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Chapter one | INTRODUCTION

1.1 Introduction

The goal of our project, ‘Eventra,’ is to develop a complete system for the online booking of workshops, seminars, and conferences. The system acts as a bridge between teachers/organizers and students. This system will streamline interactions from the creation of sessions to the booking process.

1.2 Problem definition

Current event management systems face several key limitations that impact both organizers and participants:

- Lack of hybrid event support—Most systems cannot efficiently handle both online and in-person activities within a single platform.
- Insecure payment processing—Many platforms lack integrated, reliable, and secure payment methods.
- Poor information display—Event details are often unclear, disorganized, or difficult to access.
- Limited interaction capabilities—There is minimal direct communication between presenters and participants.
- Ineffective notification systems—Reminders and updates are often unreliable or poorly managed.

These challenges result in a fragmented experience for users and highlight the need for an integrated, user-friendly solution like Eventra.

1.3 Solution

With Eventra, we have built an integrated platform that connects all the pieces—secure payments, clear event details, and direct communication—into one simple, user-friendly system for all parties.

1.4 Project goals and objectives

Strategic Objectives:

- Create a unified platform that brings all parties together.
- Improve how activities are managed and organized.
- Enhance the user experience for organizers and participants.

Operational Goals:

- Offer multiple secure payment options.
- Support both online and in-person activities.
- Provide an easy-to-use booking interface.
- Ensure the booking process takes under 3 minutes.
- Send real-time notifications and reminders.

Chapter Two | INFORMATION GATHERING

2.1 Information gathering Techniques

2.1.1 Literature review

While many existing event management systems lack integrated community features and secure payment options, Eventra stands out by offering specialized capabilities designed to address user needs. It not only solves common pain points but also introduces innovative features to enhance the entire event experience for organizers, presenters, and participants alike.

By focusing on these often-overlooked features, Eventra doesn't just compete—it redefines how event platforms serve their users.

2.1.2 Interviews

Name: Fatima Almusallam | place: Zoom Meeting | Time: 12:00PM | Date: 6/10/2025

Interview Summary:

- **Main problem:** The organizer doesn't have a single system to manage everything for their events. They use different tools(google forms, excel), which causes problems.
 - **Registration:** They use Google Forms, which is a manual process. This can lead to mistakes, like people entering the wrong phone number.
 - **Communication:** They use phone calls, social media, and group chats to send reminders. This isn't always reliable, and participants can miss important updates.
-
- **What they need:**
 - **One system for everything:** They want a single platform for registration, reminders, and data analysis.
 - **Seating limits:** They need a feature to limit the number of attendees, especially for paid events.
 - **Easy payments:** They prefer a system with multiple digital payment options like Apple Pay or bank transfers.
 - **Reports:** They need reports on attendees' ages and locations to help plan future events.

2.1.3 Questionnaire

- Questionnaire Introduction**

The questionnaire included 10 questions that examined the current situation, users' needs, their expectations of the new system, as well as their overall satisfaction with the events they attend. It was mainly designed to highlight the common challenges participants face, suggest practical solutions and features, and assess the participants' acceptance of the Eventra system.

The questionnaire was distributed among event participants, especially in clubs and communities where trainees and attendees are active. To ensure the responses reflected real experiences, it began with a simple filtering question.

The questionnaire was conducted from 29/9/2025 to 1/10/2025, and a total of 35 responses were collected. The following section presents the results along with an analysis to draw the key conclusions.

- Questionnaire**

The questionnaire link is provided in the appendices.

- Questionnaire Summary**

From the questionnaire results, most respondents 86% have previously registered for workshops or conferences, and most of them 64% prefer online registration. This indicates a high level of familiarity and readiness for digital solutions. However, 44% of participants identified payment issues as their main difficulty, while 23% mentioned lack of notifications and unclear event information, showing a strong demand for reliability and clarity.

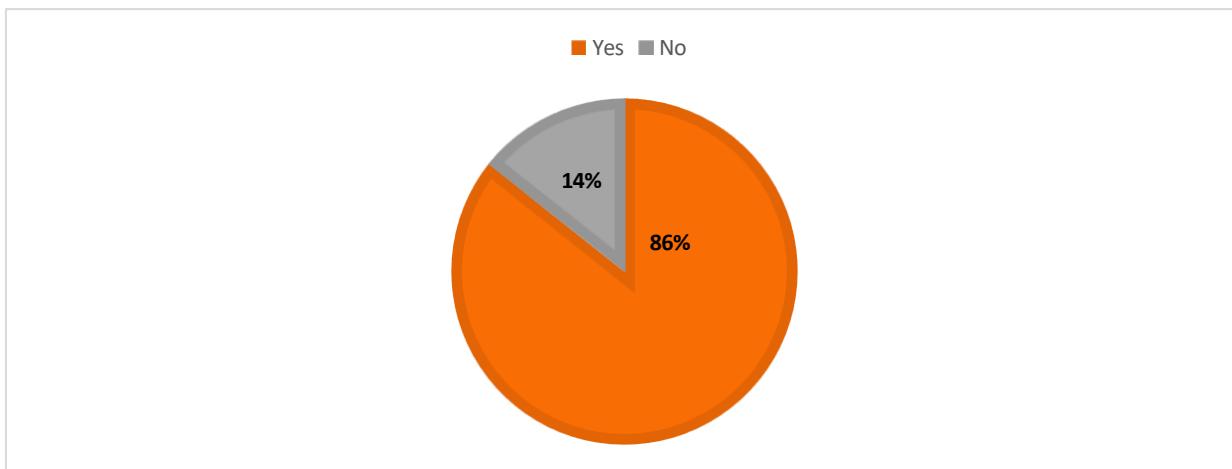
In addition, 63% of respondents prefer hybrid events (both in-person and virtual), confirming the importance of supporting multiple formats in a single system. A significant 47% of users prefer bank transfers, followed by 33% who use Apple Pay or STC Pay, which highlights the need for diverse and secure payment methods.

Participants also expressed a desire for flexibility and transparency—100% believe it is important to be able to modify or cancel bookings, and 93% would like automatic certificates or attendance reports after the event. Finally, overall satisfaction with existing systems was low to moderate, with 50% rating them only 2 out of 5, indicating a strong opportunity for improvement.

- **Questionnaire Results**

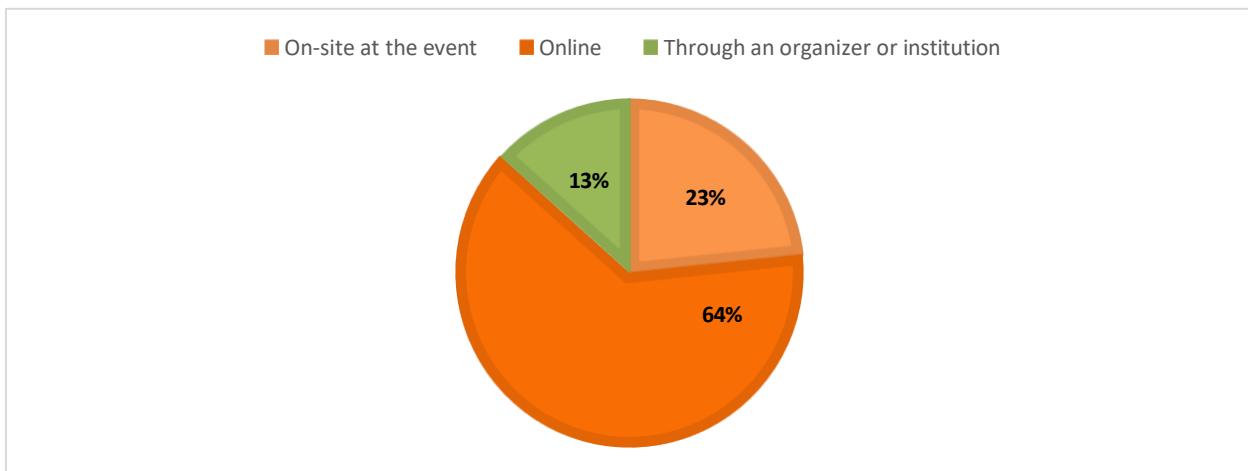
Regarding the results of the first question: **Have you ever registered for a workshop or conference before, they were:**

Yes	86%
No	14%



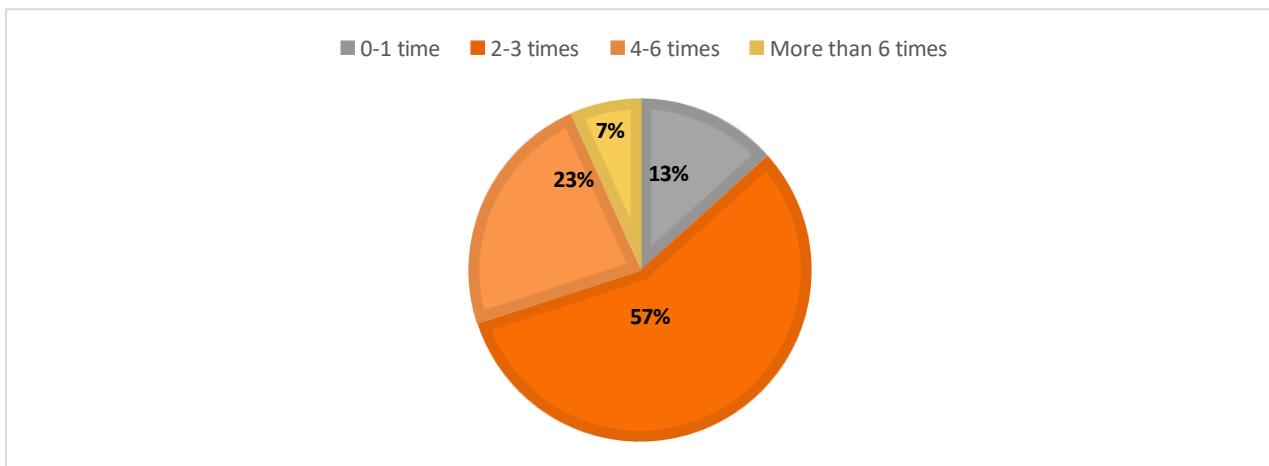
As for the results of the second question: **If yes, how did you usually register, they were:**

On-site at the event	23%
Online	64%
Through an organizer or institution	13%



As for the results of the third question: **How many times do you usually attend workshops or conferences each year, they were:**

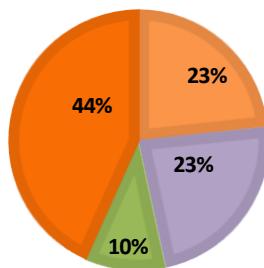
0-1 time	13%
2-3 times	57%
4-6 times	23%
More than 6 times	7%



As for the results of the fourth question: **What are the most difficulties you face when registering for events, they were:**

Difficulty accessing event information	23%
Lack of notifications/reminders	23%
Delayed booking confirmation	10%
Payment issues	44%

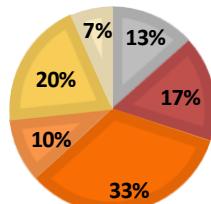
■ Difficulty accessing event information ■ Lack of notifications/reminders
 ■ Delayed booking confirmation ■ Payment issues



As for the results of the fifth question: **Which feature do you consider the most important in a booking system, they were:**

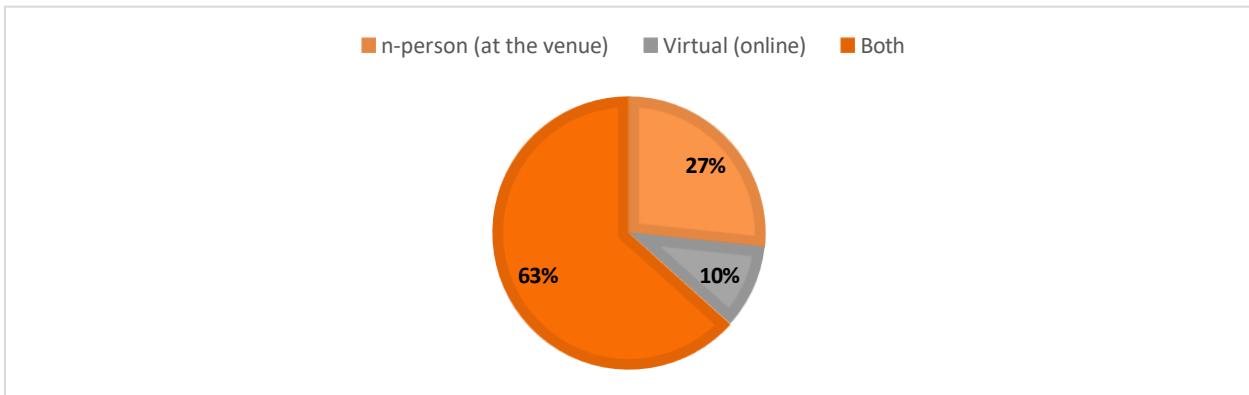
Easy registration	13%
Automated notifications & reminders	17%
Secure online payment	33%
Sufficient event information	10%
Easy communication between organizers and participants	20%
Event rating option	7%

■ Easy registration
 ■ Automated notifications & reminders
 ■ Secure online payment
 ■ Sufficient event information
 ■ Easy communication between organizers and participants
 ■ Event rating option



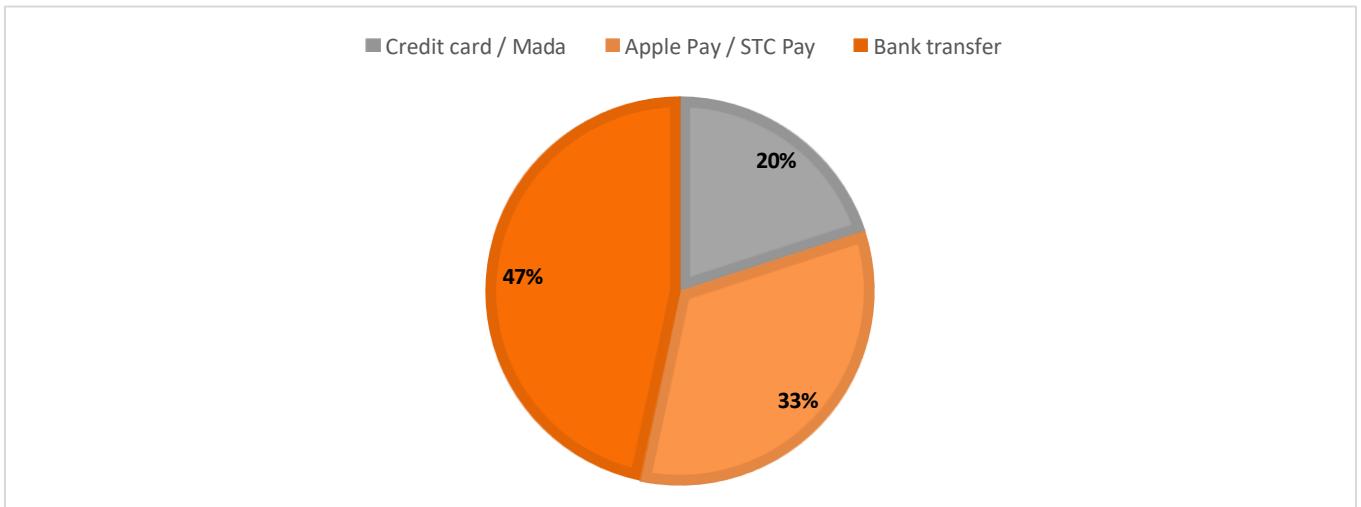
As for the results of the sixth question: **Which type of events do you prefer the most, they were:**

n-person (at the venue)	27%
Virtual (online)	10%
Both	63%



As for the results of the seventh question: **What online payment method do you prefer, they were:**

