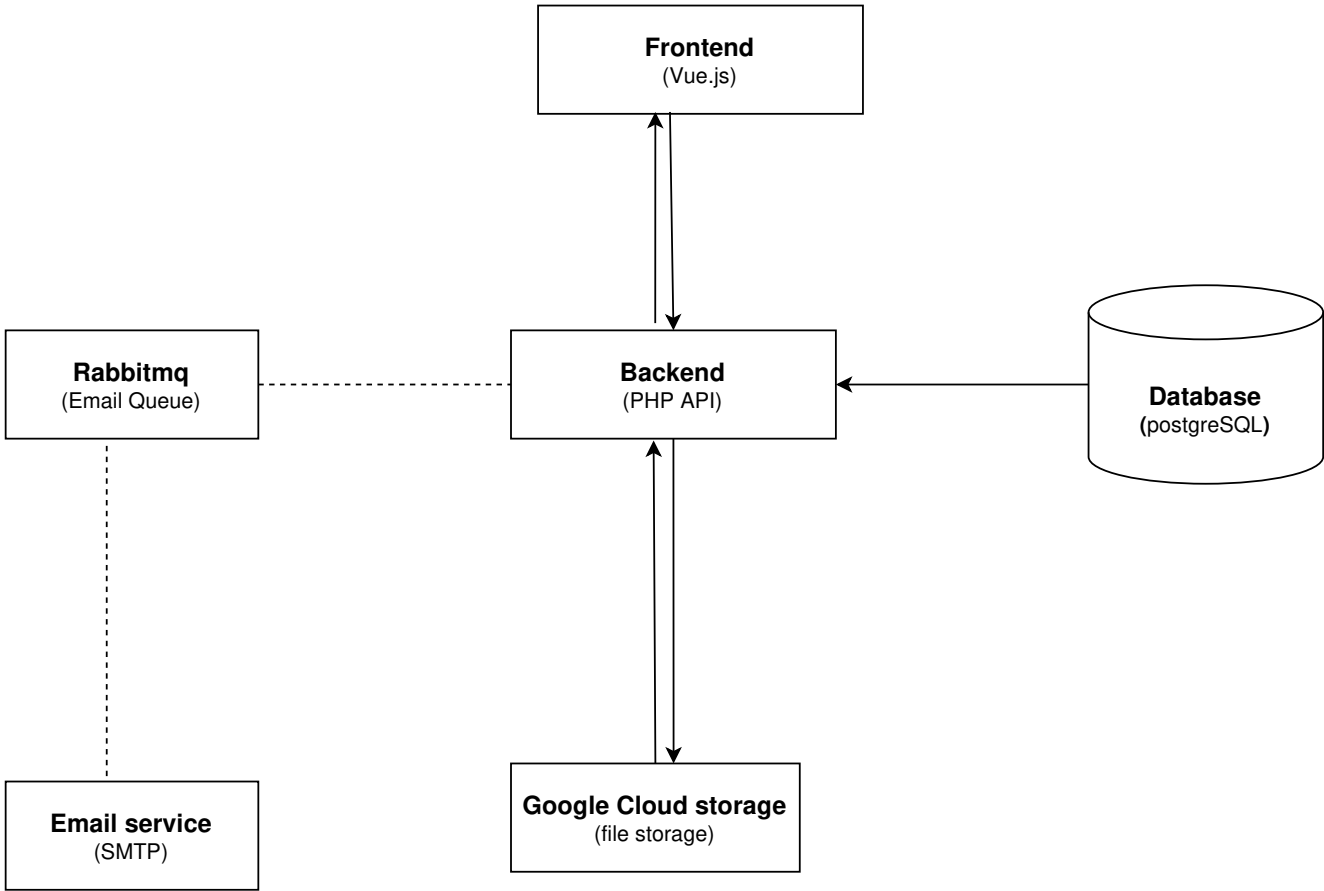


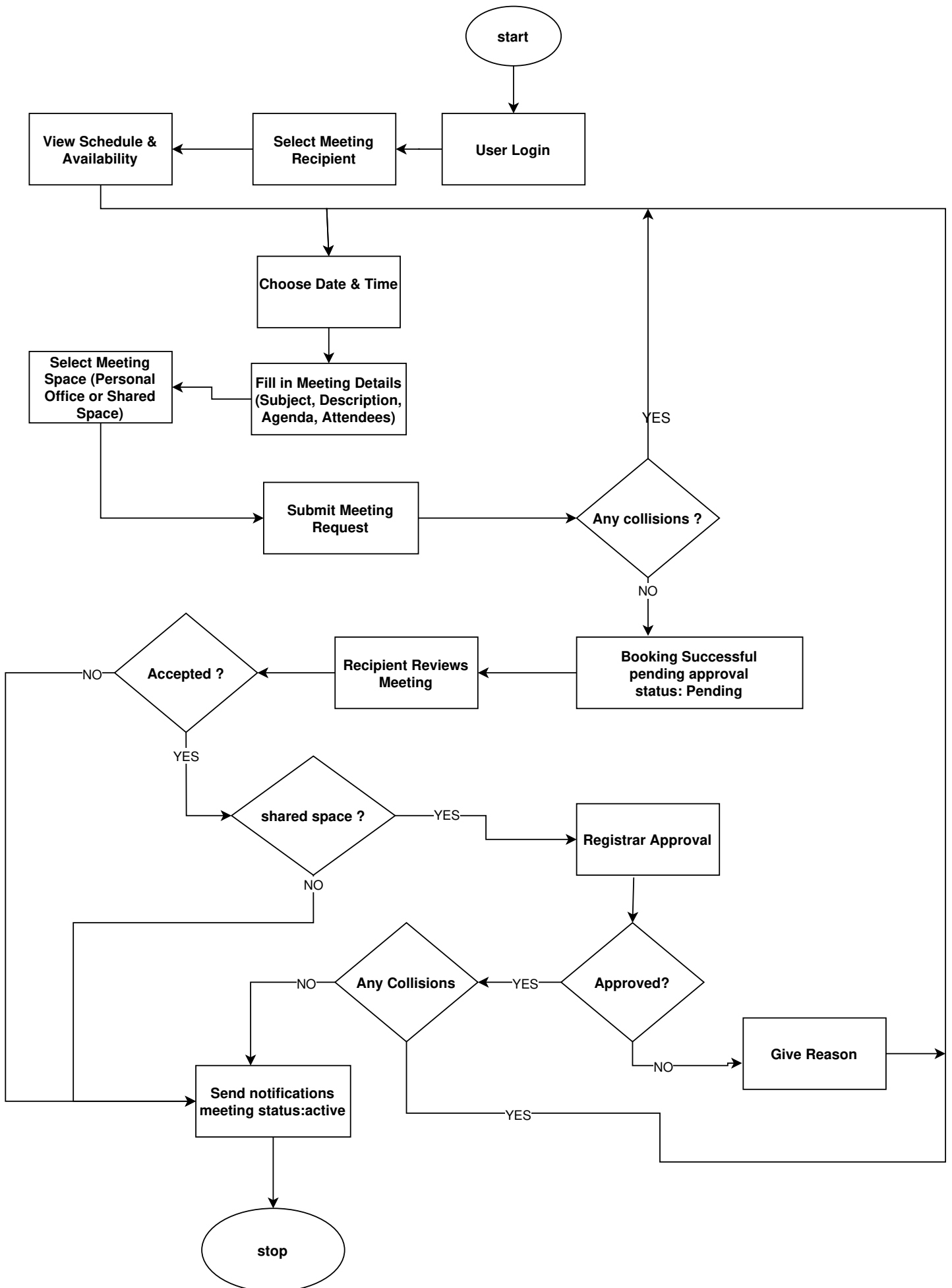
**Tummeet System Architecture**



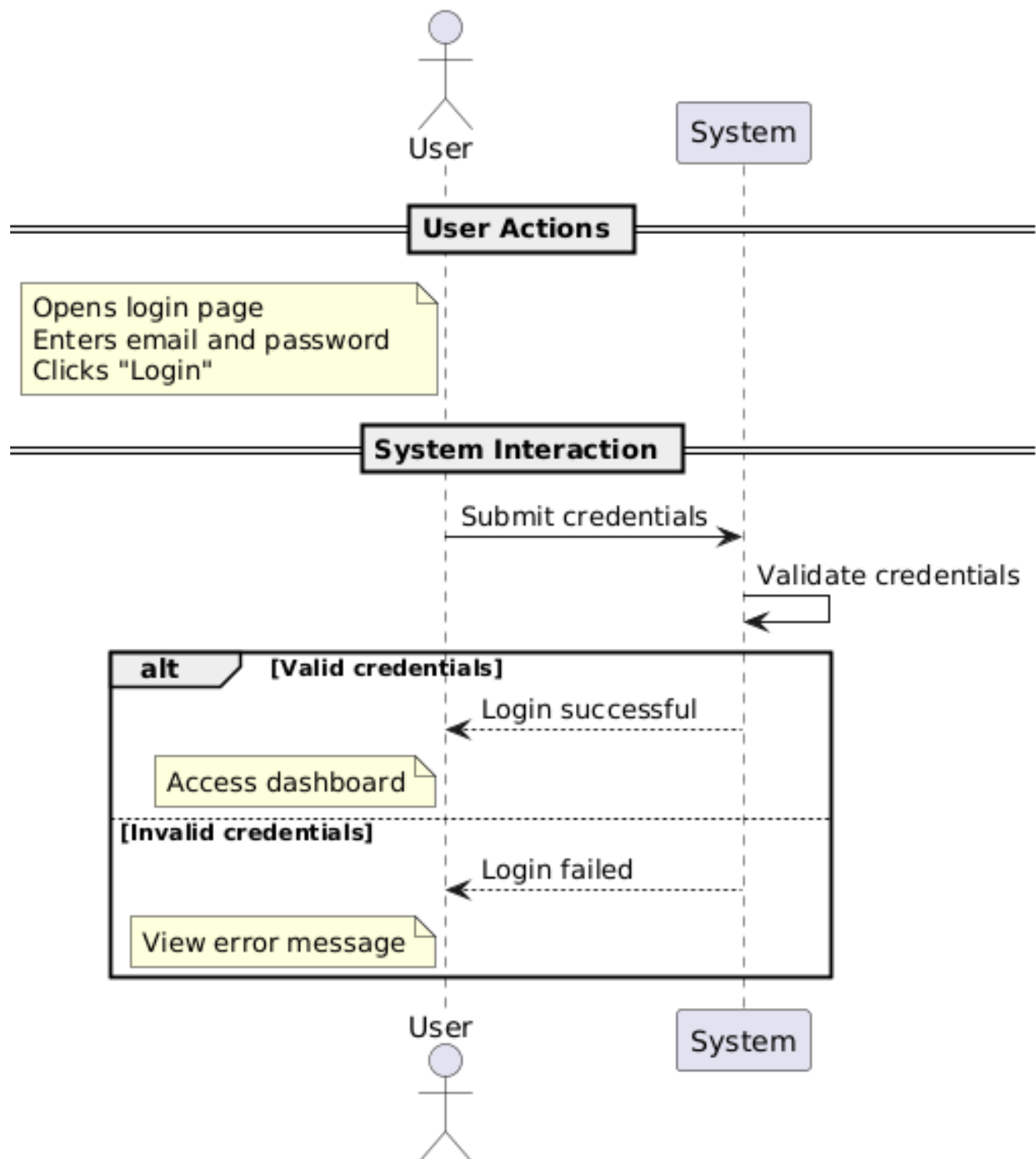
# Tum Meetings manager



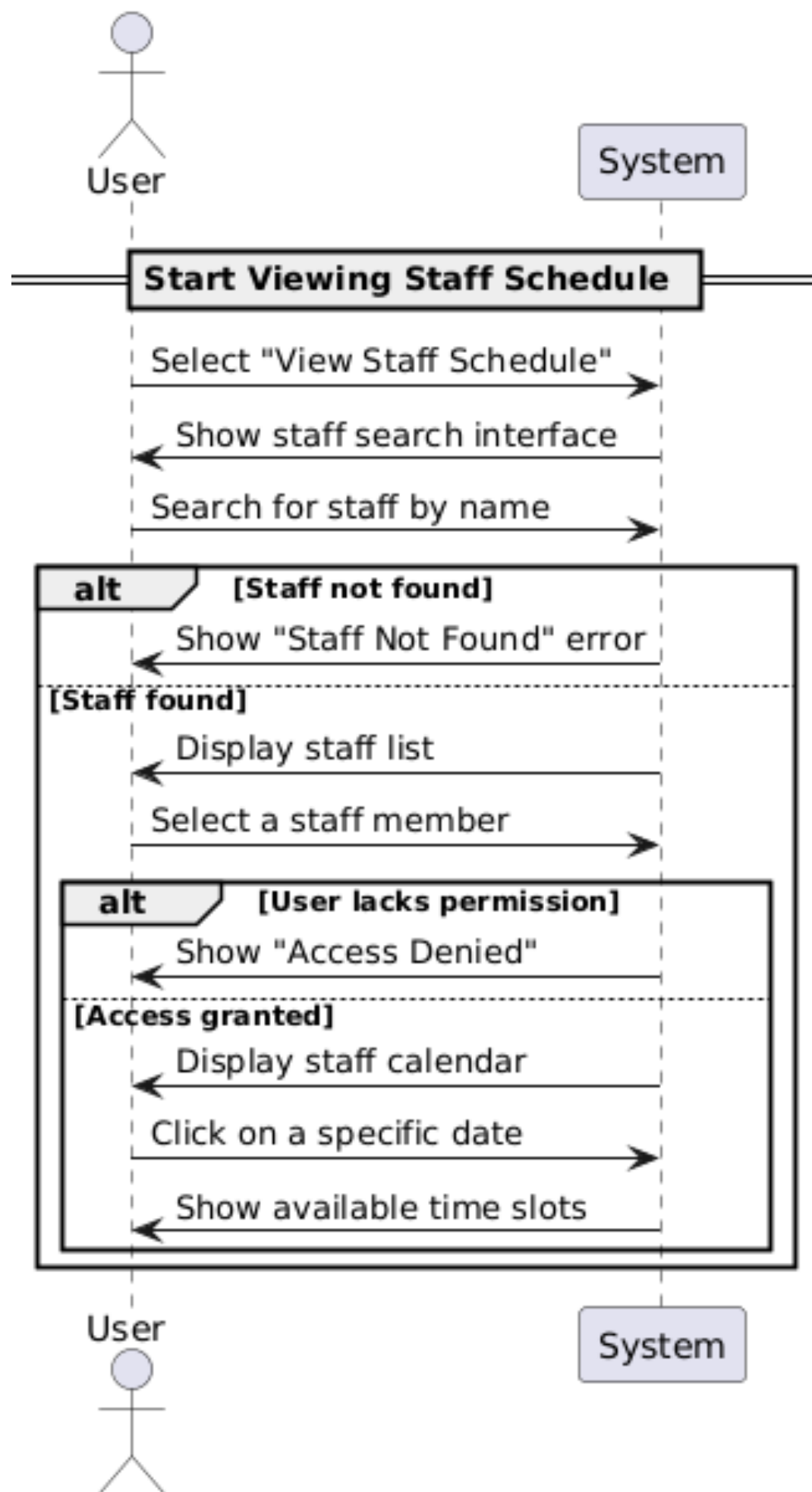
## Process View model Of TUMMEET



use case name	Login
Description	Users log in using their credentials (username and password). Successful authentication grants access to the system based on role permissions.
Actors	Staff, Admin
pre-condition	The system must be online.
basic flow	The user navigates to the login page. The user enters their username and password. The system verifies the credentials. If valid, the user is redirected to their dashboard.
post-condition	The user is successfully authenticated and redirected to the dashboard
Alternate flow	If the username or password is incorrect, the system displays an error message. If the account is deactivated, login is denied with an appropriate message. If the system is down, the user cannot log in and sees a maintenance message.

