UTM

UNIVERSITI TEKNOLOGI MALAYSIA

SECP3204: Software Engineering WBL

Software Requirements Specifications (SRS)

KTDI EVENT MANAGEMENT SYSTEM

Version 1.0

Date: 16 May 2023

Faculty: Faculty of Computing

Prepared by: Group Curiousity

Revision Page

a. Overview

The Software Documentation (SD) version 1.0 provides a comprehensive guide to our project, KTDI Event Management System. This document aims to assist developers' team, and target users in understanding and utilising the functionalities of the system.

b. Target Audience

The target audience are:

i) JKM KTDI

ii) UTM Students

iii) KTDI Staff

c. Project Team Members

Member Name	Role	Task	Status
Low Ying Xi	Project Manager	Section 2.2	Completed
		Section 2.2.1	Completed
		Section 2.2.2	Completed
Camily Tang Jia Lei	Developer	Section 1.1	Completed
		Section 1.2	Completed
		Section 1.3	Completed
		Section 1.4	Completed
		Section 1.5	Completed
		Section 2.2.3	Completed
		Section 2.2.4	Completed
		Section 2.2.5	Completed
		Section 2.2.6	Completed

Koh Li Hui	User Experience Designer	Section 2.2.11	Completed
		Section 2.2.12	Completed
		Section 2.2.13	Completed
		Section 2.3	Completed
		Section 2.4	Completed
Ng Shu Yu	Documentation Specialist	Section 2.1	Completed
		Section 2.2.7	Completed
		Section 2.2.8	Completed
		Section 2.2.9	Completed
		Section 2.2.10	Completed

d. **Version Control History**

Version	**Primary Author(s)**	**Description of Version**	**Date Completed**
1.0	Developer (Camily Tang Jia Lei)	Completed Chapter 1 Section 1.1, Section 1.2, Section 1.3, Section 1.4, Section 1.5	15/05/2023
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1.0	Project Manager (Low Ying Xi)	Completed Chapter 2, Section 2.2.2	17/05/2023
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1.0	Developer (Camily Tang Jia Lei)	Completed Chapter 2, Section 2.2.3, Section 2.2.6	27/05/2023
1.0	User Experience Designer (Koh Li Hui)	Completed Chapter 2, Section 2.2.11, Section 2.2.12, Section 2.2.13	30/05/2023

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1. Introduction

1.1 Purpose

The System Documentation (SD) serves the purpose of providing a comprehensive overview of the system development process. It is meant to serve as a reference guide for the system's developers, testers, project managers, and clients. This system documentation (SD) focuses on describing the expected behaviours and functionality of the system in order to help our clients (JKM KTDI, KTDI staff, and UTM students) manage events. Our clients are located in Kolej KTDI, UTM Johor, Malaysia, and we are developing a system that will assist them in more clearly organising their daily activities.

Developers can rely on the SD to understand the system requirements, design, and testing processes, aiding them in the effective implementation of the system. Testers can use the SD to develop relevant test cases and conduct thorough system testing. Project managers benefit from the SD by gaining a holistic view of the system's development, enabling them to monitor progress, allocate resources, and make informed decisions. Clients can refer to the SD to validate that the developed system meets their requirements.

The SD ensures clarity and alignment and lowers the likelihood of errors by providing organised and thorough documentation, which boosts productivity and improves the outcomes of the project as a whole.

1.2 Scope

This project aims to develop an event management system specifically designed for KTDI, UTM Johor. The system will cater to three main user groups: JKM KTDI, KTDI staff, and UTM students. It will consist of various modules that meet the specific requirements of these users.

JKM KTDI will have full access to all modules, allowing them to manage events comprehensively. KTDI staff will also have access, albeit with certain restrictions. They will be able to monitor event progress and track events managed by JKM KTDI, but they will not be able to add new events themselves.

The system will provide students with the ability to view events, register for them, and provide feedback afterward. The existing event dissemination system used by JKM KTDI through social media platforms like WhatsApp groups, Telegram groups, and Instagram accounts lacks organisation. Additionally, the current manual attendance and feedback system, which relies on Google Forms, is inefficient and time-consuming.

The primary objective of this system is to establish a systematic and effective event management solution for UTM Johor. It will enable JKM KTDI and KTDI staff to track each other's progress efficiently. The system will provide a centralised platform for viewing updates in an organised manner, along with details of registered participants. It will also automatically calculate students' college merit points for active quota allocation. The active quota will be crucial for the college office to determine priority in booking hostel rooms. Furthermore, the system will assist JKM KTDI and KTDI staff in generating annual reports without relying on previous JKMs for their event reports, as JKM KTDI rotates every semester.