Credit card / Mada	20%
Apple Pay / STC Pay	33%
Bank transfer	47%



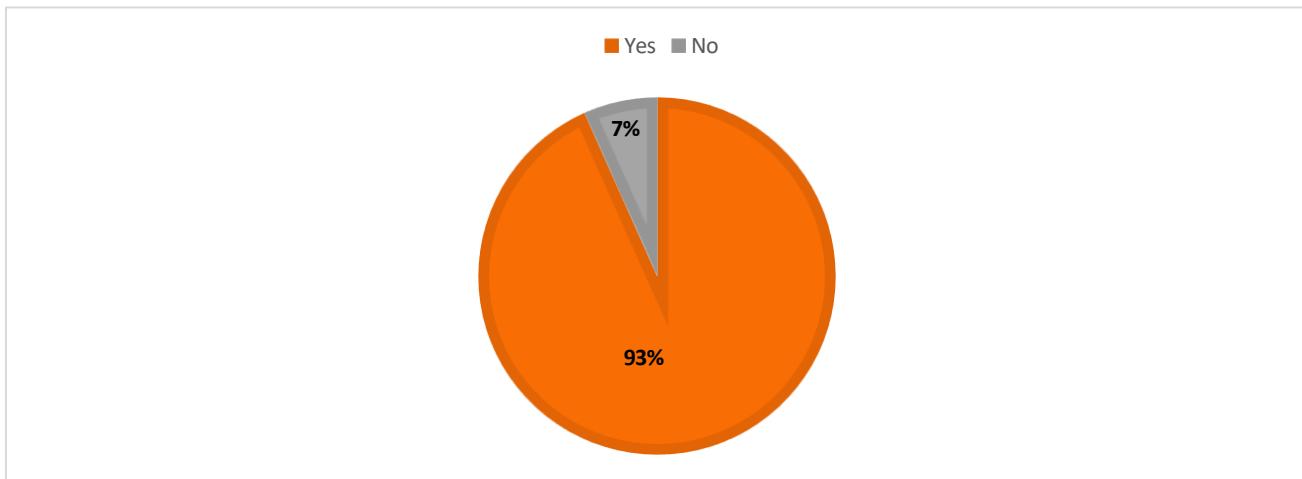
As for the results of the eighth question: **Do you think it is important to have the option to modify or cancel a booking, they were:**

Yes	100%
No	0%



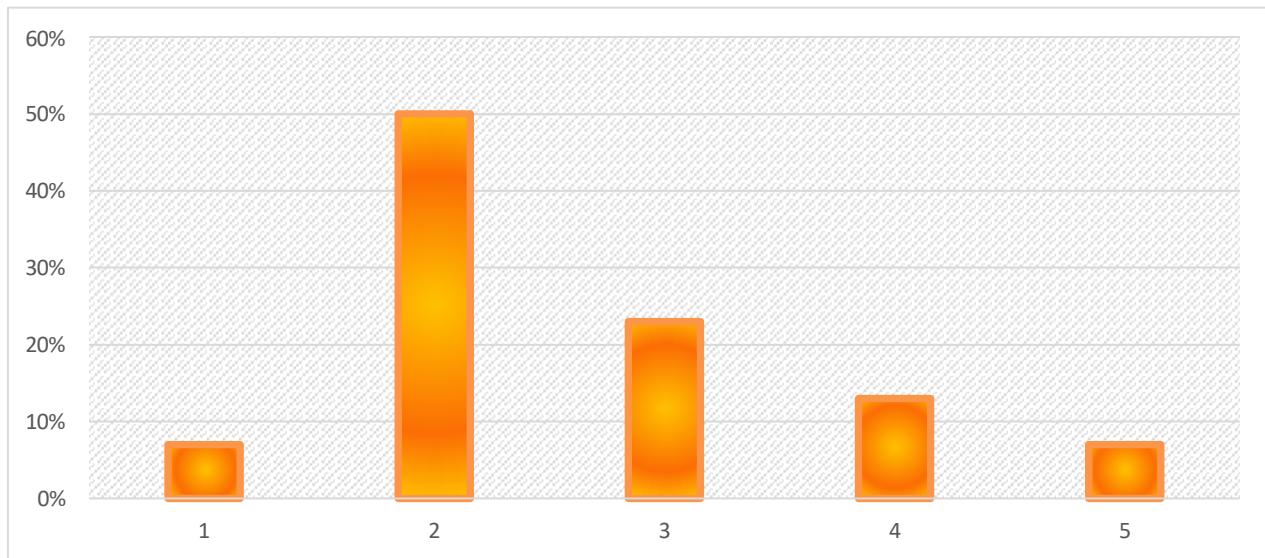
As for the results of the ninth question: **Would you like the system to provide reports or attendance certificates automatically after the event, they were:**

Yes	93%
No	7%



As for the results of the tenth question: **How satisfied are you with current event management systems overall, they were:**

1	7%
2	50%
3	23%
4	13%
5	7%



2.2 Structuring Requirements

2.2.1 Functional Requirements

The system

- The system shall support different user roles: organizer, participant and presenter.
- The system shall allow users to search and filter events by topic, date, and location (physical or virtual).
- The system shall display detailed information about events to the users.
- The system shall display a “community feed” or “activities stream” for each event on the user dashboard, showing updates from or about the event and relevant content.
- The system shall generate a digital ticket (QR code for physical events or barcode for virtual events) after the event is booked.
- The system should provide secure payment methods (e.g., Visa, MasterCard, Apple Pay, STC Bank, bank transactions).
- The system shall log financial transactions securely for auditing purposes.
- The system shall send an immediate booking email confirmation along with a receipt for successful payment.
- The system shall notify users about new events that match their interests and remind them of upcoming events they have registered for (as participants) or created (as organizers).
- The system shall automatically update the remaining capacity (available seats) for all parties.
- The system shall generate secure links for virtual events via Zoom.

The user

- The user shall be able to sign up or log into the system using their username and password.
- The user shall be able to create and update their personal profile (e.g., name, email, description, and photos).
- The user shall be able to contact system support (e.g., report an issue or submit an enquiry).
- The user shall be able to manage their notification preferences.
- The user shall be able to reset their password via a secure authentication process (e.g., SMS or email verification).

The organizer

- The organizers shall be able to register and create a profile for their organization.
- The organizer shall be able to create a new event, define its type (physical or virtual), its category (business, real estate, finance, technology, etc.), and details (such as date, time, description, and location).
- The organizer shall be able to define and manage ticket types (such as access level, e.g., General Admission, VIP, and time of purchase, e.g., Early Bird, Late) and their prices.
- The organizer shall be able to specify the maximum number for participants or per ticket type for the event.
- The organizer shall be able to create promotional discount codes for each ticket or event participants' purchases.
- The organizer shall view a dashboard summarizing booking statistics, revenue, and attendee details
- The organizer shall be able to export a list of registered participants and revenue as a spreadsheet file (e.g., Excel, PDF, or Docs).

- The organizer shall be able to enable or disable the “community feed” feature for every event created.
- The organizer shall be able to post event updates, photos, and announcements directly to the event-dedicated “community feed” (like social media posts).
- The organizer shall be able to automatically process refunds in case of event cancellation.

The participant

- The participant shall be able to view detailed information about an event before booking (e.g., speakers, agenda).
- The participant shall be able to book an event, select a ticket type or time, and proceed with a secure payment method.
- The participant shall be able to cancel the booking for an event.
- The participant shall be able to submit a rating or feedback about the event after it has been concluded.
- The participant shall be able to apply promotional code to receive a discount. The participant shall be able to download their digital ticket (through their account or confirmation email), to confirm attendance instantly via QR code scan at physical events.
- The participant shall be able to like, comment on, and share posts published by the organizer within the event’s community feed.

2.2.2 Non-Functional Requirements

Performance requirements

- The system shall load any page in less than 3 seconds.

Scalability requirements

- The system shall handle up to 10,000 users at the same time without crashing

Security requirements

- The system shall encrypt all user data and payment info.
- The system shall not allow booking without successful payment confirmation.

Reliability requirements

- The system shall send instant alerts if any service fails.

Safety requirements

- The system shall back up all data automatically every 24 hours.

Usability requirements

- The system shall have a simple and clear interface for all user roles.
- The system shall support multiple languages.

Chapter Three | SYSTEM ANALYSIS AND DESIGN

3.1 Use case

- *The following table lists all the primary actors identified for the system based on the previous analysis and user research.*

Actors Table

Actor	Type	Description
Organizer	Primary	Creates and manages events, defines ticket types, manages registrations, communicates with participants, monitors revenue and attendance, posts updates on the event community feed.
Participant	Primary	Browses events, registers for events, selects ticket types, makes payments, receives confirmations, modifies/cancels bookings, provides feedback, downloads certificates, contacts organizers, interacts with event community feed.
System Support	Primary	Handles user queries, resolves issues, assists with registration/payment problems, ensures smooth operation of the system, receives support requests.
Presenter	Secondary	Delivers sessions, interacts with participants during the event, provides materials or content for events, views participant feedback, may receive attendance feedback.

- **The Event Decomposition table below shows the main events in the system, their types, the associated actors, and the resulting use cases.**

Use Cases

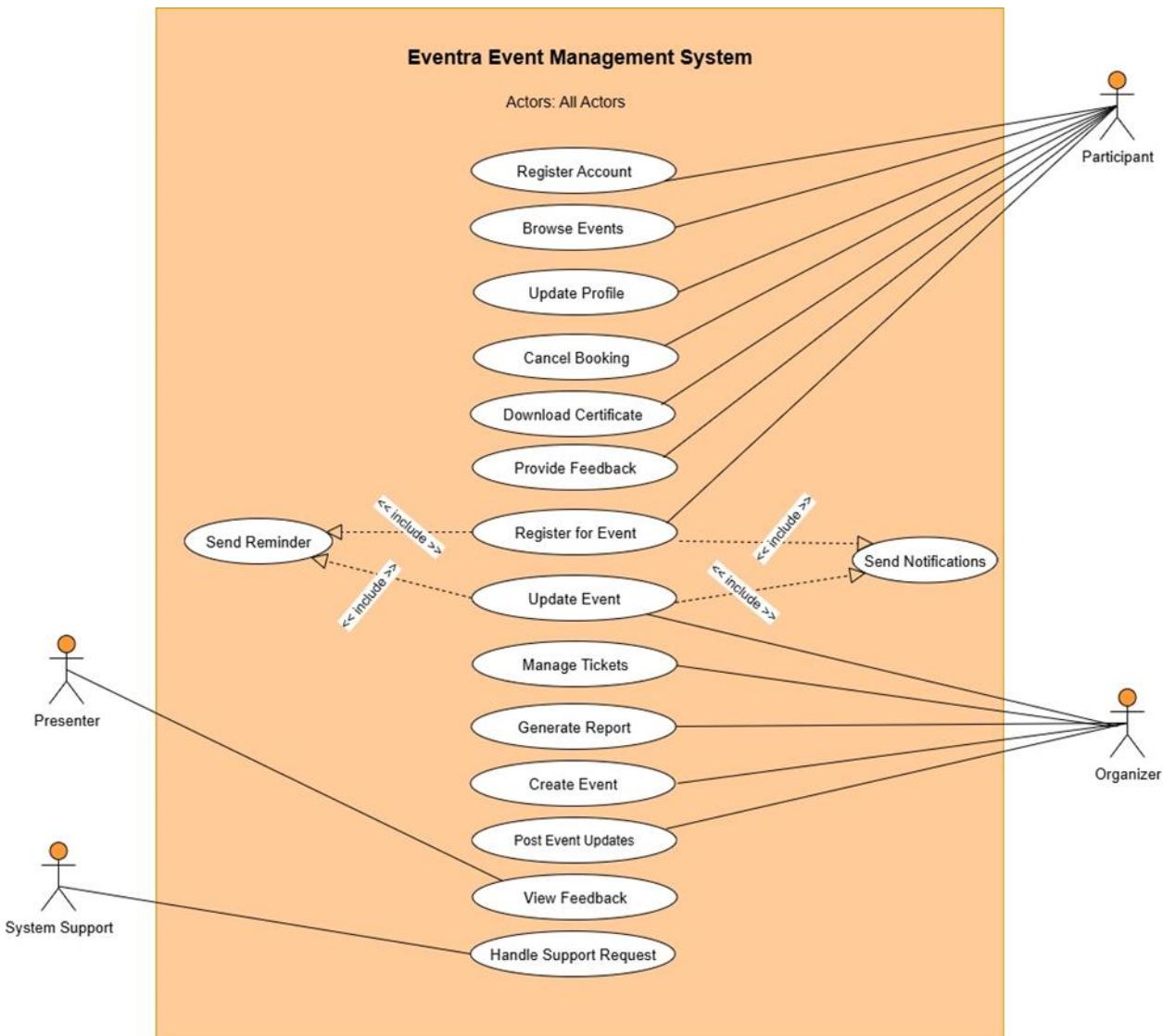
Use Case	Users / Actor	Brief use case description	Type
Register for Event	Participant	Participant registers for an event online, selects ticket type, and confirms payment.	Primary
Cancel Booking	Participant	Participant cancels a booking and receives confirmation of cancellation.	Primary
Browse Events	Participant	Participant views details of an event, including agenda, speakers, and venue.	Primary
Provide Feedback	Participant	Participant submits a rating or feedback for the event after it concludes.	Primary
Create Event	Organizer	Organizer creates a new event, specifying type, category, date, time, and location.	Primary
Manage Tickets	Organizer	Organizer defines ticket types, prices, maximum participants, and handles promotions.	Primary
Event Updates	Organizer	Organizer posts updates, photos, and announcements to the event's community feed.	Primary
Generate Reports	Organizer	Organizer exports attendee data and financial reports after the event.	Primary
Download Certificate	Participant	Participant downloads their attendance certificate automatically after the event is completed.	Primary
Update Profile	Participant	Participant updates their personal profile information.	Primary
Handle Support Request	System Support	System Support receives and resolves participant/organizer support requests.	Primary
View Feedback	Presenter	Presenter views participant feedback for their sessions.	Secondary

- *Based on the event analysis and actor interactions, the system's functional and non-functional requirements are summarized below.*