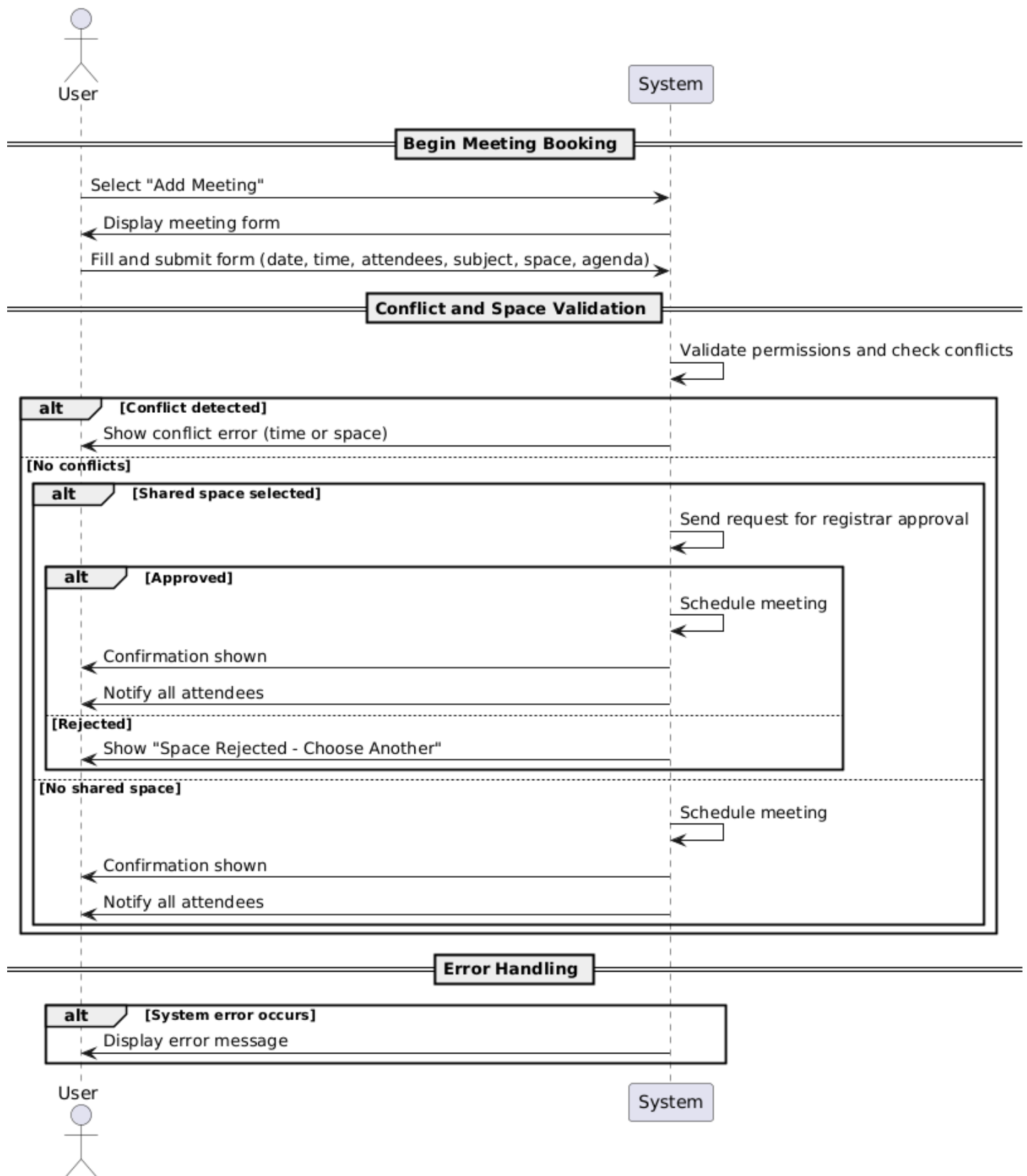


use case name	View Staff schedule
Description	Users can search for staff members by name, select a specific staff member, and view their availability on a selected date.
Actors	Staff, Admin
pre-condition	Requester must be logged in
basic flow	<p>The user selects the "<b>View Staff Schedule</b>" option.</p> <p>The system displays a search bar and a list of available staff members.</p> <p>The user searches for a staff member by name and selects them.</p> <p>The system displays the selected staff member's calendar.</p> <p>The user clicks on a specific date to view available time slots.</p>
post-condition	<p>The user successfully views the selected staff member's schedule.</p> <p>The system maintains data security and access control.</p>
Alternate flow	<p>If the staff member does not exist, the system shows an error message.</p> <p>If the user does not have permission to view a particular staff schedule, access is denied.</p>