1.3 Definitions, Acronyms and Abbreviation

Term	**Definition**
KTDI Event Management System	The software products being developed for the KTDI residents to view, manage, and organise their events in KTDI.
SRS	System Requirements Specification - A document that outlines the requirements and objectives of the software product being developed.
SDD	System Design Document - A document that describes the system architecture, components, and interfaces in detail.
STD	System Testing Document - A document that outlines the testing process and procedures for the software product

	being developed.
KTDI	Kolej Tun Dr. Ismail UTM SKUDAI JOHOR
JKM KTDI	KTDI Student Residential College Committee

1.4 References

- Universiti Teknologi Malaysia, “Events.utm.my” . [Online Website]. Available: https://events.utm.my/ [Accessed 2023]
- Cvent Inc., “Event Management Software”. [Online Website]. Available: https://www.cvent.com/en/live-events-calendar [Accessed 2023]

1.5 Overview

The system documentation defines the features, functionality, and intended behaviour of the system for each involved user using diagrams like the entity relationship diagram, use case diagram, state diagram, and activity diagram. As a result, the SRS introduces the project and describes its objectives and constraints.

The document is separated into three main chapters:
In the first chapter, which serves as the project's introduction, all the acronyms and abbreviations used in this Software Requirements Specification (SRS) are listed along with a brief summary of the entire project. This ensures that the terminology is understood clearly. The second chapter goes into more detail about the general description of the project. In addition to outlining the project's requirements, it gives a background explanation of the intended outcome. This chapter establishes the general framework for the project and lays the foundation for the following, more detailed requirements. The specific project requirements are the main topic of the last chapter. It offers diagrams for each of the use cases as well as a breakdown of the various modules. This chapter serves as a thorough reference, outlining the features and functionalities the system must have.

This SD document should be used as a reference by all parties engaged in the design, testing, and deployment of the KTDI Event Management System. As it provides a concise and clear

overview of the software requirements and testing procedures, it should be consulted at every stage of the software development lifecycle.

2.1 User characteristics

2.1.1 UTM Students

1. UTM students are the primary users of the system and are expected to have basic computer literacy skills.
2. They should be comfortable using web-based applications and have access to a device with internet connectivity.
3. Students may have varying levels of familiarity with event management systems, so the system should have a user-friendly interface to accommodate users with different technical skills.
4. Students should be able to register for events through the system and view event calendars to stay informed about upcoming events.
5. They should be able to fill out attendance and feedback forms for events they have attended to provide valuable insights and suggestions.
6. Students should be able to view their own active quotas, which will help them track their event participation and understand their eligibility for priority in booking hostel rooms.
7. Students may need assistance in navigating the system and understanding the registration process.
8. Clear instructions and intuitive navigation within the system should be provided to assist students in effectively utilising the system's functionalities.

2.1.2 JKM KTDI

1. JKM KTDI members are responsible for managing and overseeing the event management system.
2. They should have technical expertise in using the system and be familiar with its functionalities.
3. JKM users should have administrative privileges to perform tasks such as managing event calendars, distributing event preparation tasks, and updating event progress.

4. They should have the ability to upload and manage registration links, attendance, and feedback forms, ensuring a seamless registration process and data collection.
5. JKM members should be able to view students' active quotas, helping them determine priority in booking hostel rooms.
6. It is essential for JKM users to have access to event registration details, attendance records, and feedback submitted by students, enabling them to evaluate event success and make informed decisions for future improvements.

2.1.3 KTDI Staff

1. KTDI staff members support the JKM in event management activities.
2. They may have varying levels of technical expertise, but they should receive training on using the system's functionalities.
3. Staff members should be able to view event calendars to stay informed about upcoming events and collaborate effectively with JKM.
4. They should have access to view the progress of events, including student attendance and feedback, to assess the effectiveness of event management strategies.
5. KTDI staff members should also have the capability to view students' active quotas to assist in discussions with JKM regarding priority in booking hostel rooms.
6. Access to event registration details, attendance records, and student feedback will enable staff members to provide valuable insights and support JKM in organising successful events.