Event Decomposition Table

Event (in the system)	Event Type	Users / Actor	Derived Use Case
Participant creates a new account in the system	External	Participant	Register Account
Participant updates personal profile information	External	Participant	Update Profile
Organizer creates a new event (workshop or conference)	External	Organizer	Create Event
Participant browses and filters available events	External	Participant	Browse Events
Participant registers for an event and makes payment	External	Participant	Register for Event
Organizer updates event details (date, venue, fee, etc.)	External	Organizer	Update Event
System sends automatic notifications and reminders before the event date	Temporal	System	Send Reminder/ Send Notifications
Participant submits feedback after attending an event	External	Participant	Provide Feedback
System generates reports for organizers (attendance, feedback, payments)	Temporal / State	System	Generate Report
Participant downloads certificate of attendance after event completion	External	Participant	Download Certificate
System Support receives support request	External	System Support	Handle Support Request
Presenter views participant feedback	External	Presenter	View Feedback

Use Case Diagram

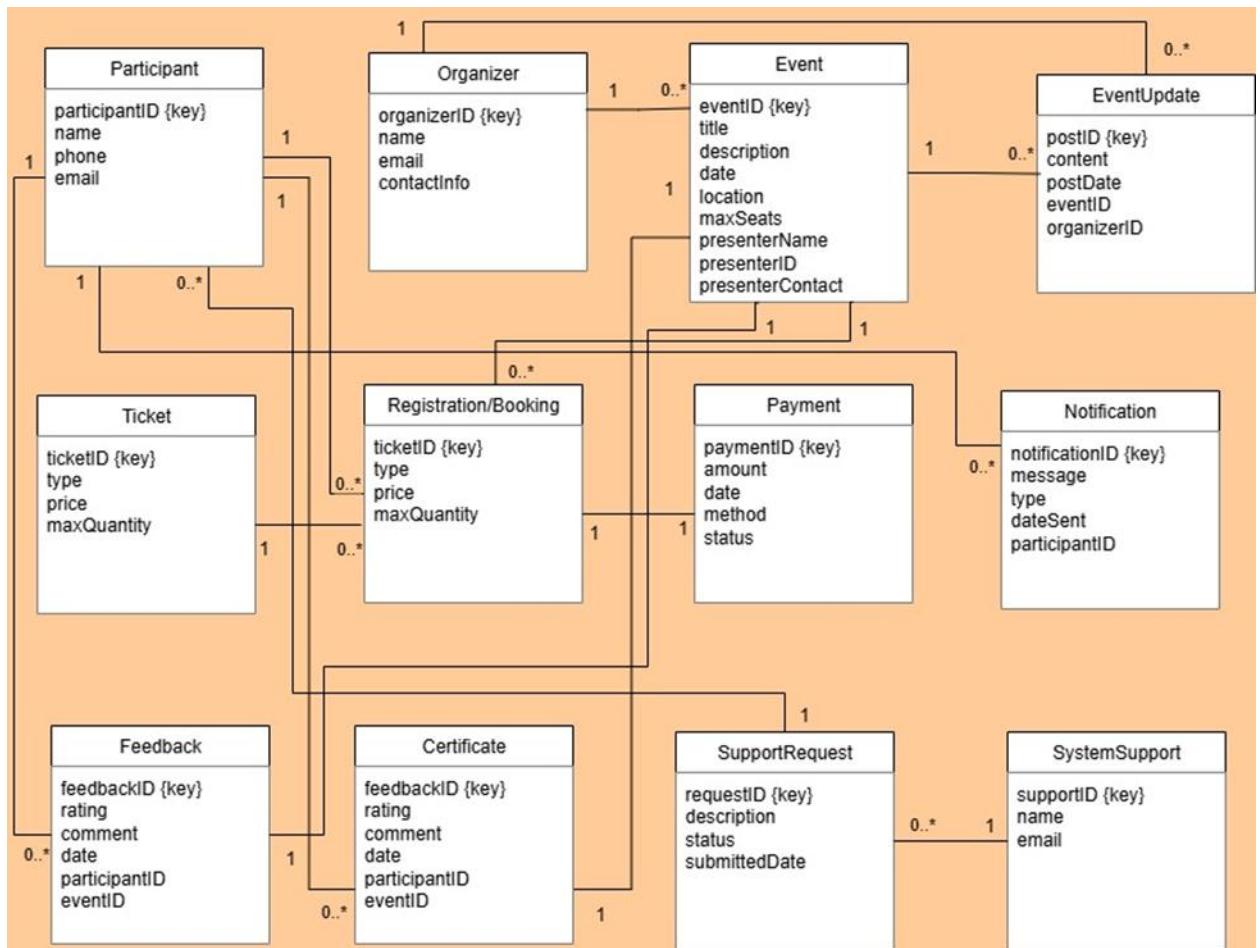


3.2 Domain model

Noun Technique Top of Form

Identified Noun	Notes on Including Noun as a thing to Store
Participant	A core system user who registers for events — must be stored as a primary entity
Organizer	Creates and manages events — must be stored as a primary entity
Presenter	Provides sessions for events — stored as an attribute of Event rather than a separate class
Event	Central element of the system — must be stored as a main class
Ticket	Represents event ticket types — must be stored
Registration / Booking	Connects Participant + Event + Ticket — must be stored as a major relationship
Payment	Records payment for bookings — must be stored
Feedback	Participant feedback for events — must be stored
Profile	Part of user information — handled as user attributes, not a separate class
Notification	System-generated notifications — must be stored to track delivery
Certificate	Certificate of attendance issued to participant — must be stored
Support Request	Logged user issues submitted to System Support — must be stored
System Support	Represents the support team handling requests — must be stored
Event Update	Organizer updates and posts — must be stored as event content

Domain Model Class Diagram



3.3 Detailed Use-case Description

<i>Use case name</i>	Register for Event	
<i>Scenario</i>	Participant registers for a selected event through Eventra.	
<i>Triggering Event</i>	Participant selects an event and clicks “Register”.	
<i>Brief description of the event</i>	Participant registers for an event online, selects ticket type, and confirms payment	
<i>Actor</i>	Participant	
<i>Related use cases</i>	Browse Events, Cancel Booking	
<i>Stakeholders</i>	Participant, Event Organizer, Payment Provider	
<i>Preconditions</i>	User is logged in, event is active, seats available, payment gateway is online.	
<i>Post conditions</i>	Booking created, payment confirmed, QR ticket issued, seats reduced.	
<i>Flow of activities</i>	<i>Actor</i>	<i>System</i>
	1. Select ticket type and quantity	1.1 Show event details & availability; hold seats and compute total
	2. (Optional) Enter promo code	2.1 Validate promo code and update amount
	3. Choose payment method and submit details	3.1 Authorize payment and create booking
	4. View confirmation	4.1 Generate QR ticket, send confirmation email/receipt, update remaining capacity
<i>Exception conditions</i>	1.1 Seats not available / registration closed 2.1 Invalid or expired promo code 3.1 Payment authorization failed	

<i>Use case name</i>	Cancel booking									
<i>Scenario</i>	The participant wants to cancel a confirmed booking and follow the event's refund policy if applicable.									
<i>Triggering Event</i>	Participant opens My Bookings and selects Cancel for a booking.									
<i>Brief description of the event</i>	Participant cancels a booking and receives confirmation of cancellation.									
<i>Actor</i>	Participant									
<i>Related use cases</i>	Register for Event									
<i>Stakeholders</i>	Participant, Event Organizer, Payment Provider									
<i>Preconditions</i>	Valid confirmed booking; user authenticated. Event has not started yet.									
<i>Post conditions</i>	Status set to Cancelled; seats restored; refund initiated if eligible; cancellation email sent.									
<i>Flow of activities</i>	<table border="1"> <thead> <tr> <th><i>Actor</i></th> <th><i>System</i></th> </tr> </thead> <tbody> <tr> <td>1. Open My Bookings and choose a booking</td> <td>1.1 List bookings and display selected booking</td> </tr> <tr> <td>2. Click Cancel and review policy</td> <td>2.1 Show cancellation/refund policy and eligibility</td> </tr> <tr> <td>3. Confirm cancellation</td> <td>3.1 Set status = Cancelled and release seats 3.2 If eligible: initiate refund and send cancellation email/notification</td> </tr> </tbody> </table>	<i>Actor</i>	<i>System</i>	1. Open My Bookings and choose a booking	1.1 List bookings and display selected booking	2. Click Cancel and review policy	2.1 Show cancellation/refund policy and eligibility	3. Confirm cancellation	3.1 Set status = Cancelled and release seats 3.2 If eligible: initiate refund and send cancellation email/notification	
<i>Actor</i>	<i>System</i>									
1. Open My Bookings and choose a booking	1.1 List bookings and display selected booking									
2. Click Cancel and review policy	2.1 Show cancellation/refund policy and eligibility									
3. Confirm cancellation	3.1 Set status = Cancelled and release seats 3.2 If eligible: initiate refund and send cancellation email/notification									
<i>Exception conditions</i>	2.1 Cancellation after refund deadline → system allows cancellation but no refund is issued 2.2 Booking already cancelled OR event already started → system prevents cancellation and shows message									

<i>Use case name</i>	Browse Events	
<i>Scenario</i>	The participant explores available events, applies filters, and opens details to decide whether to register.	
<i>Triggering Event</i>	Participant opens the Browse/Explore page.	
<i>Brief description of the event</i>	Participant views details of an event, including agenda, speakers, and venue.	
<i>Actor</i>	Participant	
<i>Related use cases</i>	Register for Event	
<i>Stakeholders</i>	Participants, Event Organizers	
<i>Preconditions</i>	Published events exist; search service is available.	
<i>Post conditions</i>	Events list is displayed successfully (Optional) An event is selected for registration	
<i>Flow of activities</i>	<i>Actor</i>	<i>System</i>
	1. Open Browse/Explore	1.1 Render filters and fetch initial event list
	2. Apply filters / search keywords	2.1 Query and return matching events
	3. Scan results and pick an event	3.1 Highlight selection and prepare details
	4. Open event details	4.1 Display full details (agenda, speakers, venue/URL, price, capacity)
<i>Exception conditions</i>	1.1 Search service unavailable → system shows error and retry option 2.1 No matching events → system displays “No results” and suggests removing filters 4.1 Details load failed → system retries and informs the user	

<i>Use case name</i>	Provide Feedback	
<i>Scenario</i>	After attending an event, the participant submits a rating and comment through the feedback form.	
<i>Triggering Event</i>	Event concludes and participant opens the feedback link or reminder.	
<i>Brief description of the event</i>	Participant submits a rating or feedback for the event after it concludes.	
<i>Actor</i>	Participant	
<i>Related use cases</i>	Register for Event	
<i>Stakeholders</i>	Participant, Organizer, Presenter	
<i>Preconditions</i>	Booking status is Attended/Completed; user authenticated.	
<i>Post conditions</i>	Feedback stored and associated with the booking/event; available in organizer reports.	
<i>Flow of activities</i>	<i>Actor</i>	<i>System</i>
	1. Open the feedback form	1.1 Load form and verify user eligibility (attended)
	2. Enter rating and comment	2.1 Validate required fields and ranges
	3. Submit	3.1 Save feedback linked to booking/event
	4. View confirmation	4.1 Display confirmation message and update score
<i>Exception conditions</i>	1.1 User not eligible (not attended) → system blocks submission 2.1 Invalid or empty input → system requests correction Inappropriate content detected → system rejects and shows policy message	

Use case name	Create event	
Scenario	Organizer creates a new event by providing event details	
Triggering Event	Organizer clicks "Create New Event" button from the organizer dashboard.	
Brief description of the event	Organizer creates a new event, specifying type, category, date, time, and location.	
Actor	Organizer	
Related use cases	-	
Stakeholders	Organizer, Participants, System Administrator	
Preconditions	<ol style="list-style-type: none"> 1. The organizer is registered and logged into the system. 2. The organizer has a verified organizer profile. 	
Post conditions	<ol style="list-style-type: none"> 1. A new event is created 2. The event is listed publicly for participants to browse and register. 3. The organizer is redirected to the event management dashboard 	
Flow of activities	Actor	System
	1. Actor click on "Create Event"	1.1 System displays the "Create Event"
	2. Actor enters basic event details	2.1 System validates the entered date and time
	3. Actor reviews all entered information and clicks the "Publish Event" button.	2.2 System displays the final settings options
		3.1 System displays a success message to the actor.
Exception conditions	2.a Invalid Date/Time :If the entered date is in the past, the system displays an error message and returns to renter step	

Use case name	Manage Tickets	
Scenario	Successfully defining and configuring ticket types for an event.	
Triggering Event	The organizer selects "Manage Tickets" from the event dashboard.	
Brief description of the event	Organizer defines ticket types, prices, maximum participants, and handles promotions.	
Actor	organizer	
Related use cases	-	
Stakeholders	Organizer ,Participants, System Administrator	
Preconditions	1. The organizer is registered and logged into the system. 2. The organizer has at least one created event. 3. The event is in "Draft" or "Published" state.	
Post conditions	1. Ticket types are saved and associated with the event. 2. Available capacity is updated in real-time. 3. Participants can view and purchase the configured tickets.	
Flow of activities	Actor	System
	1. Organizer selects "Manage Tickets" for a specific event.	1.1 System displays the event management dashboard
		1. 2 System displays Mange options
	2.Organizer chooses to: - Add new ticket type - Delete ticket type	2.1 system display details for the option
	3.Organizer fills in ticket details and saves.	3.1 System validates ticket data
		3.2 System displays success message
Exception conditions	3.a Invalid Ticket Data If validation fails, system displays specific error and returns to renter data step 3.b Duplicate Ticket Name If ticket name already exists for this event, system displays error	

Use case name	Update event	
Scenario	Successfully posting updates to the event community feed	
Triggering Event	Organizer clicks on post update in event management page	
Brief description of the event	This use case allows Organizer to share updates ,photos and announcements with event participant through community feed	
Actor	Organizer	
Related use cases	<>include>>: send notification, send reminders	
Stakeholders	Organizer ,Participant, system administrator	
Preconditions	1. The organizer is registered and logged into the system. 2. The organizer has at least one active event. 3. The event's community feed feature is enabled.	
Post conditions	1. The update is posted to the event's community feed. 2. Participants receive notifications about the new update. 3. The update is visible to all event participants and organizers.	
Flow of activities	Actor	System
	1. Organizer clicks on " post update" button	1.1 system display event management dashboard with community feed
	2. Organizer write and update	1.2 system display post creation interface with text editor
	3. Organizer clicks on "publish update"	3.1 system validate content if its empty
		3.1 system publish update
Exception conditions	2.a empty content system displays: "Update must contain text message." Return to write step	

Use case name	Generate reports	
Scenario	Successfully exporting attendee data and financial reports for a completed event.	
Triggering Event	The organizer selects "Generate Reports" from the event dashboard.	
Brief description of the event	This use case allows an organizer to export detailed attendee information and financial data for their events in various formats for analysis and record-keeping.	
Actor	Organizer	
Related use cases	-	
Stakeholders	Organizer, system administrator, Accounting Department	
Preconditions	1. The organizer is registered and logged into the system. 2. The organizer has at least one completed event.	
Post conditions	1. The requested report is generated and downloaded. 2. Report data is accurately reflected from the event records.	
Flow of activities	Actor	System
	1. select completed event and clicks on "generate reports".	1.1 system display event management dashboard with "Generate Reports" 1.2 system validates complementation
	2.select type of report	2.1 system display type of report to be selected
	3. enter inputs	2.2 display parameters to type in
	4. clicks on generate	3.1 system validate content 4.1 system generate report
	1.a No data available : display message of failure and return to select event 3.a input invalid : display message of failure and return to rewrite inputs.	
Exception conditions		