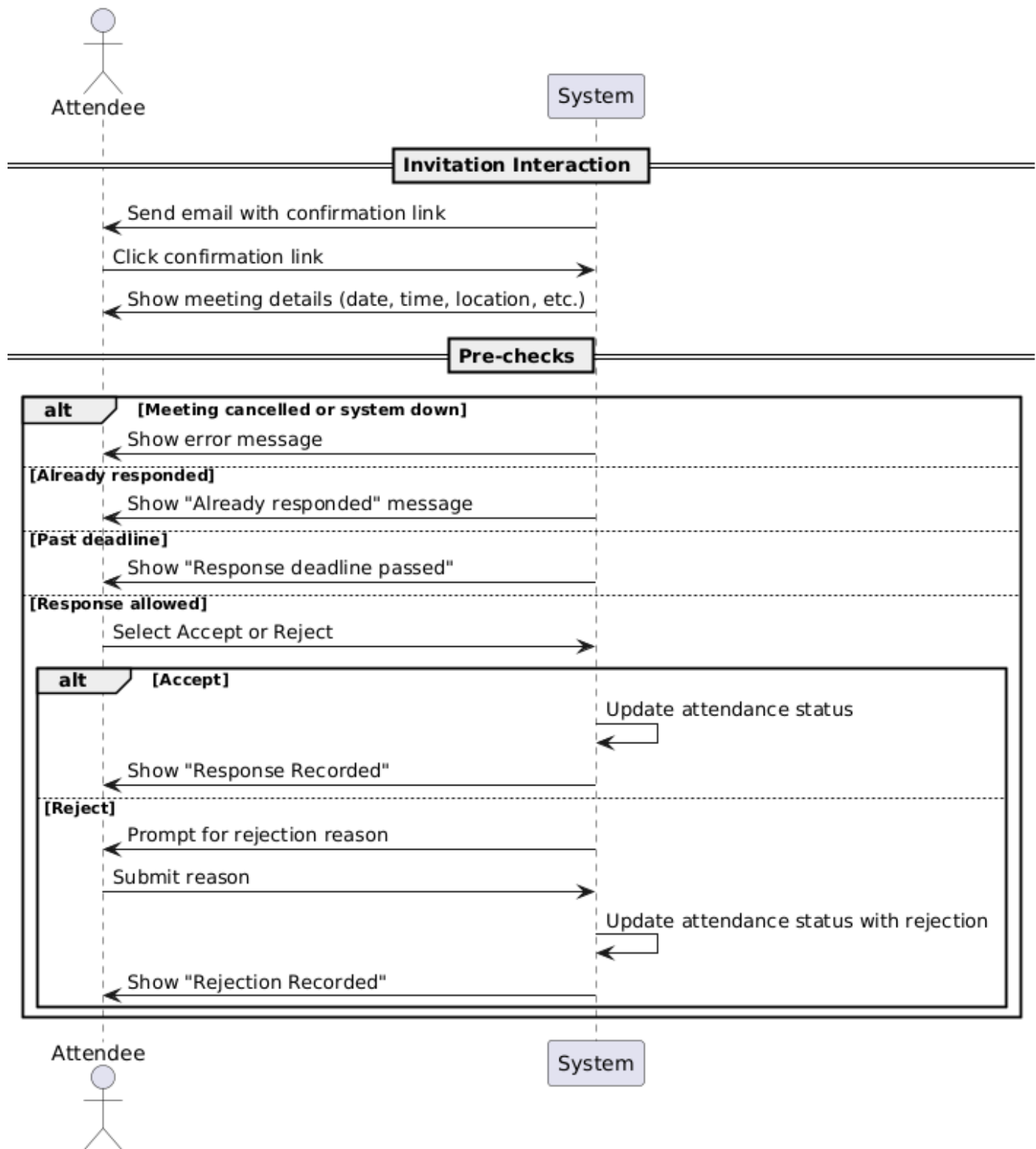


<b>use case name</b>	<b>Create Meeting</b>
<b>Description</b>	A user books a meeting with one or more users by selecting a date, time, subject and optional meeting agenda. The system checks for conflicts before confirming.
<b>Actors</b>	Staff, Admin
<b>pre-condition</b>	The user must be logged in. The system must have access to staff schedules and meeting spaces.
<b>basic flow</b>	<p>The user selects the <b>"Add Meeting"</b> option.</p> <p>The system prompts the user to fill a form and select a staff member. The user selects a date and time, then enters meeting details (subject, description, agenda(optional) ).</p> <p>The user selects Attendees from a search box, the attendees receive a meeting invitation in their emails</p> <p>If the user selects a <b>shared space</b>, the request is sent to the registrar for approval.</p> <p><b>If approved</b>, the meeting is scheduled.</p> <p><b>If rejected</b>, the user is notified and must choose another space.</p> <p>The user submits the meeting request.</p> <p>The system checks for conflicts (double booking, overlapping events, leaves).</p> <p><b>If a conflict is found</b>, an error is displayed, and the user must choose a different time or space depending on the nature of the conflict.</p> <p>The system updates schedules, sends notifications to all attendees, and records the meeting.</p>
<b>post-condition</b>	<p>The meeting is successfully scheduled, and all attendees are notified.</p> <p>If a shared space is requested, it remains pending until approved by the registrar.</p> <p>Attendees receive notifications to accept/reject the invitation.</p>
<b>Alternate flow</b>	<p>If the selected time slot is already booked, the system prompts the user to select another time.</p> <p>If the selected meeting space is unavailable, an alternative must be chosen.</p> <p>If the request fails due to system issues, an error message is displayed.</p>