2.2 System Features

The KTDI Event Management System is a comprehensive web-based platform designed to streamline event management for JKM KTDI. This system is accessible on various devices, including desktop computers, laptops, tablets, and smartphones, through a web browser. It enables efficient event management, covering the entire event lifecycle, from preparation and execution to post-event activities. Additionally, the system facilitates easy access to event information within KTDI and automates the calculation of active quotas, simplifying administrative processes.

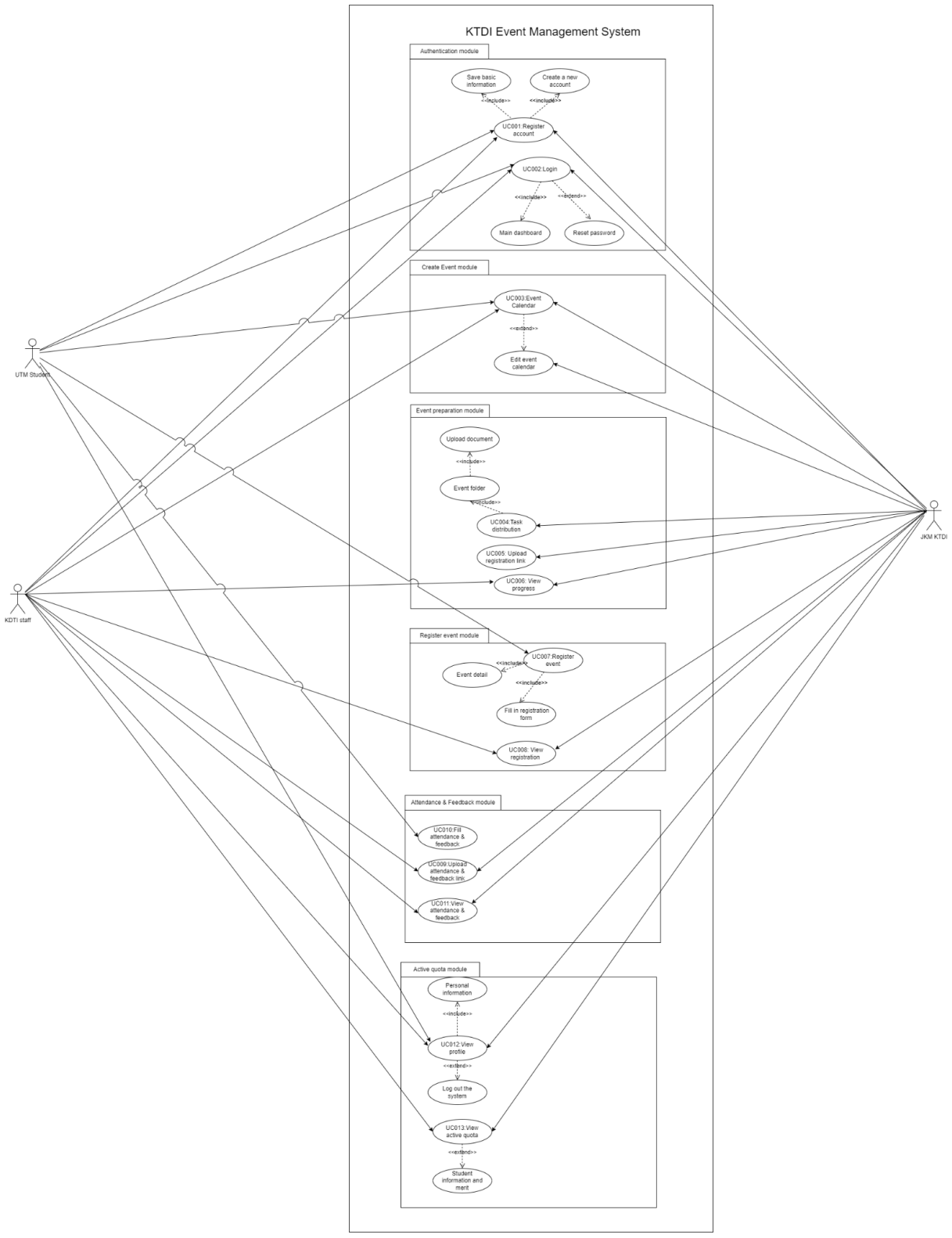

Figure 2.2 (a): Use Case Diagram for KTDI Event Management System

Module	Function	Description

Authentication Module	UC001 – Register Account	This use case allows students in UTM to sign up as a user for the system.
	UC002 – Log in	This use case allows registered users to log in thee system.
Create Event Module	UC003 – Event Calendar	This use case allows JKM KTDI to upload event details on the respective date of the event calendar and allows students and KTDI staff to view more detailed information about the event.
Event Preparation Module	UC004 – Task Distribution	This use case allows JKM KTDI to assign tasks to JKM member according to the unit, upload documents and update their task progress.
	UC005 – Upload Registration Link	This use case allows JKM KTDI to upload the details of the event and the registration form link for students to register for the event..
	UC006 – View Progress	This use case allows JKM KTDI and KTDI staff to view the progress of the task distributed by viewing the content in the each unit's folder
Register Event Module	UC007 – Register Event	This use case allows students to register an event by filling their personal information in the registration form. The system will store the registered event in student profile.

	UC008 – View Registration	This use case allows JKM KTDI and KTDI staff to view the users that have registered for an event.
Attendance & Feedback Module	UC009 – Upload Attendance & Feedback Link	This use case allows JKM KTDI to upload the attendance and feedback link to students to record participants' attendance and feedback for the calculation of quota active and improvement of the event.
	UC010 – Fill Attendance & Feedback	This use case allows students to fill in their attendance and feedback at the end of the event.
	UC011 – View Attendance & Feedback	This use case allows JKM KTDI and KTDI staff to view the attendance and feedback from students for an event in a list.
Active Quota Module	UC012 – View Profile	This use case will show the user's personal information and display the event joined in a list for JKM and students.
	UC013 – View Active Quota	This use case will show the list of all the students that participate in KTDI events with their KTDI merit score to identify quota-active students. When clicking on a student's name, it will display the list of activities and merit provided for each event that has been participated in by the student and the total KTDI merit earned by the student.