<i>Use case name</i>	Download Certificate													
<i>Scenario</i>	Participant downloads attendance certificate													
<i>Triggering Event</i>	Event ends and system marks it as completed													
<i>Brief description of the event</i>	Participant downloads certificate after event completion													
<i>Actor</i>	Participant													
<i>Related use cases</i>	Register for Event													
<i>Stakeholders</i>	Participant, Organizer													
<i>Preconditions</i>	Event completed, Participant attended event													
<i>Post conditions</i>	Certificate downloaded, Download recorded													
<i>Flow of activities</i>	<table border="1"> <thead> <tr> <th><i>Actor</i></th> <th><i>System</i></th> </tr> </thead> <tbody> <tr> <td>1. Participant logs into account</td> <td>1. System verifies login</td> </tr> <tr> <td>2. Participant goes to *My Certificates*</td> <td>2.1 System shows available certificates</td> </tr> <tr> <td>3. participant clicks Download on desired certificate</td> <td>3.1 System generates PDF certificate</td> </tr> <tr> <td>4.</td> <td>4.1 System sends PDF to participant's device</td> </tr> <tr> <td>5.</td> <td>5.1 System records download date/time</td> </tr> </tbody> </table>	<i>Actor</i>	<i>System</i>	1. Participant logs into account	1. System verifies login	2. Participant goes to *My Certificates*	2.1 System shows available certificates	3. participant clicks Download on desired certificate	3.1 System generates PDF certificate	4.	4.1 System sends PDF to participant's device	5.	5.1 System records download date/time	
<i>Actor</i>	<i>System</i>													
1. Participant logs into account	1. System verifies login													
2. Participant goes to *My Certificates*	2.1 System shows available certificates													
3. participant clicks Download on desired certificate	3.1 System generates PDF certificate													
4.	4.1 System sends PDF to participant's device													
5.	5.1 System records download date/time													
<i>Exception conditions</i>	3.If PDF generation fails, system shows error and suggests <u>retry</u> later													

<i>Use case name</i>	Update Profile	
<i>Scenario</i>	Participant updates personal information	
<i>Triggering Event</i>	Participant wants to modify profile data	
<i>Brief description of the event</i>	Participant edits and saves profile change	
<i>Actor</i>	Participant	
<i>Related use cases</i>	Register for Event	
<i>Stakeholders</i>	Participant	
<i>Preconditions</i>	Participant is logged in	
<i>Post conditions</i>	Profile information updated	
<i>Flow of activities</i>	<i>Actor</i>	<i>System</i>
	1. Participant navigates to Profile page	1.1 System displays current profile data
	2. Participant clicks *Edit Profile*	2.1 System enables editing mode
	3. Participant modifies information (name, phone, email)	3.1 System validates
	4. Participant * Clicks Save Changes*	4.1 System saves updates to database
<i>Exception conditions</i>	5.	5.1 System shows *Profile updated successfully*
	1. If phone format <u>invalid</u> , show "Please enter valid phone number" 2. If required fields <u>empty</u> , show "Please fill required fields"	

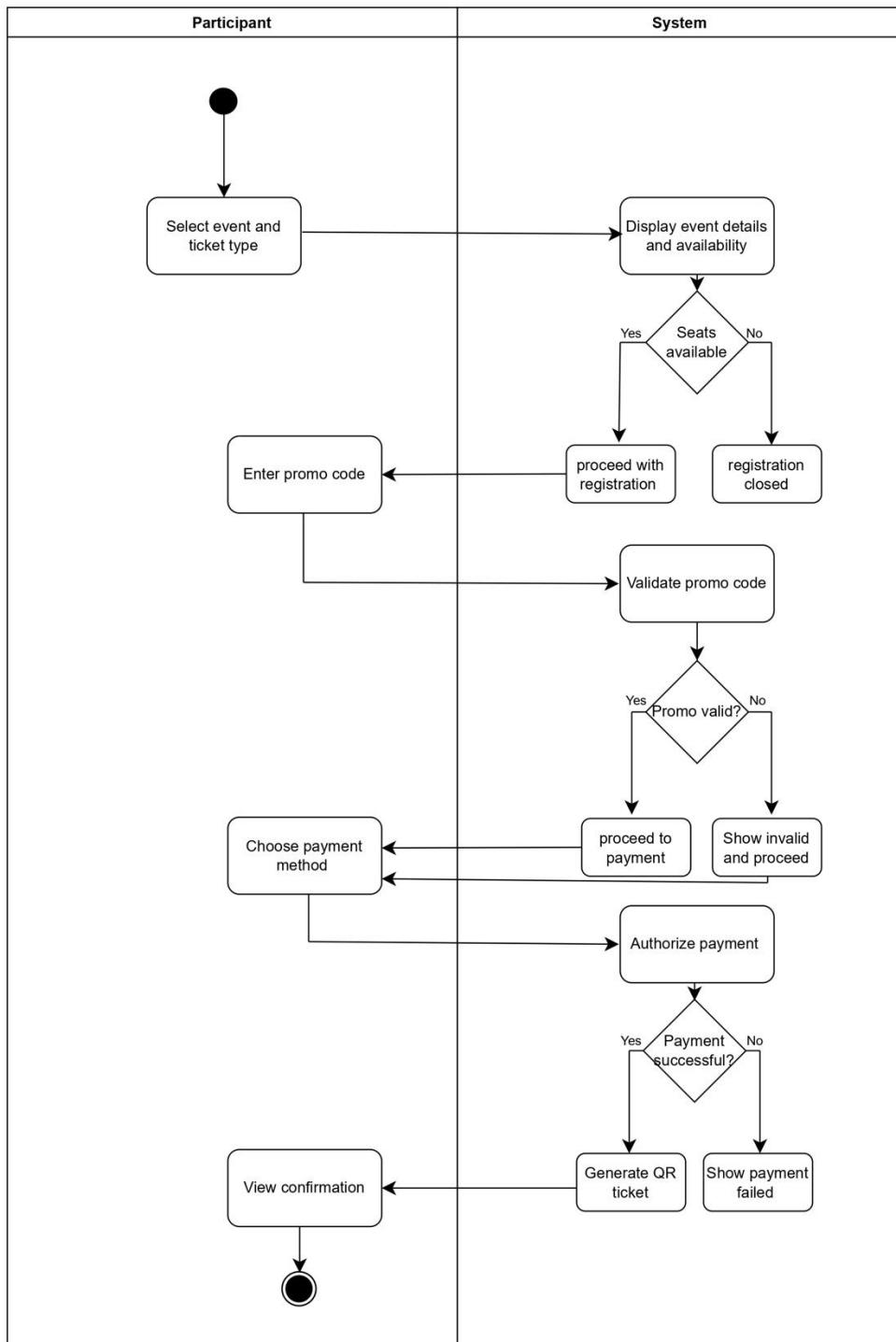
<i>Use case name</i>	Handle Support Request	
<i>Scenario</i>	System Support handles user issues	
<i>Triggering Event</i>	User submits support request	
<i>Brief description of the event</i>	Support team receives and resolves user problems	
<i>Actor</i>	System Support	
<i>Related use cases</i>	Register for Event	
<i>Stakeholders</i>	Participant, Organizer, System Support	
<i>Preconditions</i>	Support request exists in system	
<i>Post conditions</i>	Support request resolved	
<i>Flow of activities</i>	<i>Actor</i>	<i>System</i>
	1. System Support checks new requests	1.1 System shows pending support requests
	2. System Support selects request	2.1 System displays request details
	3. System Support contacts user	3.1 System provides user contact information
	4. System Support resolves issue	4.1 System logs resolution steps
	5. System Support marks as resolved	5.1 System updates request status and <u>notifies</u> user
<i>Exception conditions</i>	2. If user unavailable, schedule follow-up	

<i>Use case name</i>	View Feedback													
<i>Scenario</i>	Presenter views participant feedback													
<i>Triggering Event</i>	Feedback submitted for presenter's session													
<i>Brief description of the event</i>	Presenter accesses and reviews event feedback													
<i>Actor</i>	Presenter													
<i>Related use cases</i>	Provide Feedback													
<i>Stakeholders</i>	Presenter, Participants													
<i>Preconditions</i>	Event completed, Feedback exists													
<i>Post conditions</i>	Feedback viewed													
<i>Flow of activities</i>	<table border="1"> <thead> <tr> <th><i>Actor</i></th> <th><i>System</i></th> </tr> </thead> <tbody> <tr> <td>1. Presenter logs into system</td> <td>1.1 System authenticates presenter</td> </tr> <tr> <td>2. Presenter goes to "My Events"</td> <td>2.1 System displays presenter's events</td> </tr> <tr> <td>3. Presenter selects completed event</td> <td>3.1 System shows event details</td> </tr> <tr> <td>4. Presenter clicks "View Feedback"</td> <td>4.1 System retrieves feedback data</td> </tr> <tr> <td>5. Presenter reviews ratings and comment</td> <td>5.1 System displays organized feedback</td> </tr> </tbody> </table>	<i>Actor</i>	<i>System</i>	1. Presenter logs into system	1.1 System authenticates presenter	2. Presenter goes to "My Events"	2.1 System displays presenter's events	3. Presenter selects completed event	3.1 System shows event details	4. Presenter clicks "View Feedback"	4.1 System retrieves feedback data	5. Presenter reviews ratings and comment	5.1 System displays organized feedback	
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4. Presenter clicks "View Feedback"	4.1 System retrieves feedback data													
5. Presenter reviews ratings and comment	5.1 System displays organized feedback													
<i>Exception conditions</i>	1. If no feedback available, show "No feedback yet"													