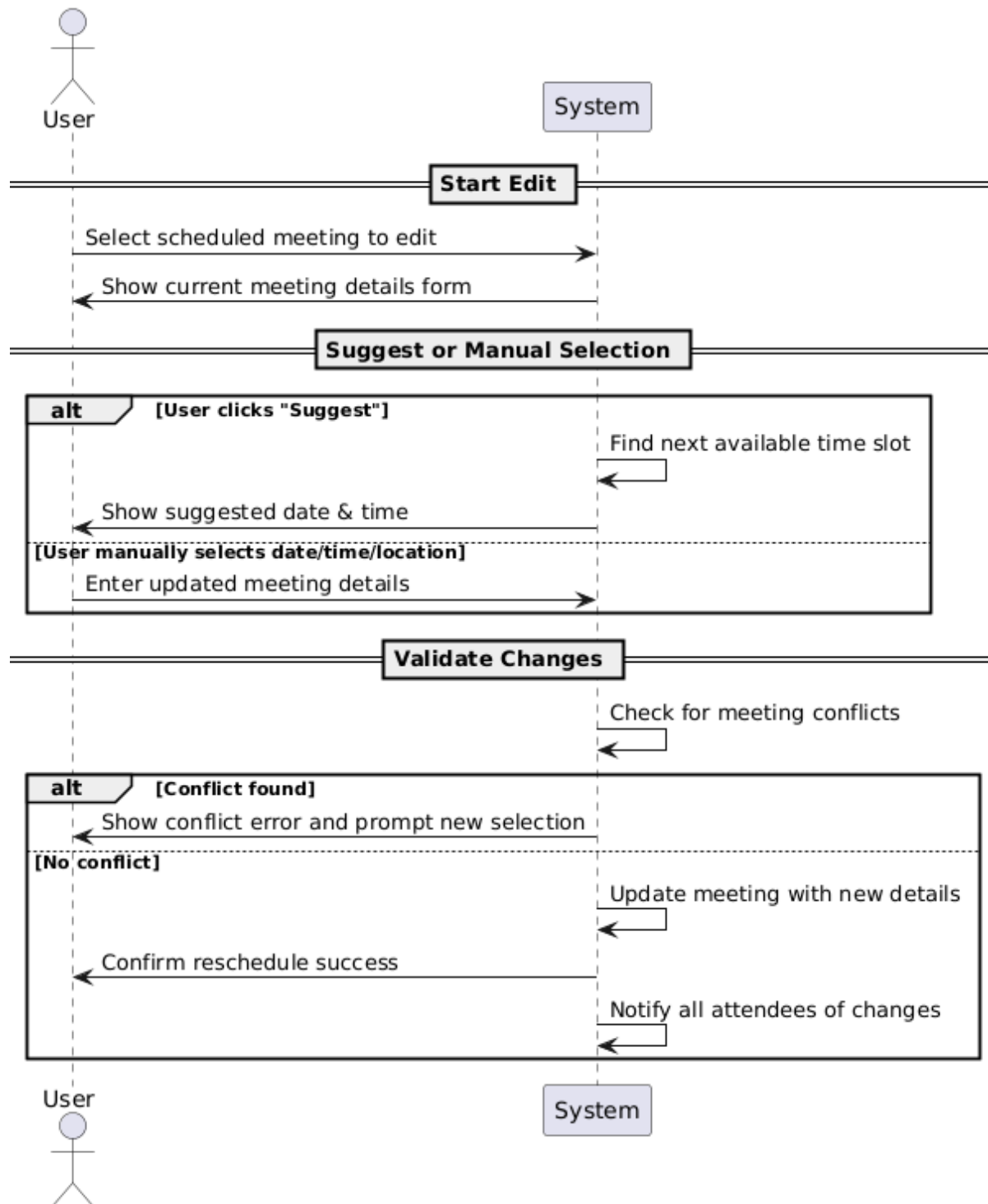




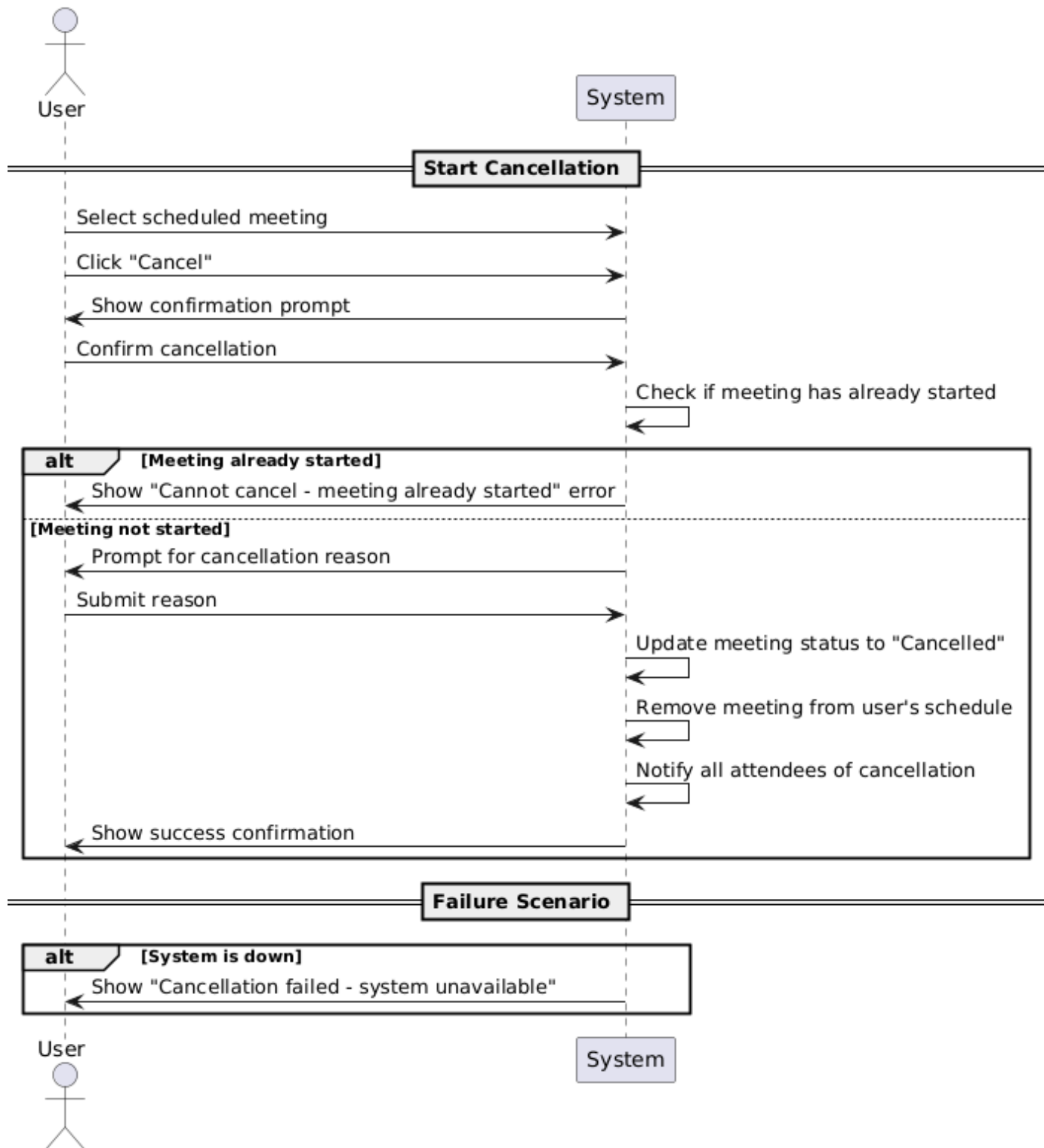
<b>use case name</b>	<b>Accept/Reject Meeting invitation</b>
<b>Description</b>	Attendees can accept or reject a meeting invitation through an email link. If rejected, a reason must be provided.
<b>Actors</b>	Staff, Admin
<b>pre-condition</b>	The attendee must receive an email invitation with a confirmation link. The meeting has not been cancelled The attendee has not responded to this invite(only one response is allowed)
<b>basic flow</b>	<p>The system sends an email invitation to attendees with a <b>confirmation link</b>.  The user clicks the link, which redirects to the <b>attendance confirmation page</b>.  The system displays meeting details (date, time, location, organizer, attendees).  The user selects <b>Accept</b> or <b>Reject</b>:</p> <p><b>If Accept:</b> The system updates the attendance status  <b>If Reject:</b> The system prompts the user to enter a reason.  The system updates the attendance status accordingly.</p>
<b>post-condition</b>	The meeting invitation status is updated based on the attendee's response.
<b>Alternate flow</b>	<p>If the user tries to respond after the deadline, an error message is shown  If the system is down, the user cannot respond until it's restored.  if the attendee already responded an error in shown</p>



<b>use case name</b>	<b>Reschedule meeting</b>
<b>Description</b>	Users can modify the date, time, or location of a scheduled meeting.
<b>Actors</b>	Staff, Admin
<b>pre-condition</b>	<p>The meeting must already exist.</p> <p>The user must have permission to reschedule.</p>
<b>basic flow</b>	<p>The user selects the meeting and chooses <b>"Edit"</b>.</p> <p>The user can click the Suggest button that suggest a date and time of next available timeslot that suits the meeting or manually choose a different date</p> <p>The system provides a form with the current meeting details, the user can update any of the fields and submit the form.</p> <p>The system checks for conflicts.</p> <p>If no conflicts exist, the reschedule request is submitted.</p>
<b>post-condition</b>	<p>The meeting is updated with the new details.</p> <p>Notifications are sent to attendees.</p>
<b>Alternate flow</b>	<p>If the new time conflicts with another meeting, an error message is shown and user is prompted to select another date or time.</p>

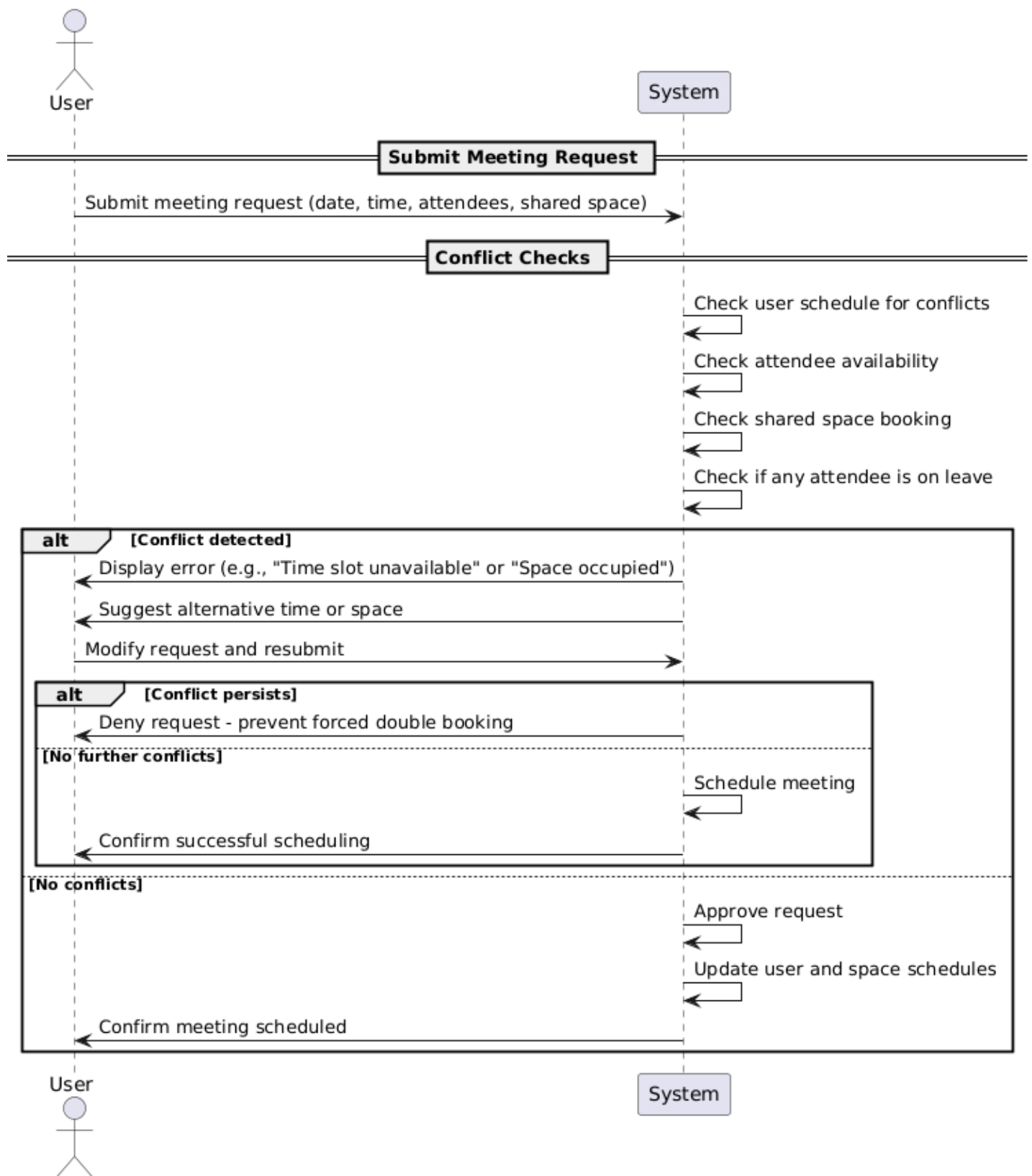


use case name	Cancel Meetings
Description	A user can cancel a scheduled meeting.
Actors	Staff, Admin
pre-condition	<p>The user is logged in.</p> <p>The meeting must exist.</p> <p>The user must have created the meeting.</p>
basic flow	<p>The user selects the meeting and chooses "<b>Cancel</b>".</p> <p>A confirmation to cancel pops up.</p> <p>The system prompts for a reason.</p> <p>The system updates the meeting status to "Cancelled."The system notifies all attendees.</p>
post-condition	<p>The meeting is removed from the schedule.</p> <p>The status of the meeting is changed to cancelled</p> <p>Notifications are sent to attendees.</p>
Alternate flow	<p>If the meeting has already started, cancellation is not allowed.</p> <p>If the system is down, the cancellation request fails.</p>