Table 2.2: Description of Module and Functions for KTDI Event Management System

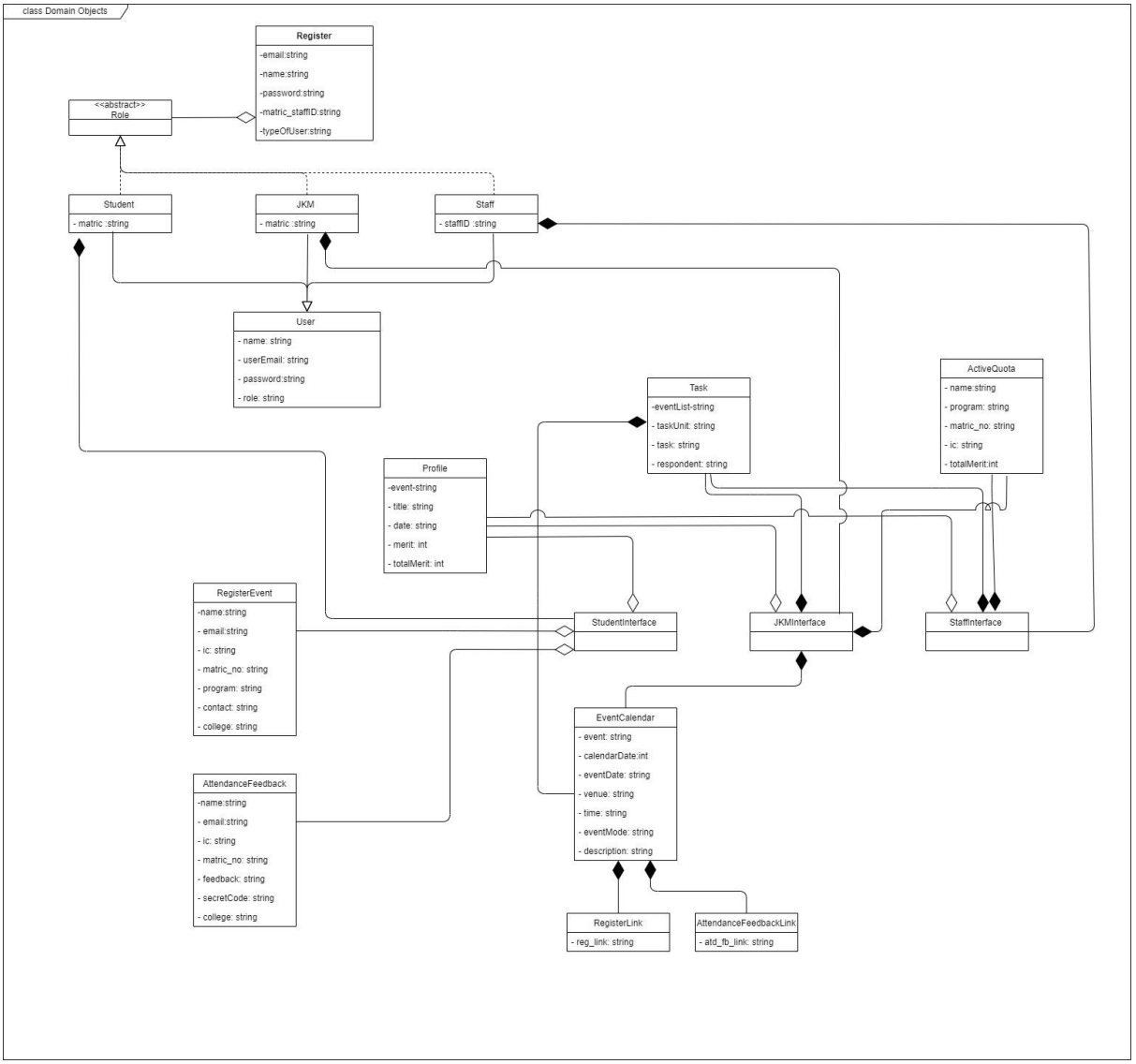

Figure 2.2 (b): Domain Model for KTDI Event Management System

Module: Authentication module

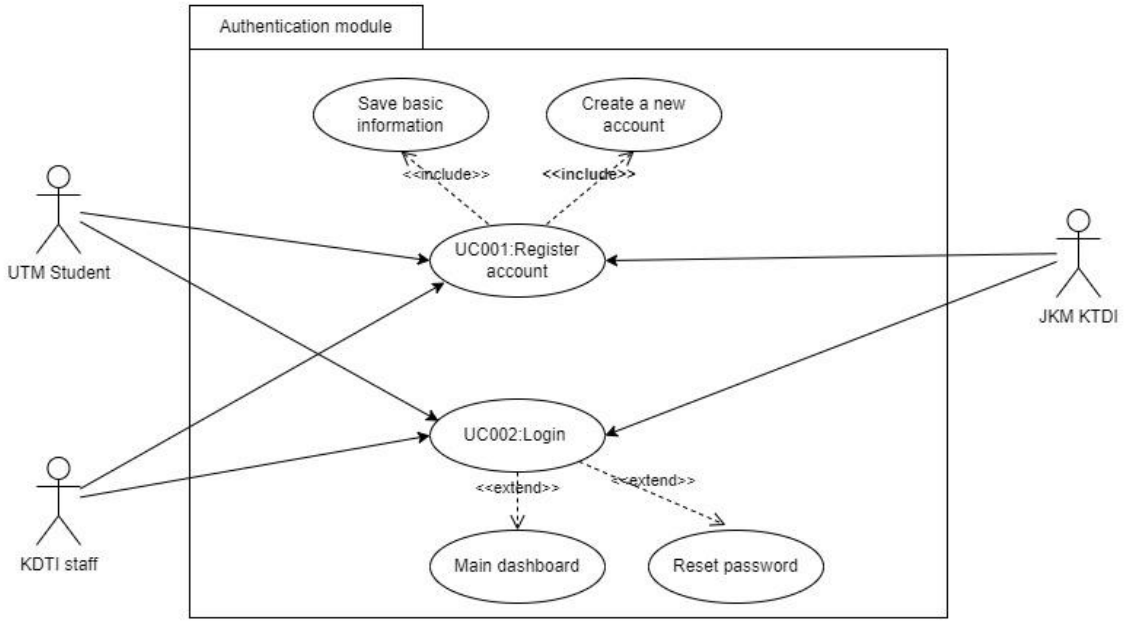

Figure 2.2 (c): Use Case Diagram for Authentication module

The use cases include in this authentication module are stated as below:

I. UC001: Register account - The system shall allow students to register their account using their UTM email to create a new account for login.

II. UC002: Login - The system shall allow students to login their account with their UTM email and a valid password that matches their email address.

2.2.1 UC001: Use Case Register account

Table 2.2.1: Use Case Description for Register account

Use case: Register account
ID: UC001
Actors: 1. Students 2. JKM KTDI 3. KTDI staff
Preconditions:

- Users must have UTM email as their email address for sign up.