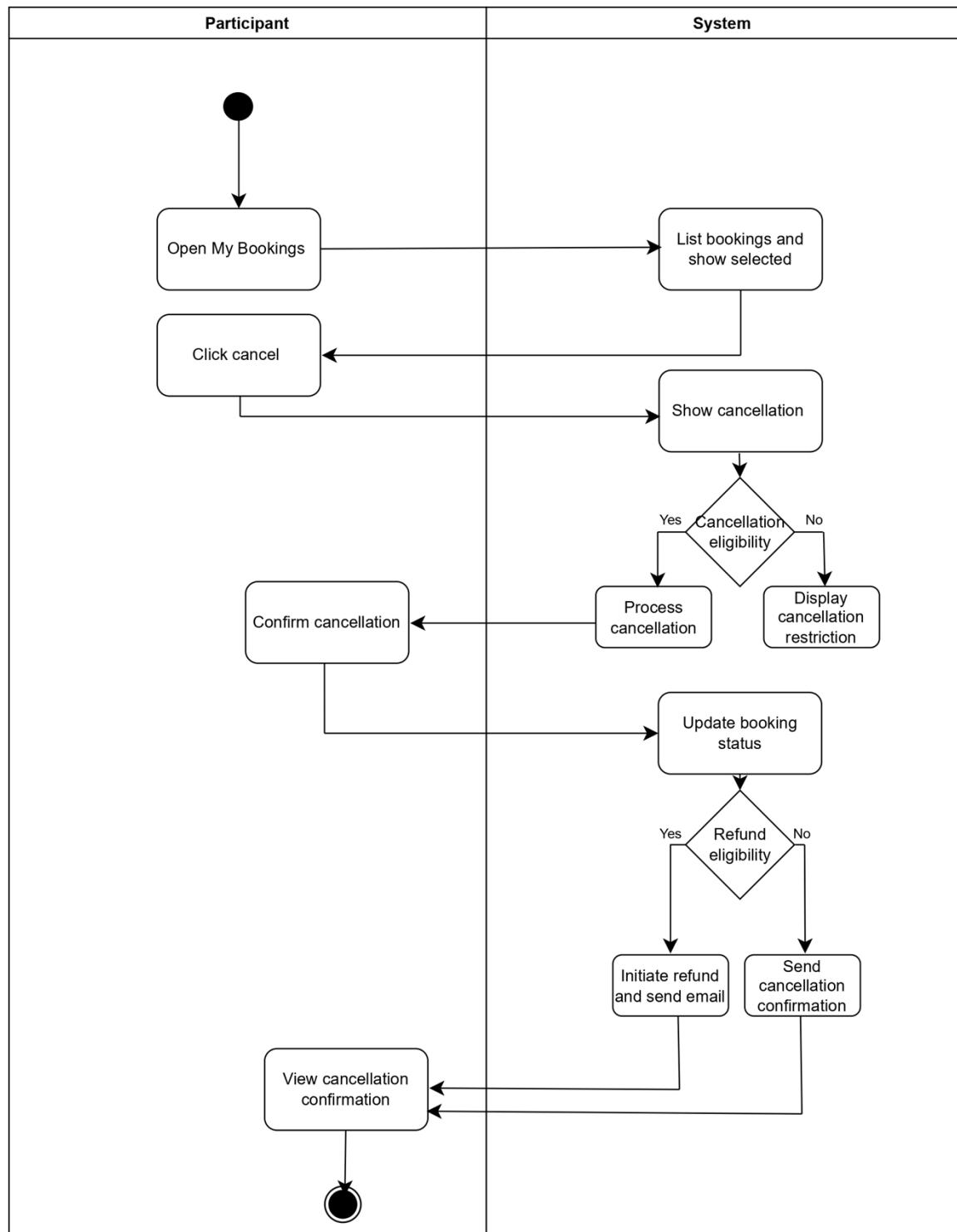
/

3.4 Activity Diagram

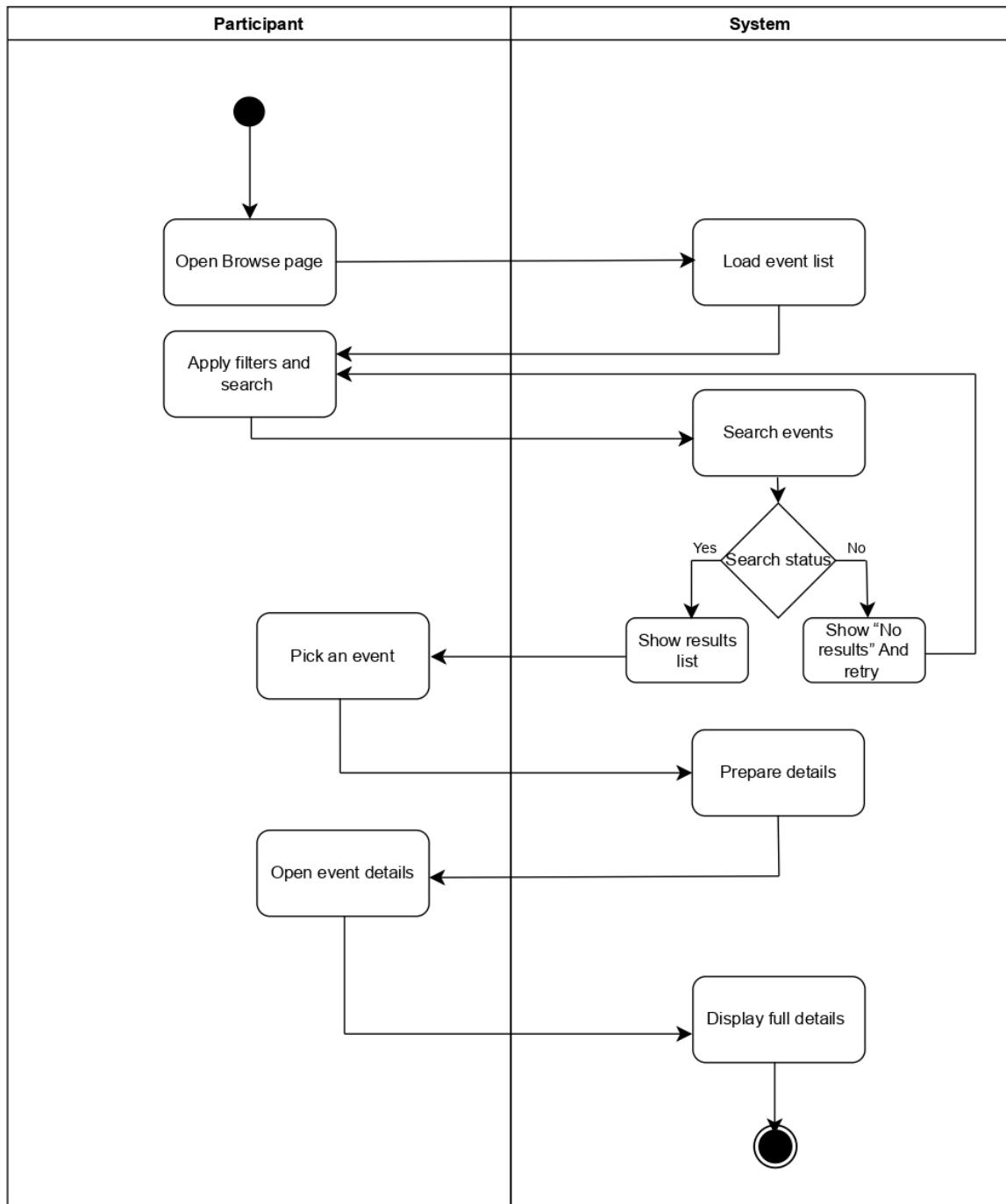
Register for event



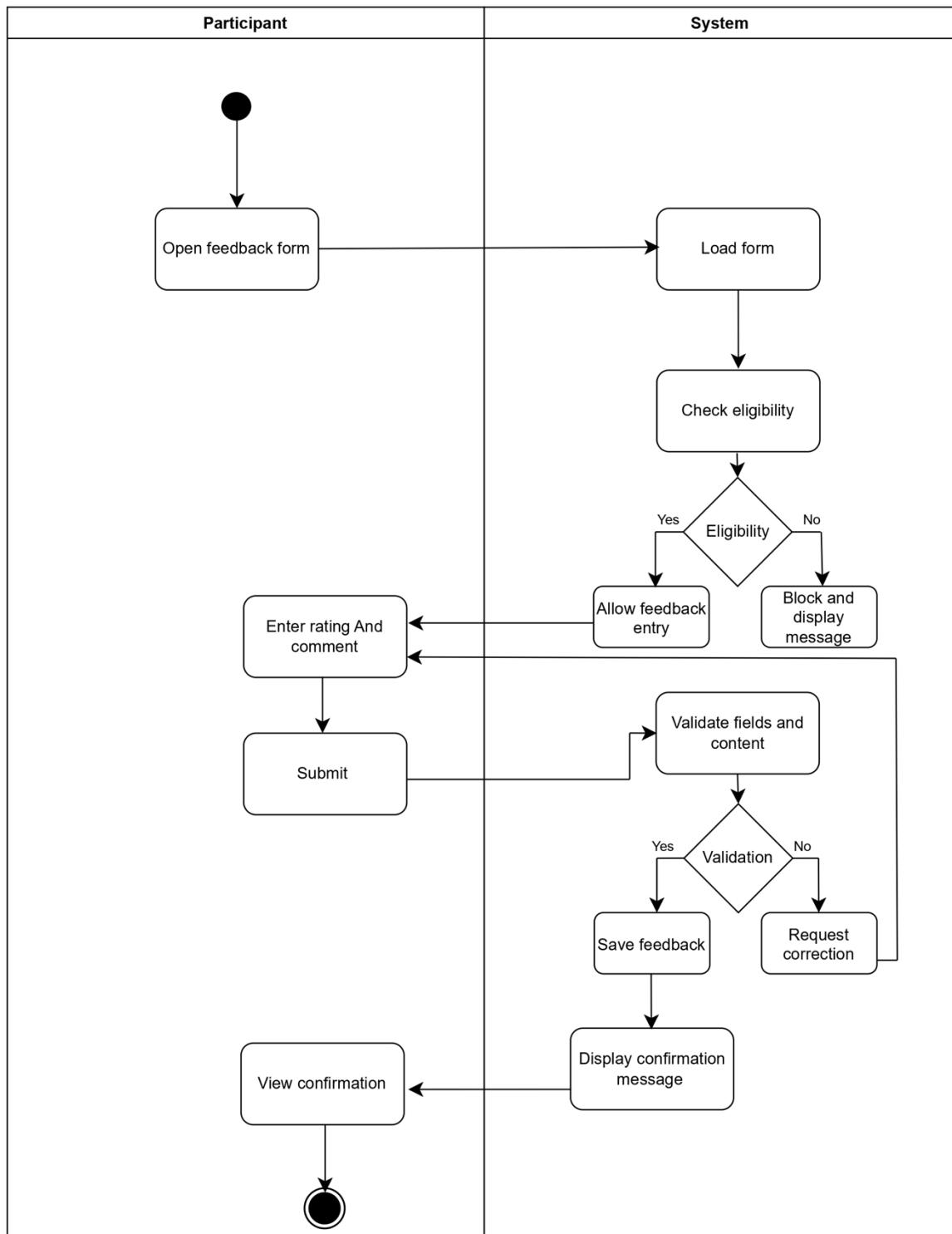
Cancel booking



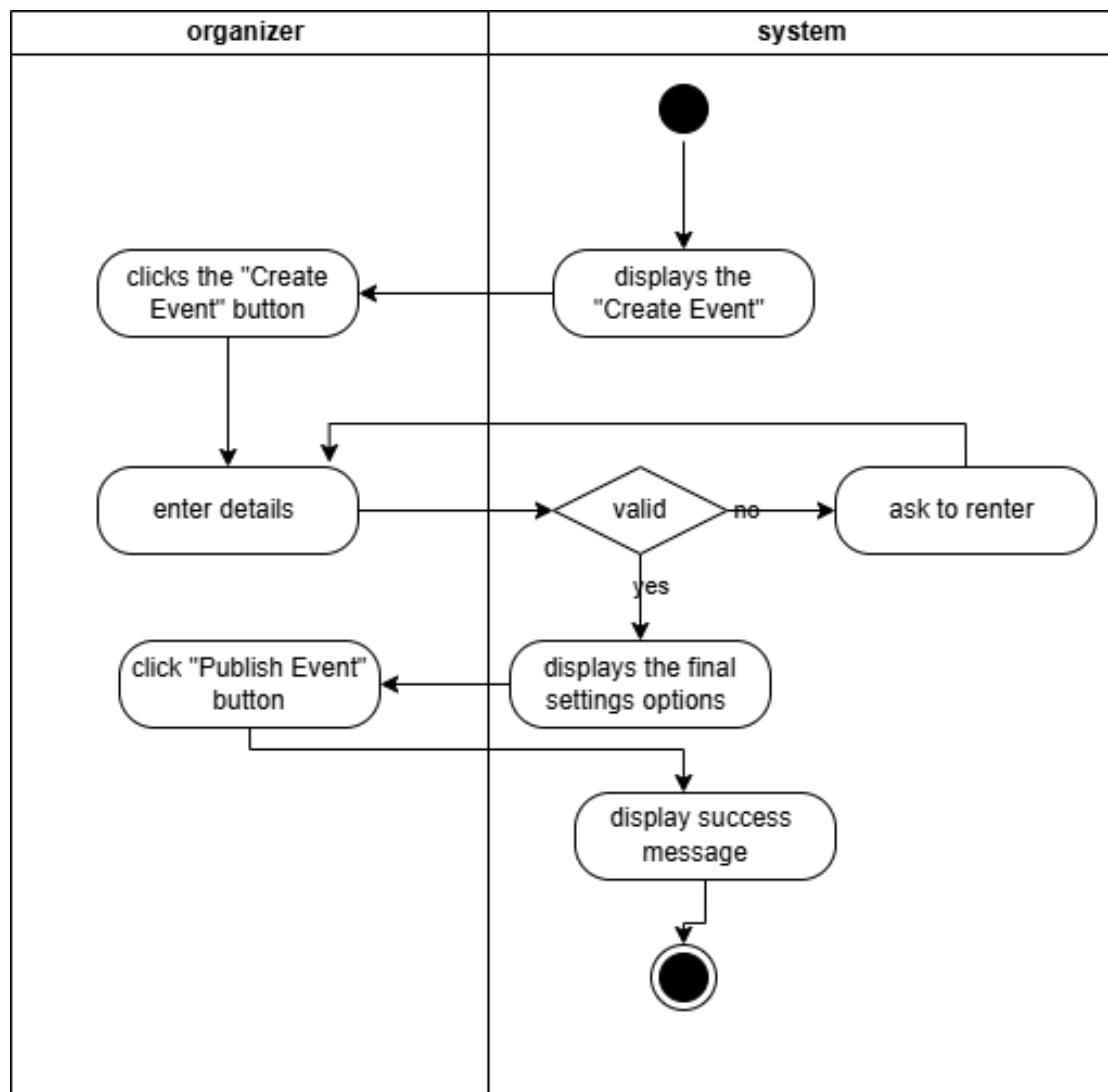
Browse events



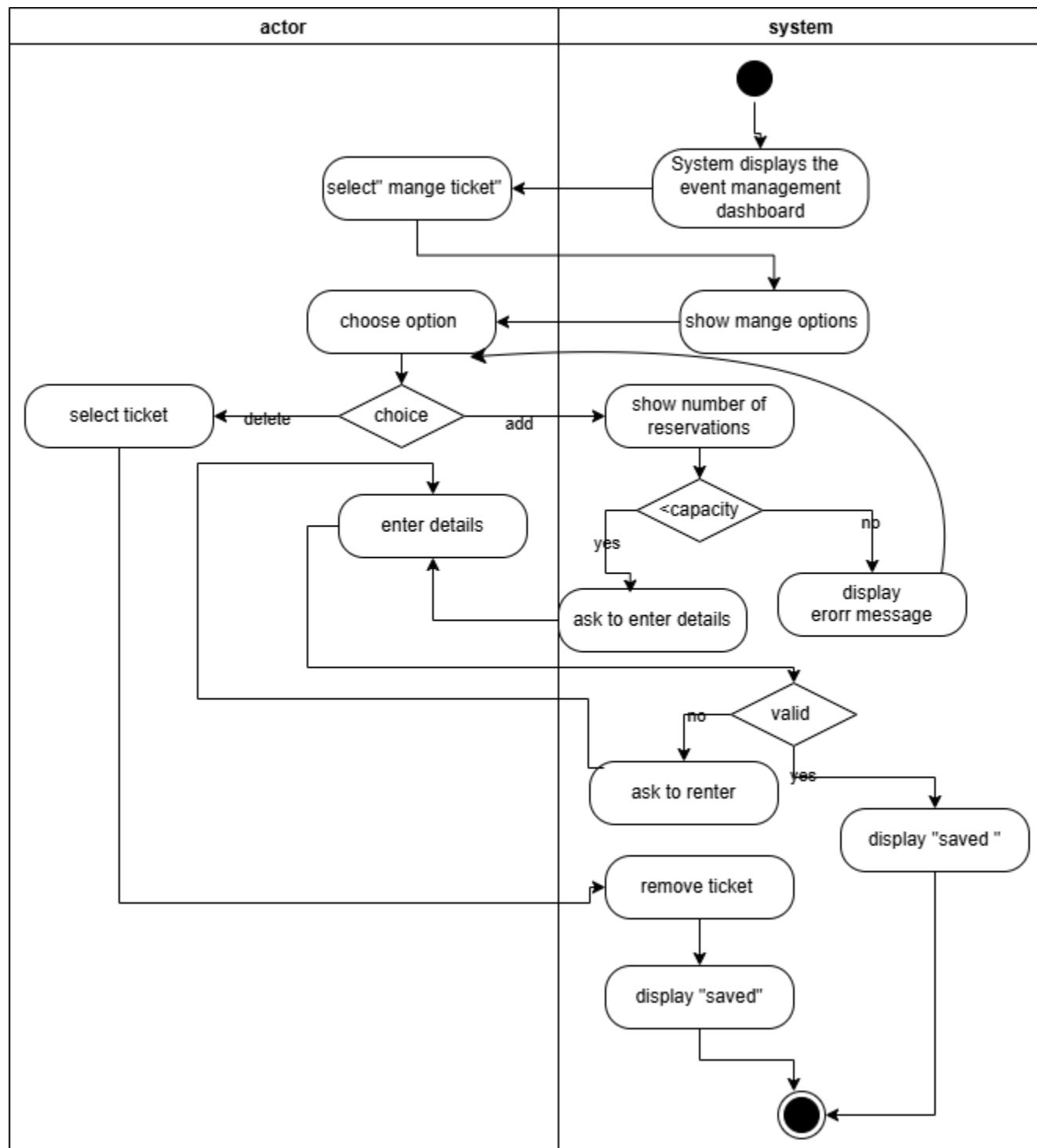
Provide feedback



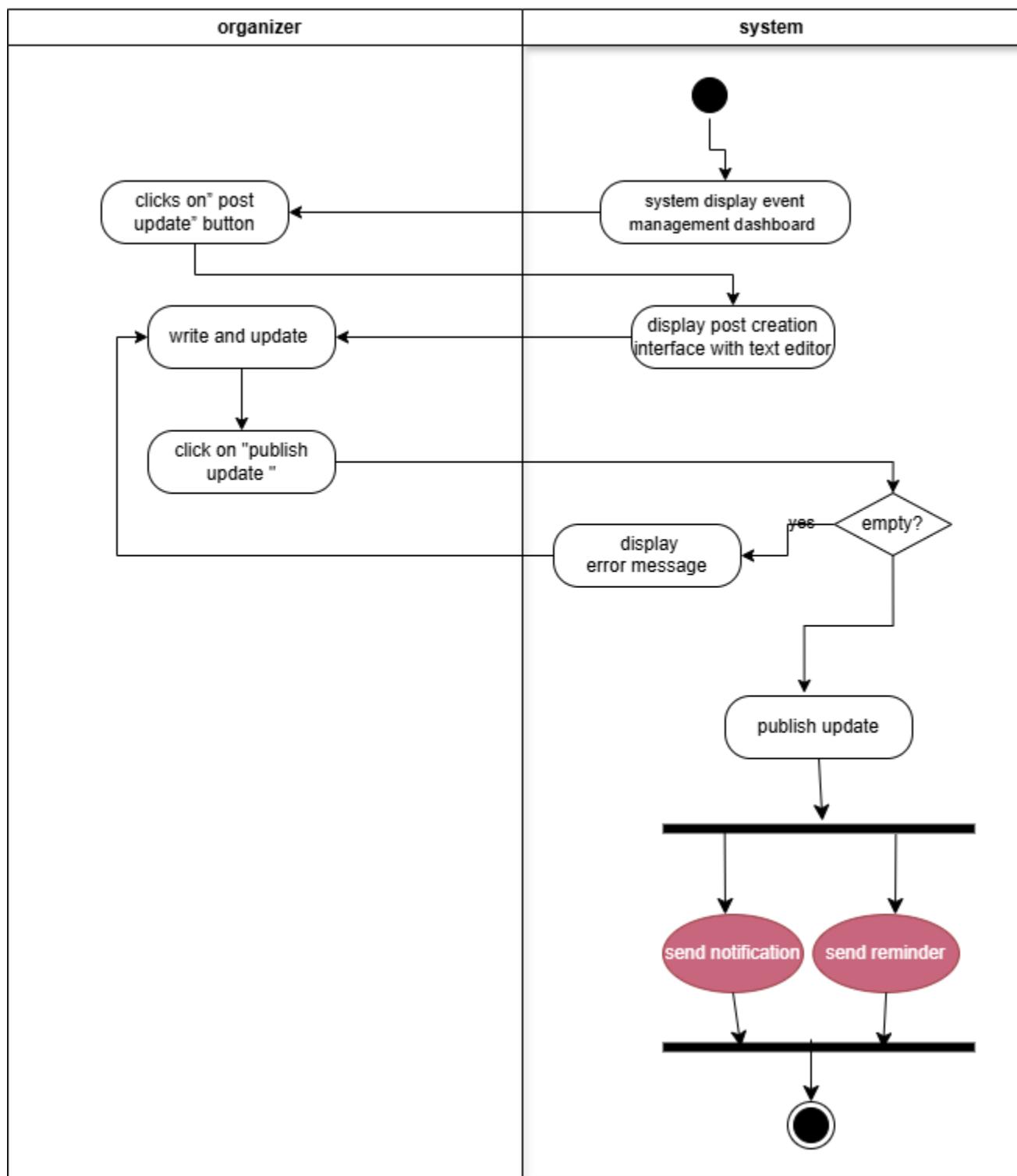
Create event



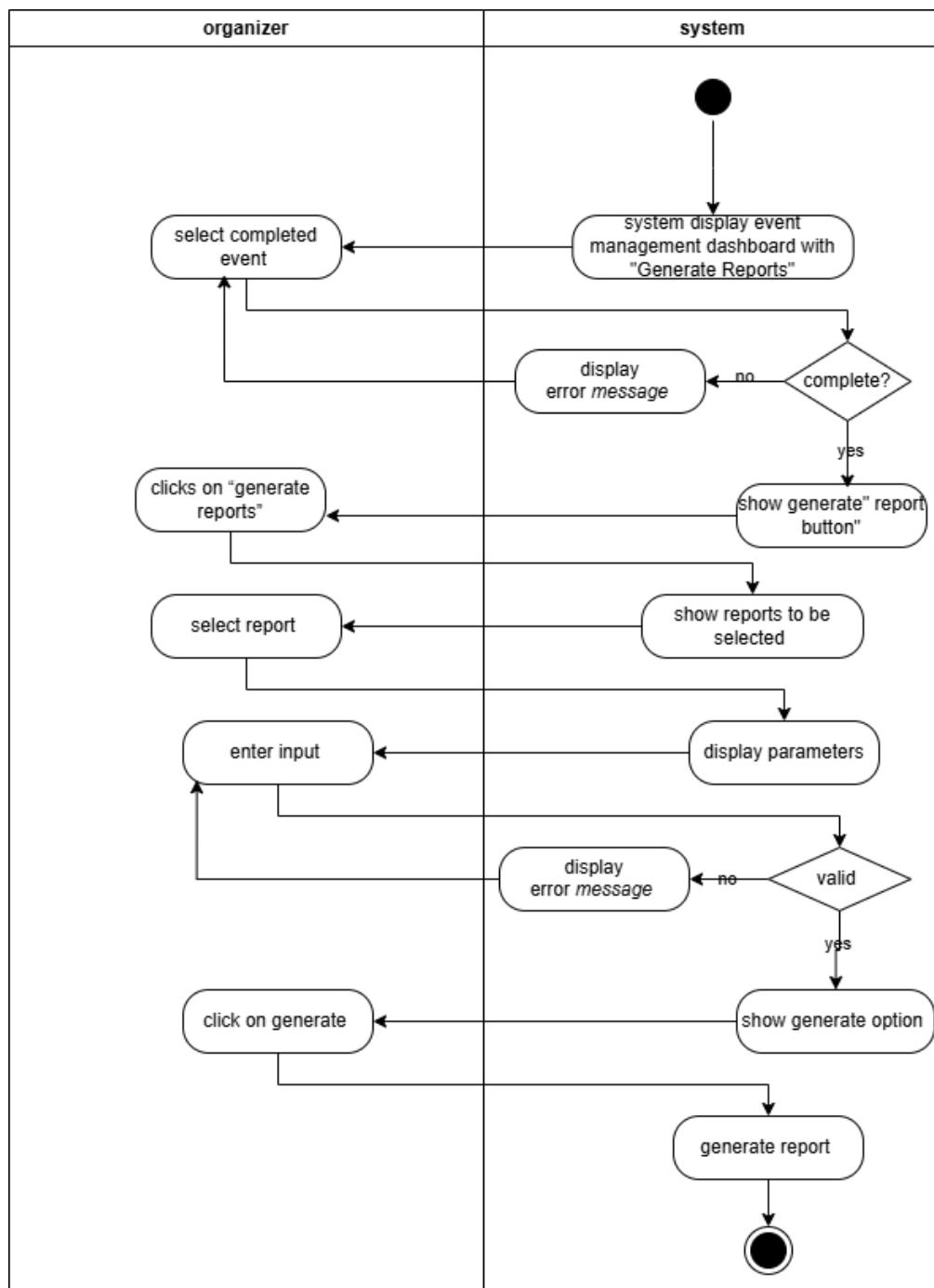
Manage Tickets



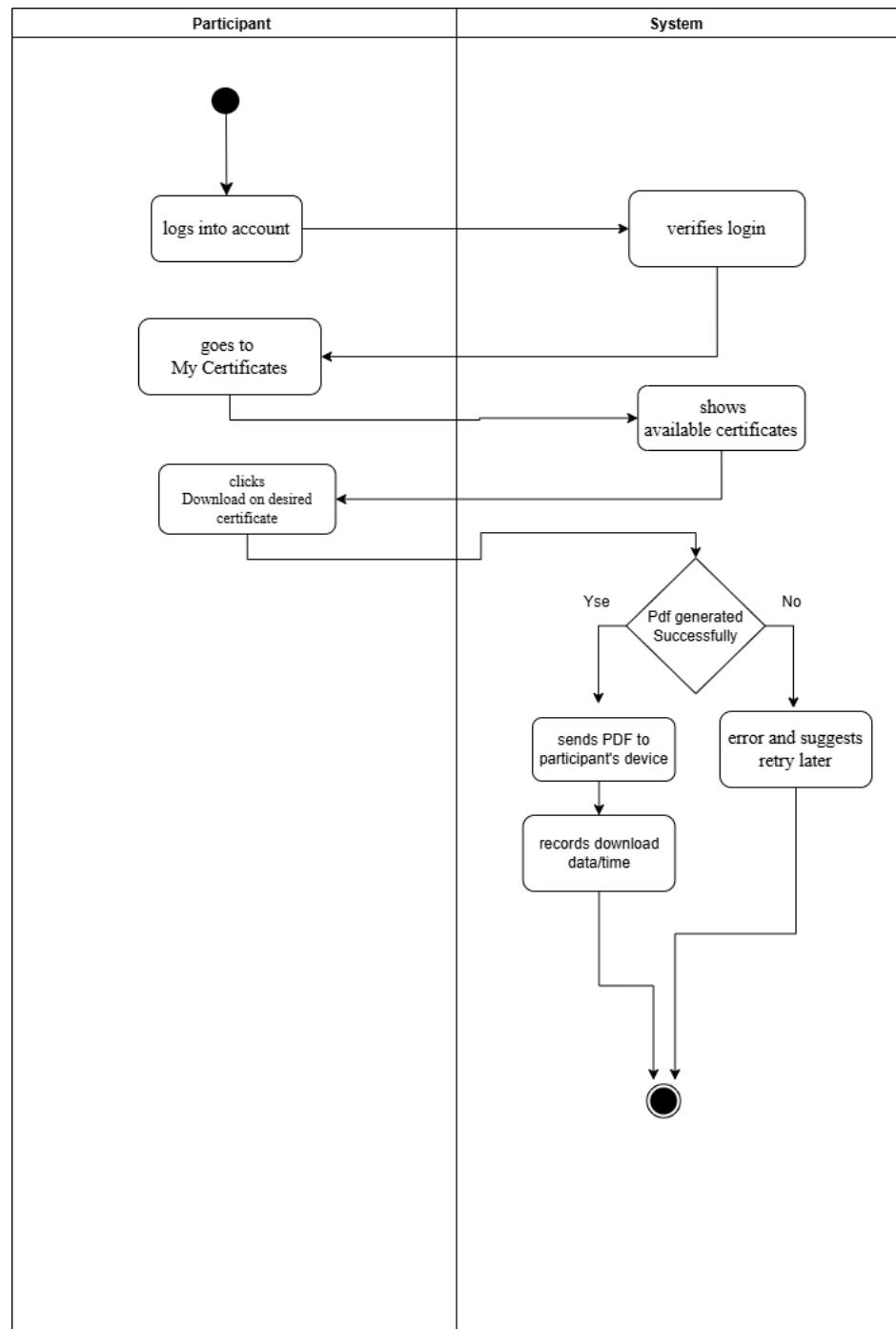
Update event



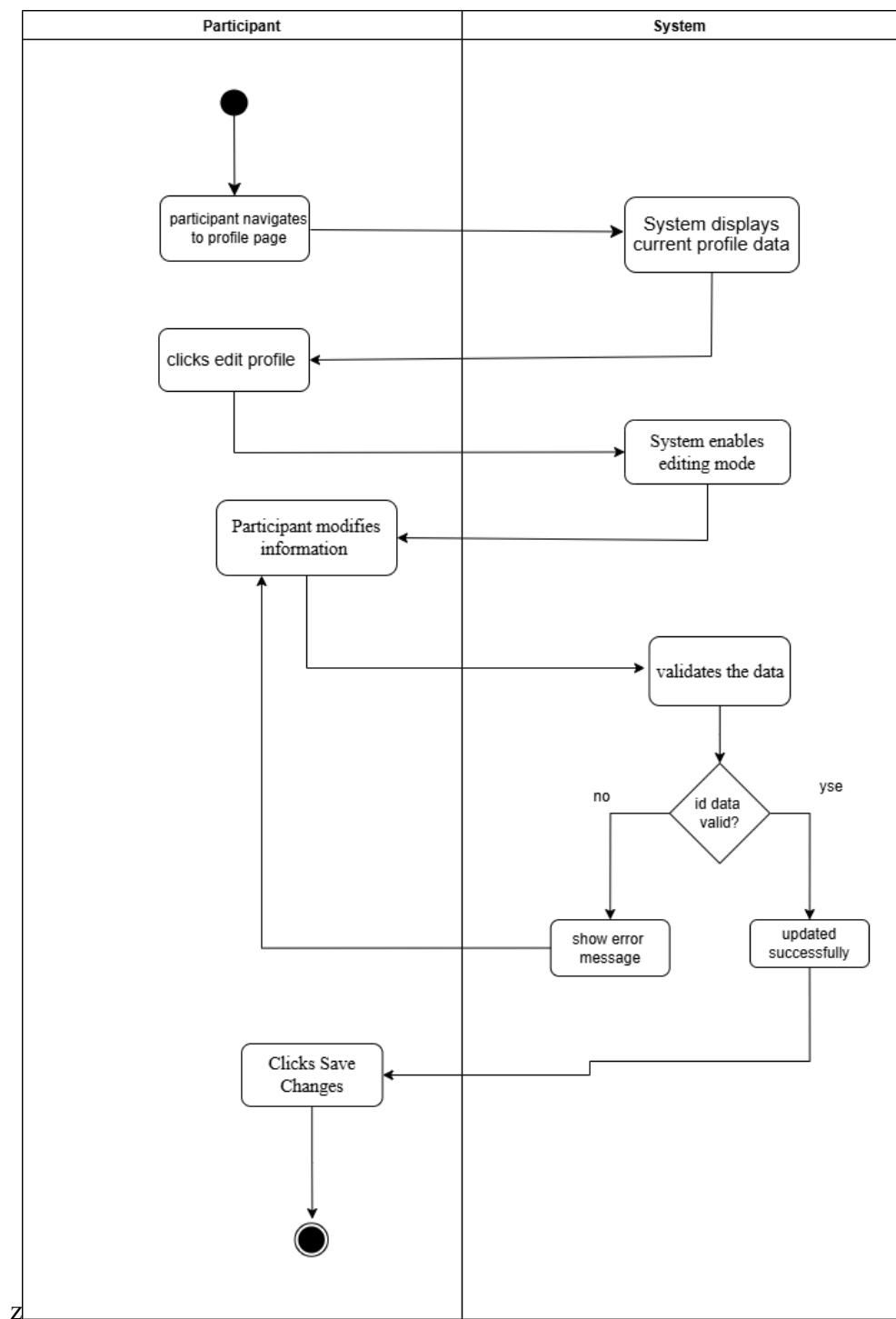
Generate reports



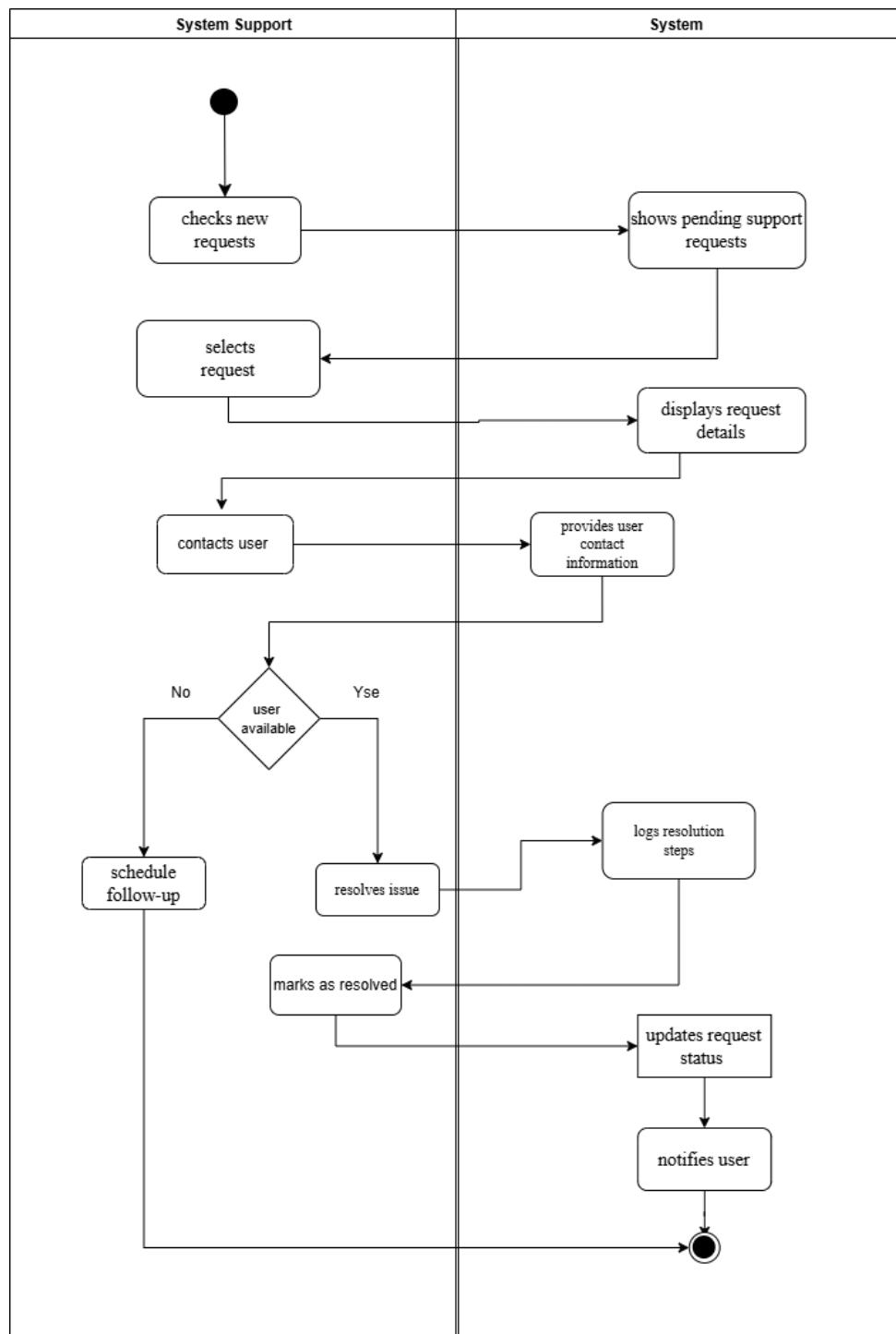
Download Certificate



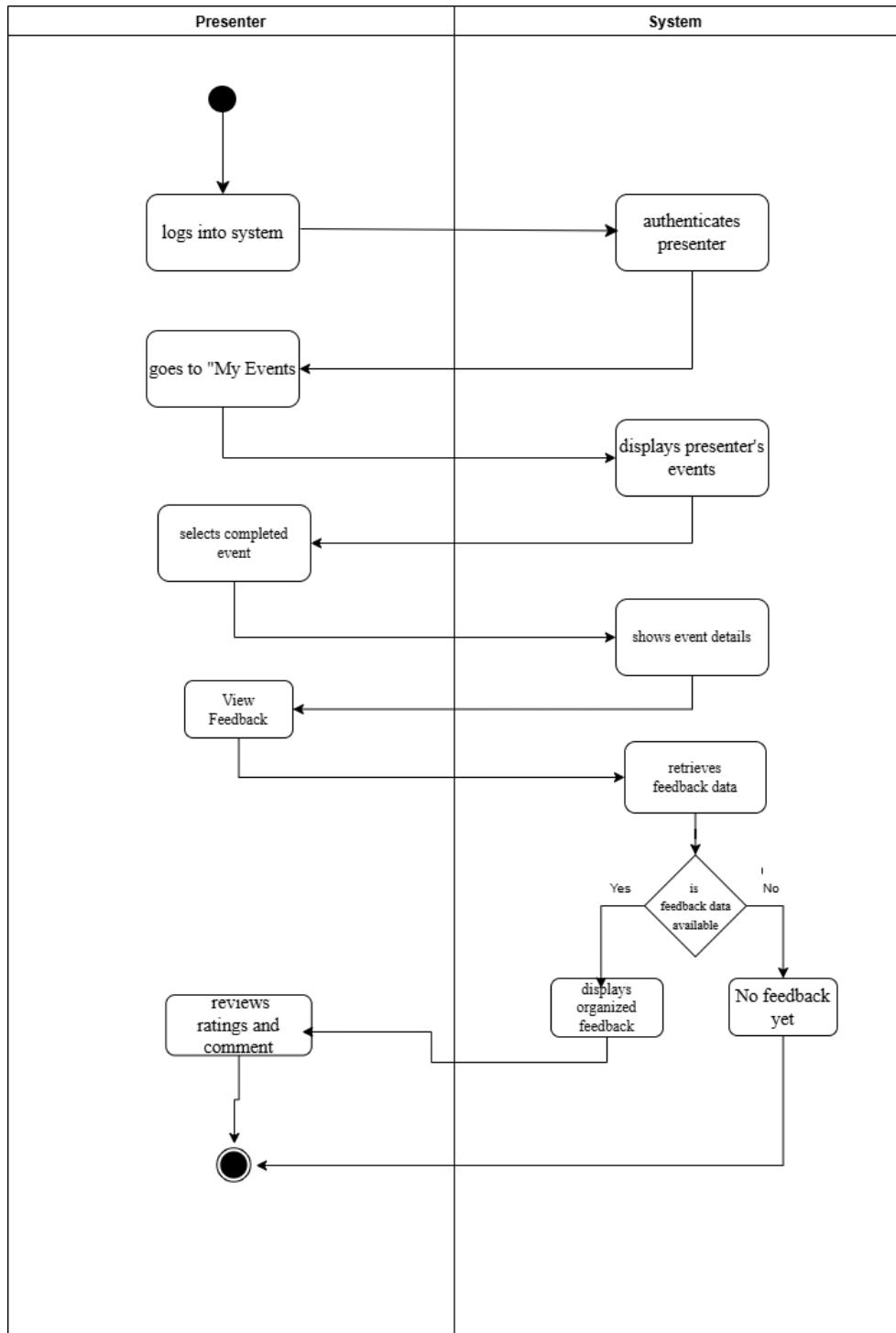
Update Profile



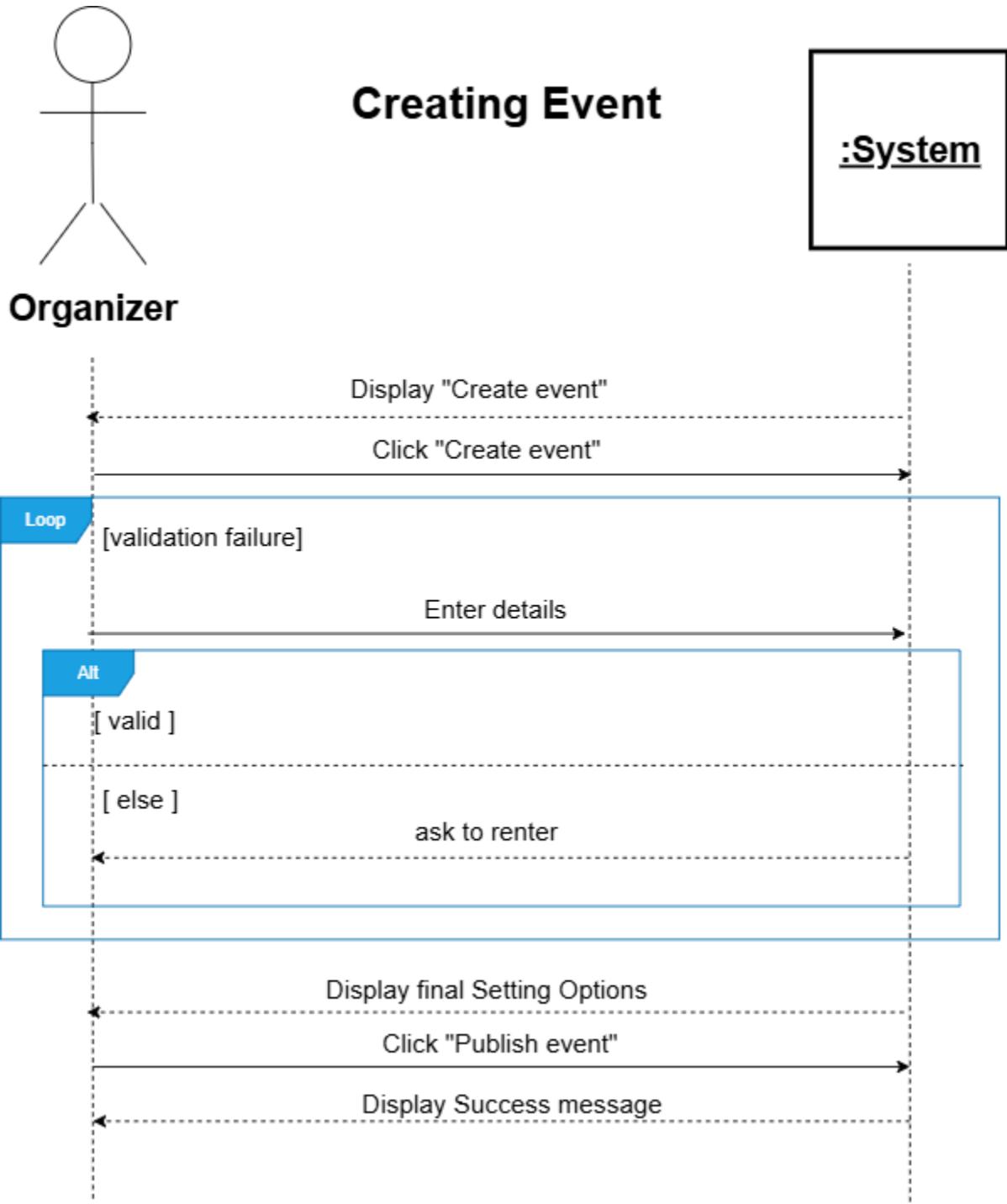
Handle Support Request

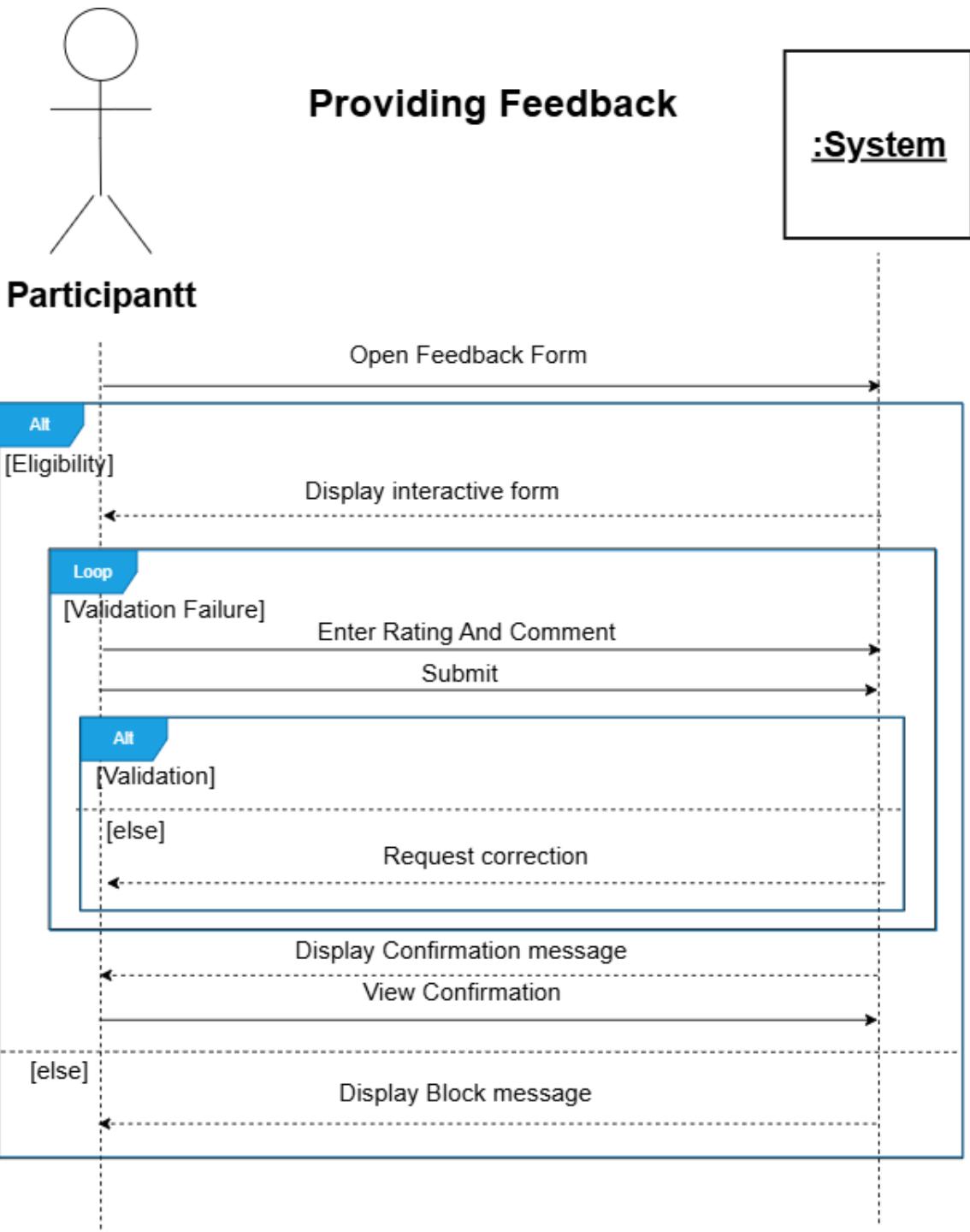


View Feedback



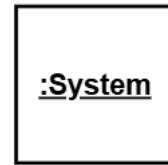
3.5 System sequence diagram



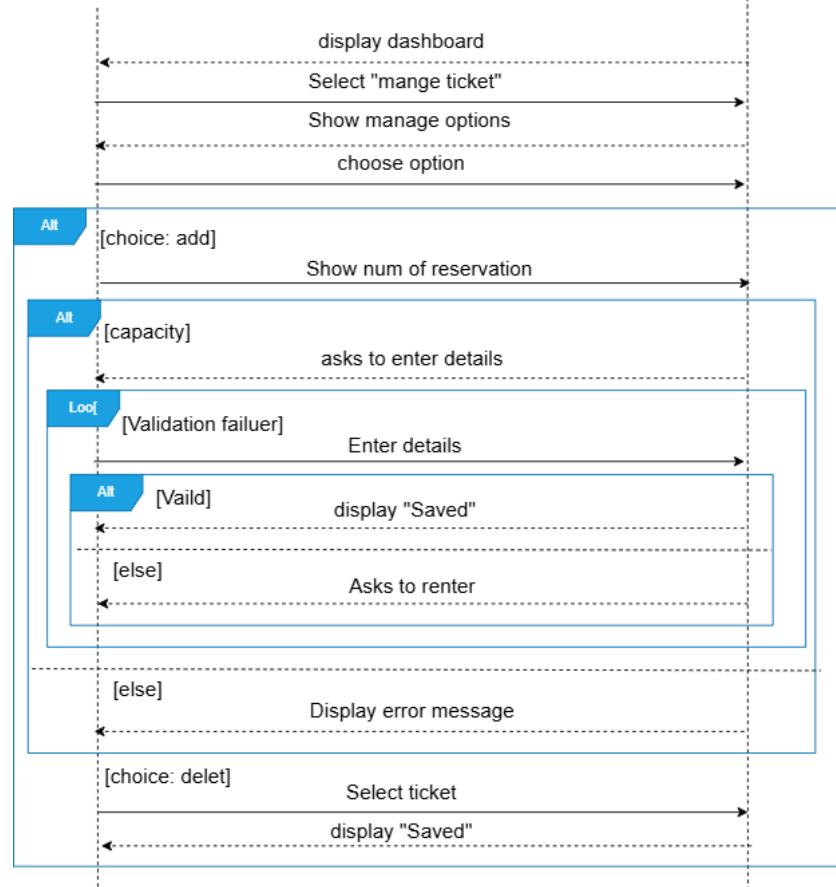


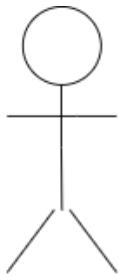


Managing tickets



Actor

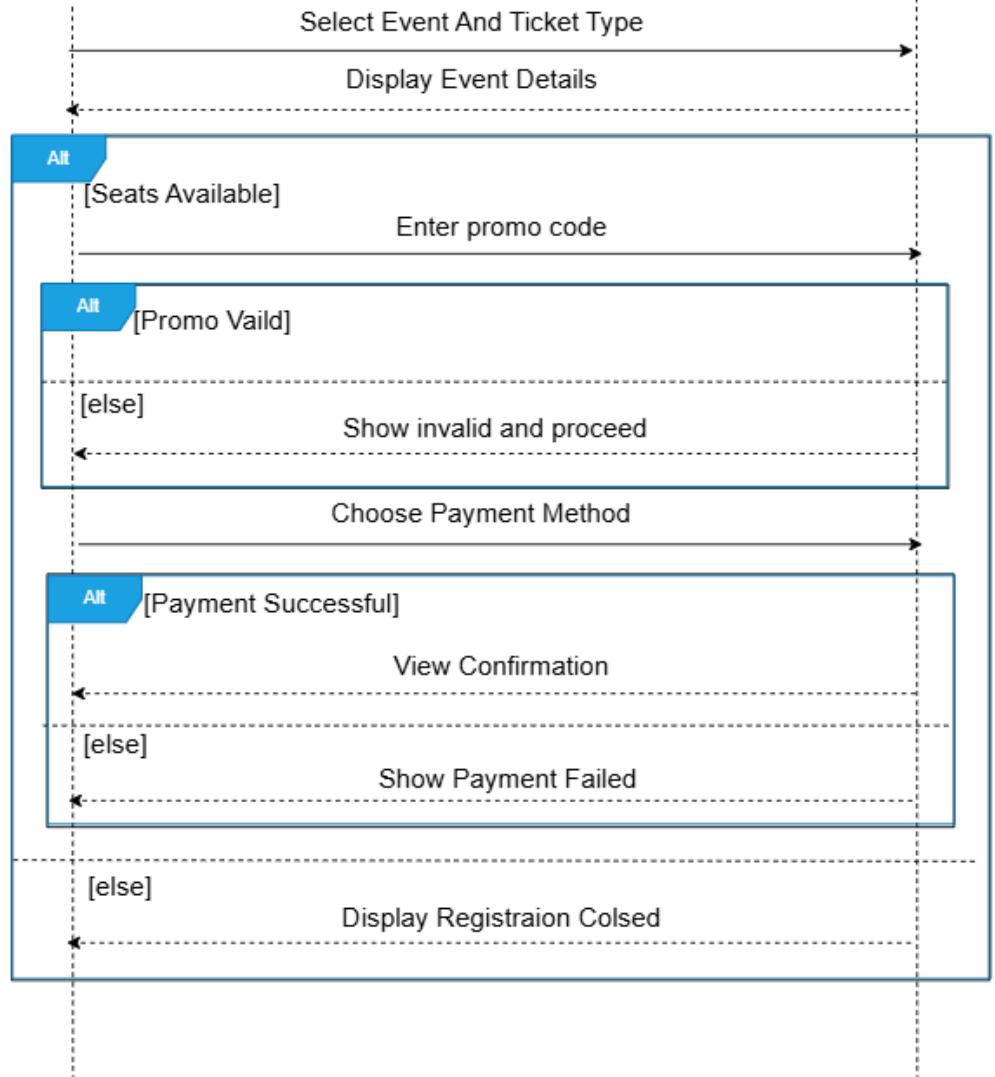


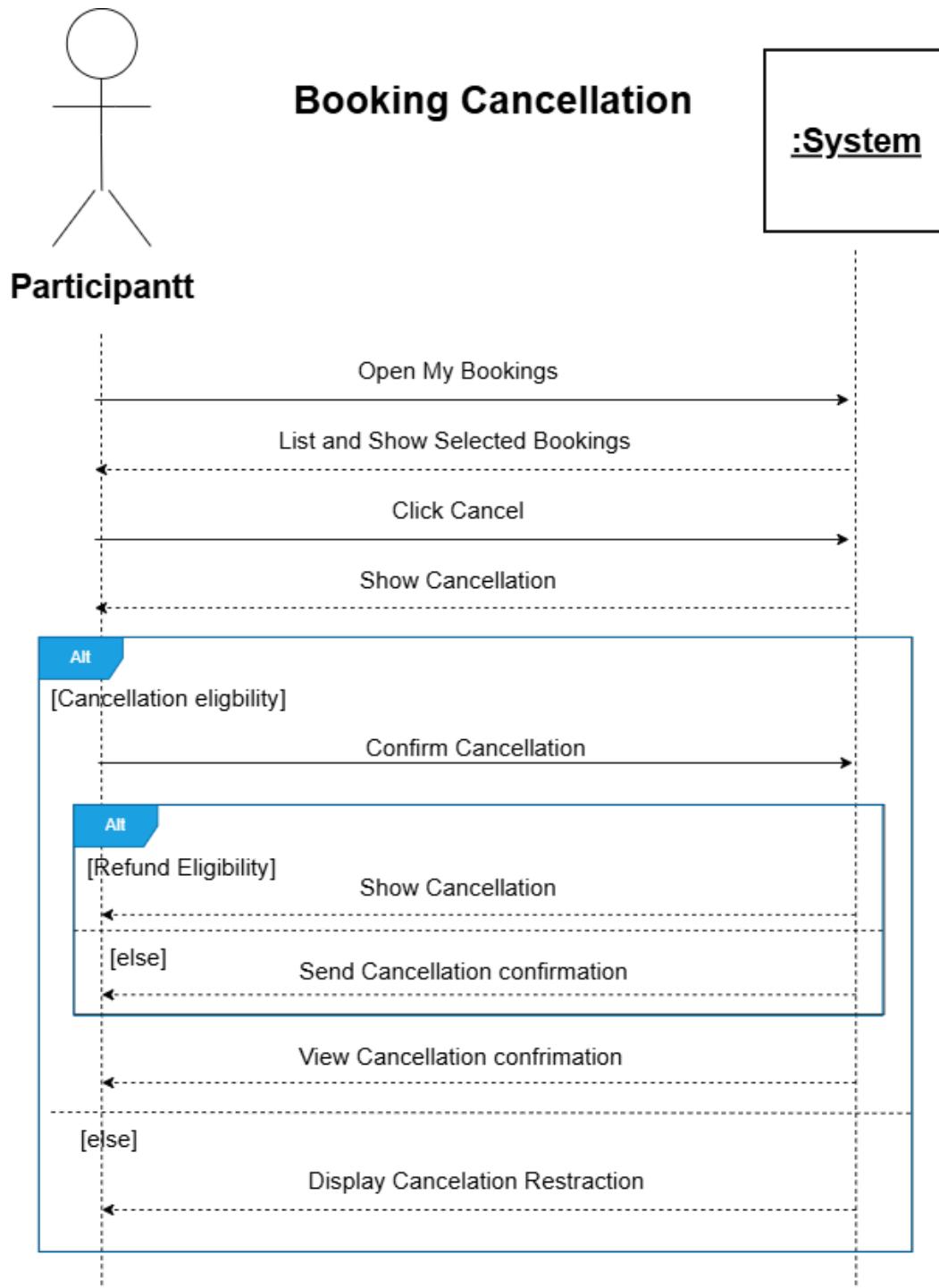


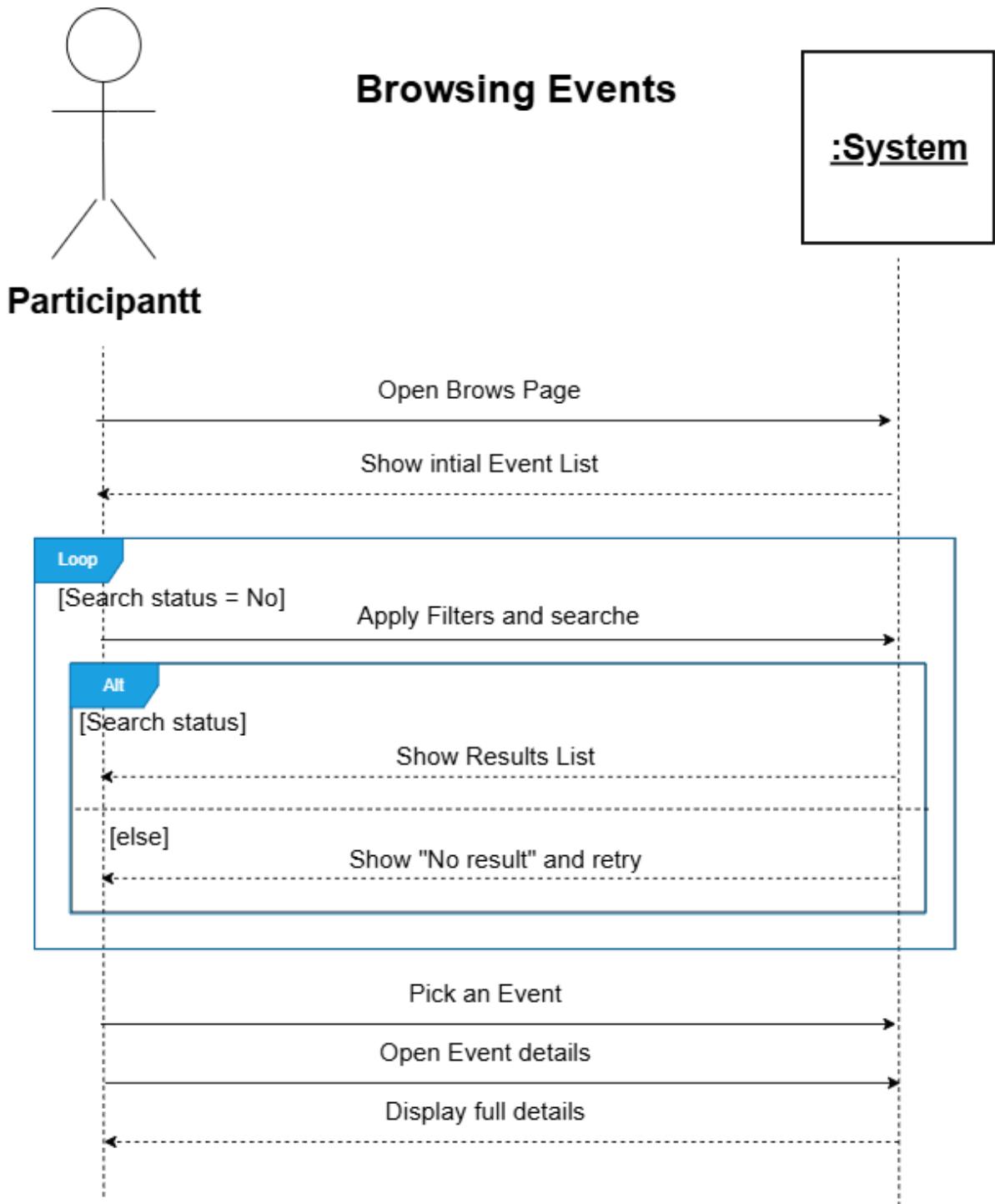
Registration for event

:System

Participant







5.Appendices

5.1 Questionnaire

1. Have you ever registered for a workshop or conference before?