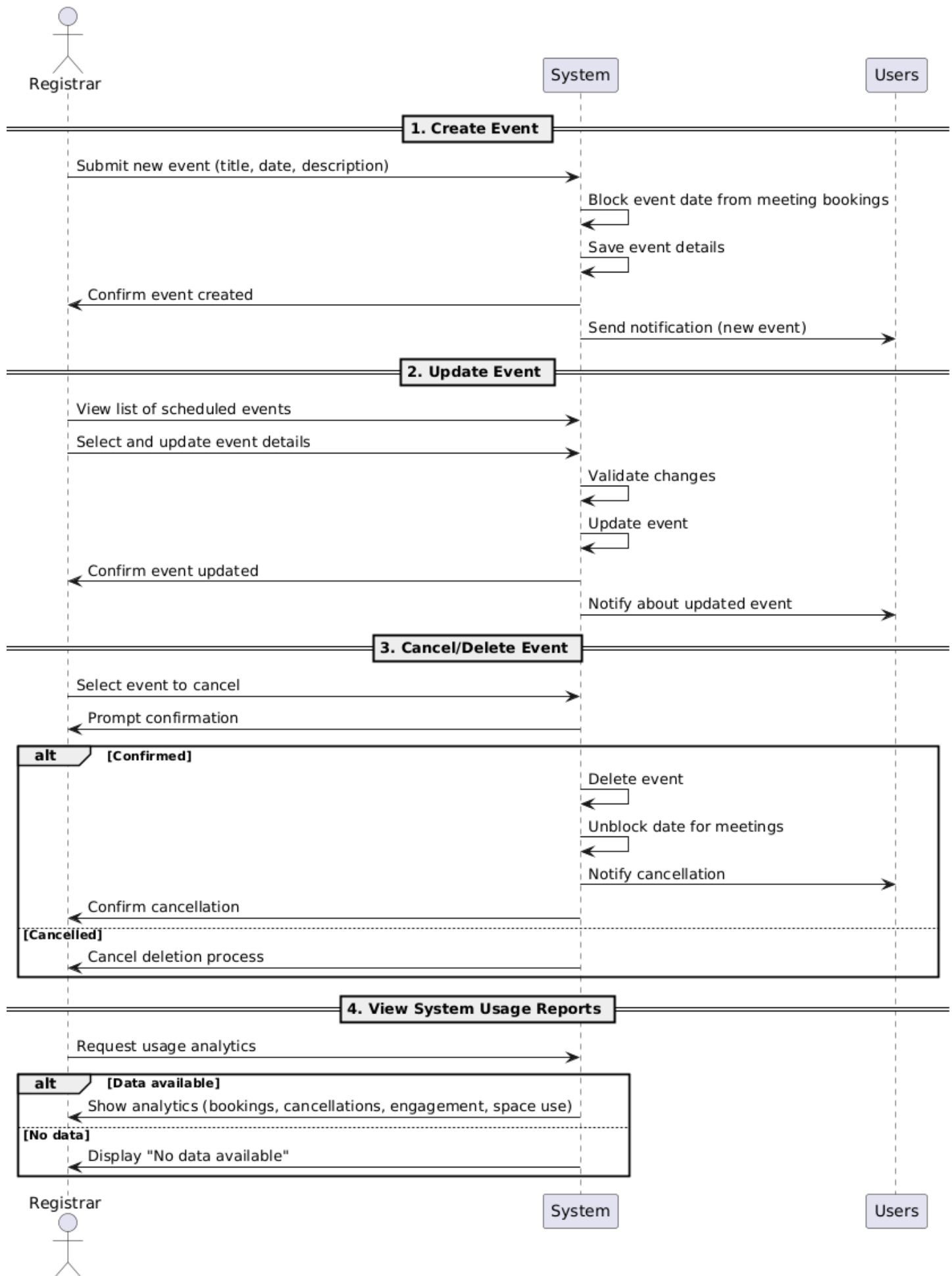


use case name	Conflict Detection and Prevention
Description	<p>Ensures that no scheduling conflicts occur by preventing double booking of users and shared spaces.</p> <p>If a conflict is detected, the system notifies the user and suggests alternative options.</p>
Actors	Staff, Admin
pre-condition	<p>The user must be logged in.</p> <p>The meeting request must contain a valid date, time, attendees, and (if applicable) a shared space.</p>
basic flow	<p><b>Meeting Request Submission</b> The user selects the date, time, attendees, and shared space for the meeting.</p> <p><b>System Checks for Conflicts</b> Ensures the requested time slot does not overlap with an existing meeting for any attendee.</p> <p>Ensures the shared space is not already booked for the selected time. Checks if the recipient is on leave during the selected time.</p> <p><b>If No Conflict</b> The system approves the request and updates schedules accordingly.</p> <p><b>If Conflict Detected</b> The system:  Displays an error message indicating the issue (e.g., "User already has a meeting at this time" or "Space is occupied").  Allows the user to modify their request accordingly.</p>
post-condition	<p>Ensures no overlapping meetings for users.</p> <p>Prevents double booking of shared spaces.</p> <p>Guarantees meeting schedule integrity.</p>
Alternate flow	<p>If the user attempts to force a conflicting booking, the system denies the request and prompts them to select a different time or space.</p>