- Yes
- No

2. If yes, how did you usually register?

- On-site at the event
- Online
- Through an organizer or institution

3. How many times do you usually attend workshops or conferences each year?

- 0–1 time
- 2–3 times
- 4–6 times
- More than 6 times

4. What are the most difficulties you face when registering for events?

- Difficulty accessing event information
- Payment issues
- Delayed booking confirmation
- Lack of notifications/reminders
- Other: _____

5. Which feature do you consider the most important in a booking system?

- Easy registration
- Secure online payment
- Sufficient event information

- Easy communication between organizers and participants
- Automated notifications & reminders
- Event rating option
- Other: _____

6. Which type of events do you prefer the most?

- In-person (at the venue)
- Virtual (online)
- Both

7. What online payment method do you prefer?

- Credit card / Mada
- Apple Pay / STC Pay
- Bank transfer
- Other: _____

8. Do you think it is important to have the option to modify or cancel your booking?

- Yes
- No

9. Would you like the system to provide reports or attendance certificates automatically

- after the event?
- Yes
- No

10. How satisfied are you with current event management systems overall? (1 = Not satisfied at all and 5 = Very satisfied)

- 1
- 2
- 3
- 4
- 5

Press here to view link : [survey](#)

5.2 Interview

Interview: Event Organizer

Name: Fatima Almusallam | Place: Zoom Meeting | Time: 12:00 PM | Date: 7/10/2025

- **What are the biggest challenges you face in the initial stages of organizing an event?**

The main challenge is securing partnerships with external organizations to get support for events.

- **How do you currently manage the participant registration process, and what information do you collect?**

Registration is currently handled through an online questionnaire using Google Forms. The required information includes the full name, gender, age, mobile number, email, and how the participant found out about the event.

- **How do you send reminders to participants before an event?**

For large events, we make direct phone calls to confirm attendance and get a final headcount. For medium-sized events, we rely on social media to post reminders.

- **How do you handle event cancellations and inform participants?**

We inform participants via text messages or email, explaining the reason for the change and providing the new date.

- **Do you need a system that allows you to set a limited number of seats for each event and show the remaining count?**

Not usually for free events, as attendance isn't guaranteed. However, a system that tracks and shows available seats would be essential for managing registrations for any future paid events.

- **How do you currently handle payments, and would you prefer multiple payment options?**

I have no prior experience with paid events but would prefer using digital payment methods. I'd like a system that supports various payment options like Mada, Apple Pay, and bank transfers for more flexibility.

- **What types of reports would you like to receive after an event?**

I would like to receive statistical and analytical reports. Key metrics would include the average age of participants, their city of origin to identify areas with high demand, and the results of evaluation surveys to measure participant satisfaction.

- **What is the biggest problem you face in event management that you wish there was a technical solution for?**

The biggest challenge is the absence of a unified system that combines registration, reminders, and data analysis in one single place. The new system is expected to solve this key problem.