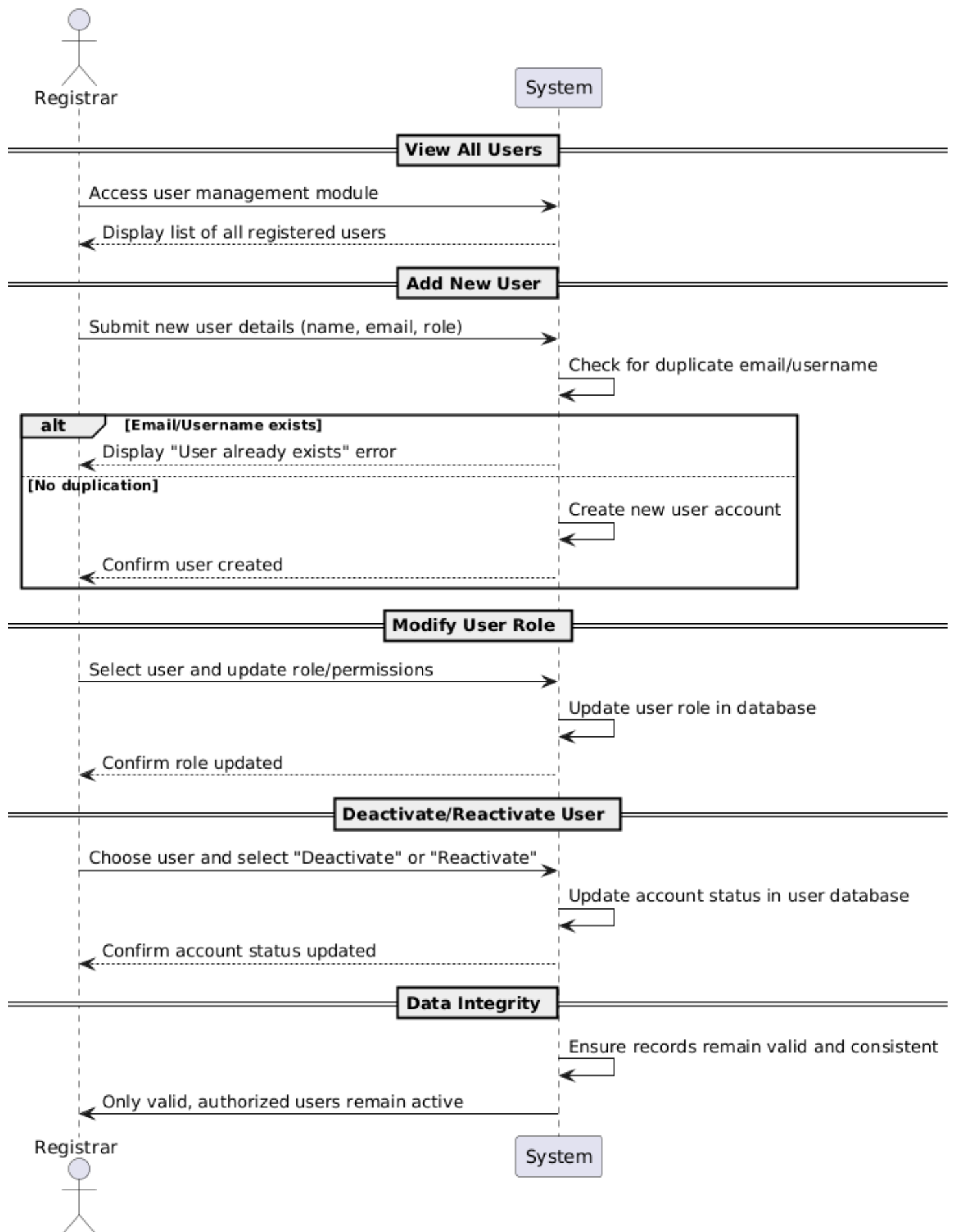




use case name	Full-System Overview
scenario	
Description	This use case allows the Registrar to view and analyze system usage, including meetings booked, cancellations, approvals, shared space utilization, and overall staff engagement with the scheduling system.
Actors	Admin
pre-condition	The user must be logged in as the <b>Registrar (Admin)</b> . The system must have logged meeting and event data
basic flow	<p><b>1. Create Event (<i>Handled in a separate use case: "Create Event"</i>)</b></p> <p>The registrar schedules a new event (title, date, description, etc.).  The event date is blocked from meeting bookings.  A notification is sent to all users.</p> <p><b>2. Update Event</b></p> <p>The <b>Registrar</b> navigates to the list of scheduled events.  Selects an event to modify.  Updates event details (e.g., title, date, description, location).  The system validates changes and updates the event.  A notification is sent to all users about the event update.</p> <p><b>3. Cancel/Delete Event</b></p> <p>The <b>Registrar</b> selects an event to cancel.  The system asks for confirmation before proceeding.  If confirmed:  The event is removed from the system.  The date becomes available for meeting bookings again.  Notifications are sent to all users about the cancellation.</p>
post-condition	The Registrar can use insights to optimize space allocation and scheduling policies
Alternate flow	if not data is available "no data is available" is displayed



use case name	Users Management
Description	Allows the <b>Registrar (Admin)</b> to manage user accounts, including adding new users, modifying user roles, deactivating/reactivating accounts, and removing users from the system.
Actors	Admin
pre-condition	The <b>Registrar (Admin)</b> must be logged in. The system must have access to the user database.
basic flow	<p><b>View User List</b> The <b>Registrar (Admin)</b> accesses the user management module to see all registered users.</p> <p><b>Add New User</b> The <b>Registrar (Admin)</b> enters details (name, email, role, etc.), assigns a role, and creates the user account.</p> <p><b>Modify User Role</b> The <b>Registrar (Admin)</b> updates user role , <b>strip or add permissions</b></p> <p><b>Deactivate/Reactivate Users</b> The <b>Registrar (Admin)</b> can disable an account (preventing login) or reactivate it when needed.</p>
post-condition	<p>User database is updated with the latest changes.</p> <p>Only authorized users remain active in the system.</p> <p>The system maintains data integrity when modifying user records.</p>
Alternate flow	If an email or username already exists, the system prevents duplication and prompts for a different one.

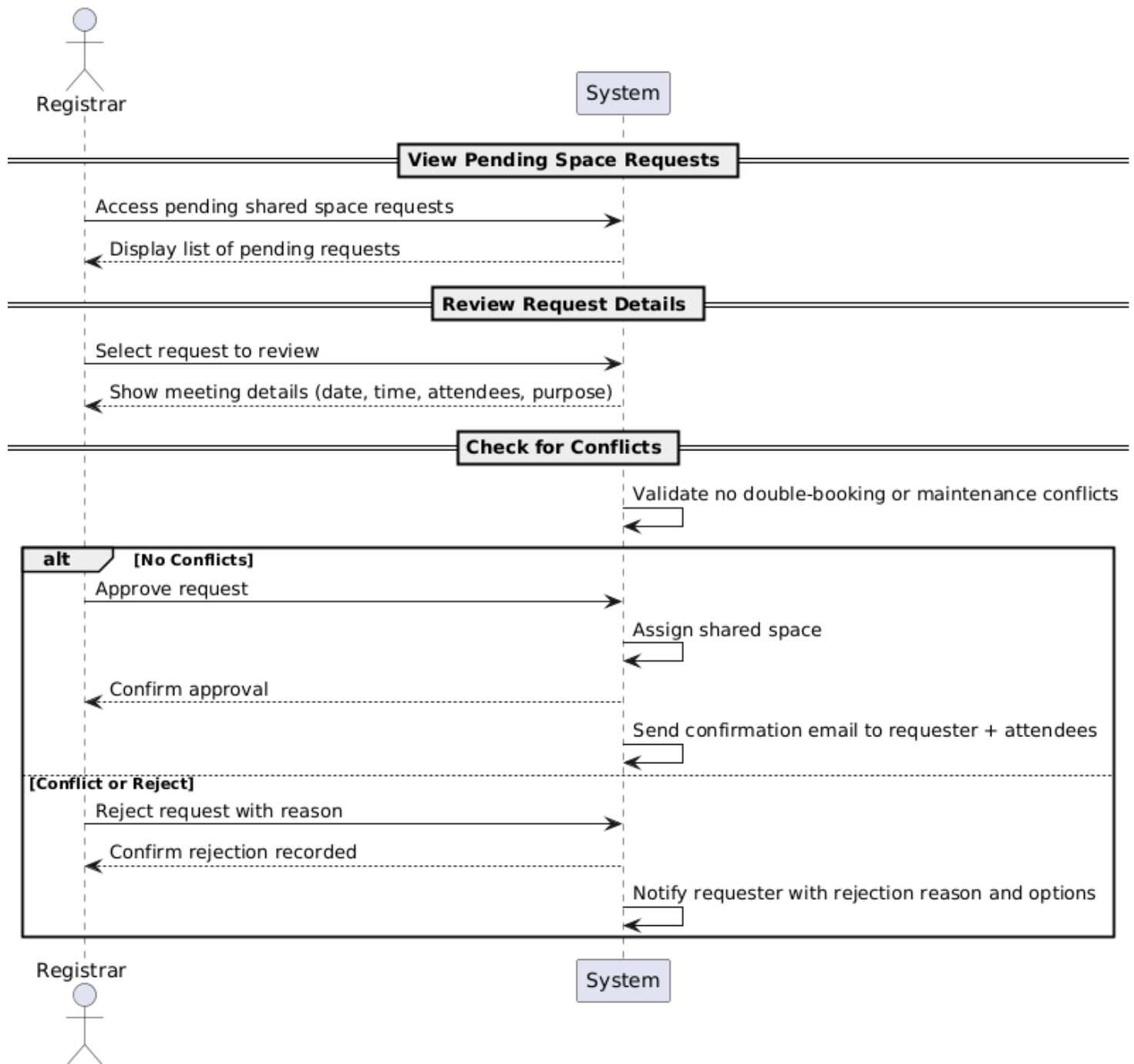


use case name	Manage Common Spaces
Description	The <b>Registrar (Admin)</b> manages shared meeting spaces by adding, modifying, removing, locking, or unlocking them. This ensures that meeting rooms and boardrooms are properly allocated and maintained.
Actors	Admin
pre-condition	The <b>Registrar (Admin)</b> must be logged into the system. The system must have access to the shared spaces database
basic flow	<p><b>View Available Shared Spaces</b> The Registrar (Admin) accesses the shared spaces management module.</p> <p><b>Add New Shared Space</b> The Registrar (Admin) enters the room name, location, capacity, and availability status.</p> <p><b>Modify Space Details</b> The Registrar (Admin) updates room details, such as capacity or location.</p> <p><b>Lock/Unlock Shared Space</b> The Registrar (Admin) can prevent bookings for a space (e.g., for maintenance) or reopen it for reservations.</p> <p><b>Remove Shared Space</b> If necessary, the Registrar (Admin) can delete a shared space from the system.</p>
post-condition	The list of shared spaces is updated. Locked spaces cannot be booked until unlocked.
Alternate flow	If a shared space is booked for an upcoming meeting, the system prevents deletion and prompts the Registrar (Admin) to reschedule or cancel existing bookings.

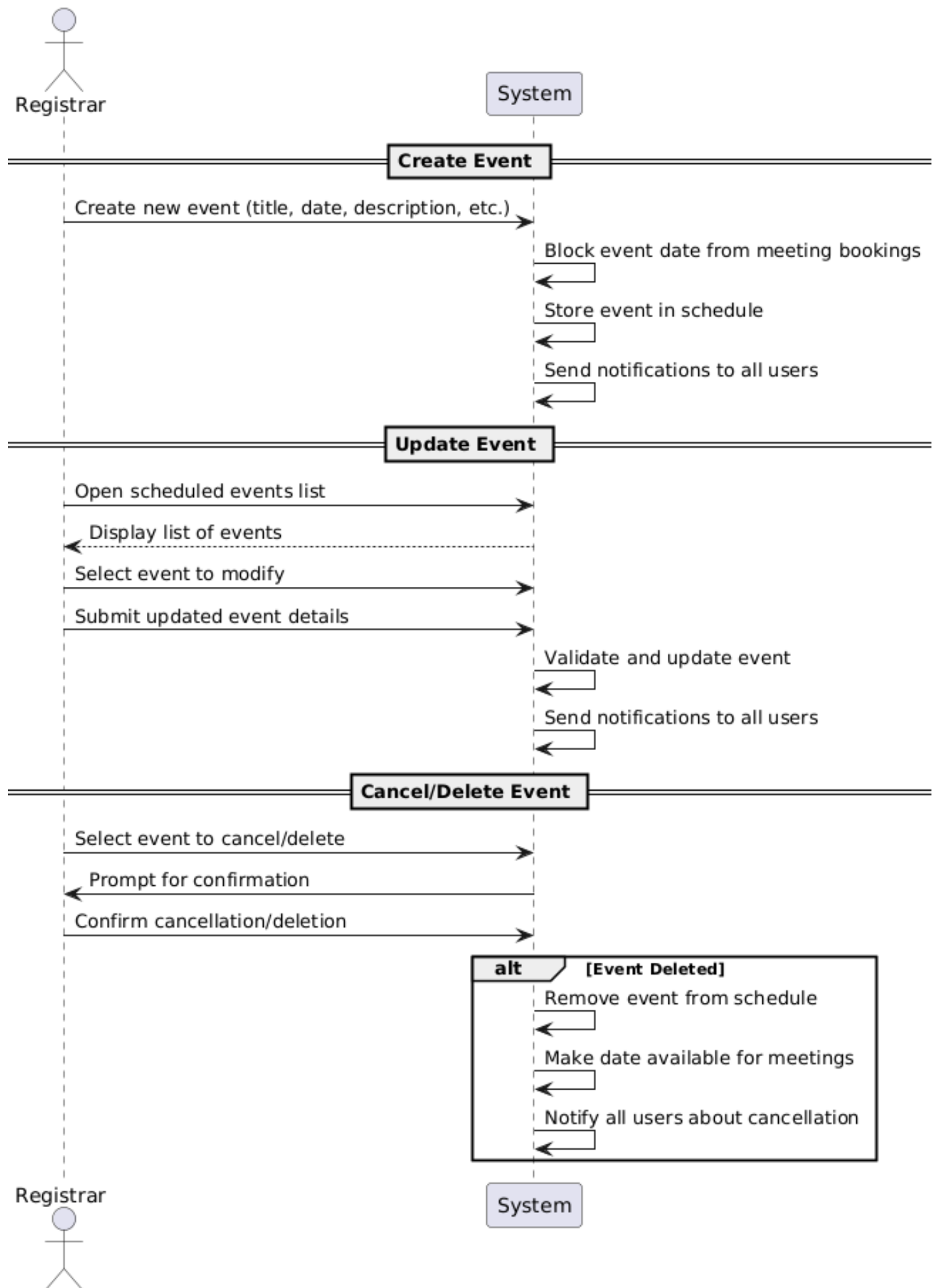


<b>use case name</b>	<b>Approve common space use</b>
<b>Description</b>	When a user books a meeting in a shared space, the <b>Registrar (Admin)</b> must approve or reject the request to ensure proper allocation and avoid conflicts
<b>Actors</b>	Admin
<b>pre-condition</b>	The requester must have selected a shared space while booking a meeting. The Registrar (Admin) must be logged in to review requests.
<b>basic flow</b>	<p><b>View Pending Space Requests</b> The <b>Registrar (Admin)</b> checks pending approvals.</p> <p><b>Review Request</b></p> <p><b>Details</b> The system shows meeting details, including date, time, attendees, and purpose.</p> <p><b>Check for Conflicts</b> The system ensures no double-booking or maintenance conflicts exist.</p> <p><b>Approve Request</b> The shared space is assigned, and a confirmation email is sent to the requester and attendees.</p> <p><b>Reject Request (If Needed)</b> The <b>Registrar (Admin)</b> provides a reason for rejection, and the requester is notified.</p>
<b>post-condition</b>	Approved meetings reserve the shared space. Rejected requests notify the requester with a reason and options.
<b>Alternate flow</b>	If a rejection occurs, the requester must select another space or reschedule the meeting.





<b>use case name</b>	<b>Manage Events</b>
<b>Description</b>	The <b>Registrar</b> has full control over institutional events. They can <b>create, update, delete, or cancel</b> events as needed. Once an event is scheduled, meetings cannot be booked on that date unless the event is removed.
<b>Actors</b>	Admin
<b>pre-condition</b>	The registrar must be logged into the system. The event to be modified must exist.
<b>basic flow</b>	<p><b>1. Create Event (<i>Handled in a separate use case: "Create Event"</i>)</b></p> <p>The registrar schedules a new event (title, date, description, etc.). The event date is blocked from meeting bookings. A notification is sent to all users.</p> <p><b>2. Update Event</b></p> <p>The <b>Registrar</b> navigates to the list of scheduled events. Selects an event to modify. Updates event details (e.g., title, date, description, location). The system validates changes and updates the event. A notification is sent to all users about the event update.</p> <p><b>3. Cancel/Delete Event</b></p> <p>The <b>Registrar</b> selects an event to cancel. The system asks for confirmation before proceeding. If confirmed: The event is removed from the system. The date becomes available for meeting bookings again. Notifications are sent to all users about the cancellation.</p>
<b>post-condition</b>	If an event is deleted, users can book meetings on that date again.
<b>Alternate flow</b>	If an email or username already exists, the system prevents duplication and prompts for a different one. If a user is linked to pending meetings, the system warns the <b>Registrar (Admin)</b> before deactivation or deletion.



use case name	Out of Office(OOO)
Description	Users can mark themselves as "Out of Office" (OOO) for specific days. During these periods, they cannot be booked for meetings, and their schedule is marked as fully booked. Meetings already scheduled on those days are automatically canceled and require rescheduling or cancellation.
Actors	Staff, Admin
pre-condition	The user is logged in
basic flow	<p><b>Navigate to Out of Office Settings</b> → The user accesses the OOO management section.</p> <p><b>Add OOO Days</b> → The user selects the dates they will be unavailable.</p> <p><b>Provide Reason</b> (Optional) → The user may specify a reason (e.g., vacation, sick leave, conference).</p> <p><b>Save OOO Status</b> → The system updates the schedule, preventing new meeting requests during OOO days.</p> <p><b>Cancel Existing Meetings</b> → Any scheduled meetings on the selected dates are automatically marked for rescheduling.</p>
post-condition	<p>The user's schedule reflects their unavailability.</p> <p>Meetings during OOO days are marked as "Needs Rescheduling" or "Canceled" with notifications sent.</p> <p>Removing OOO restores normal booking availability.</p>
Alternate flow	<p>If the user removes an OOO record, their availability is restored, and they can be booked again.</p> <p>If the meeting organizer does not act on a rescheduled meeting, automatic reminders are sent.</p>