Flow of events:

1. User will be in an intro page of the system.
2. User clicks on the “Register”, then one will be redirected to the Sign up Page.
3. User will need to fill their name, Matric number or staff ID , role, UTM email and password to register a new account.
4. Each UTM email can only register once. If the UTM email is already registered, the system will display an error message. User cannot proceed to fill in the remaining registration field.
5. If the UTM email is not registered, the user can proceed to fill in the remaining registration field.
6. User will need to enter the password twice and both passwords entered must be the same to submit the registration form.
7. User submits the registration form.
8. The system verifies the information provided, checking for any errors or missing field.
9. If all the information is valid, the system creates a new user account.

Alternative flow 1: Already have valid account

1. The system will display an error message
2. Users can click “Log In” to redirect to Login page.

Postconditions:

- User successfully registered a new account. System will redirect back to the login page.

Exception:

Required field(s) is/are empty

1. An error message will be displayed by the system
2. Submission cannot proceed.

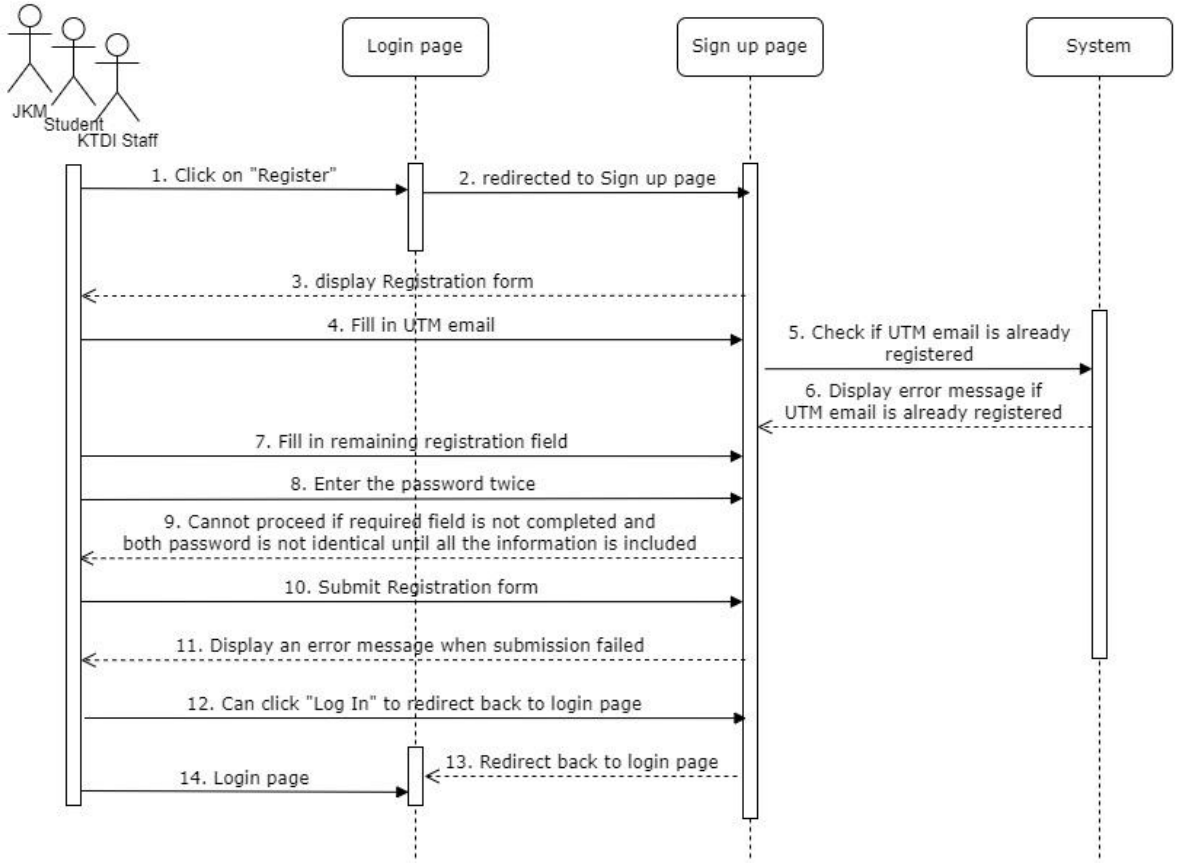

Figure 2.2.1.1: Sequence Diagram for Register account

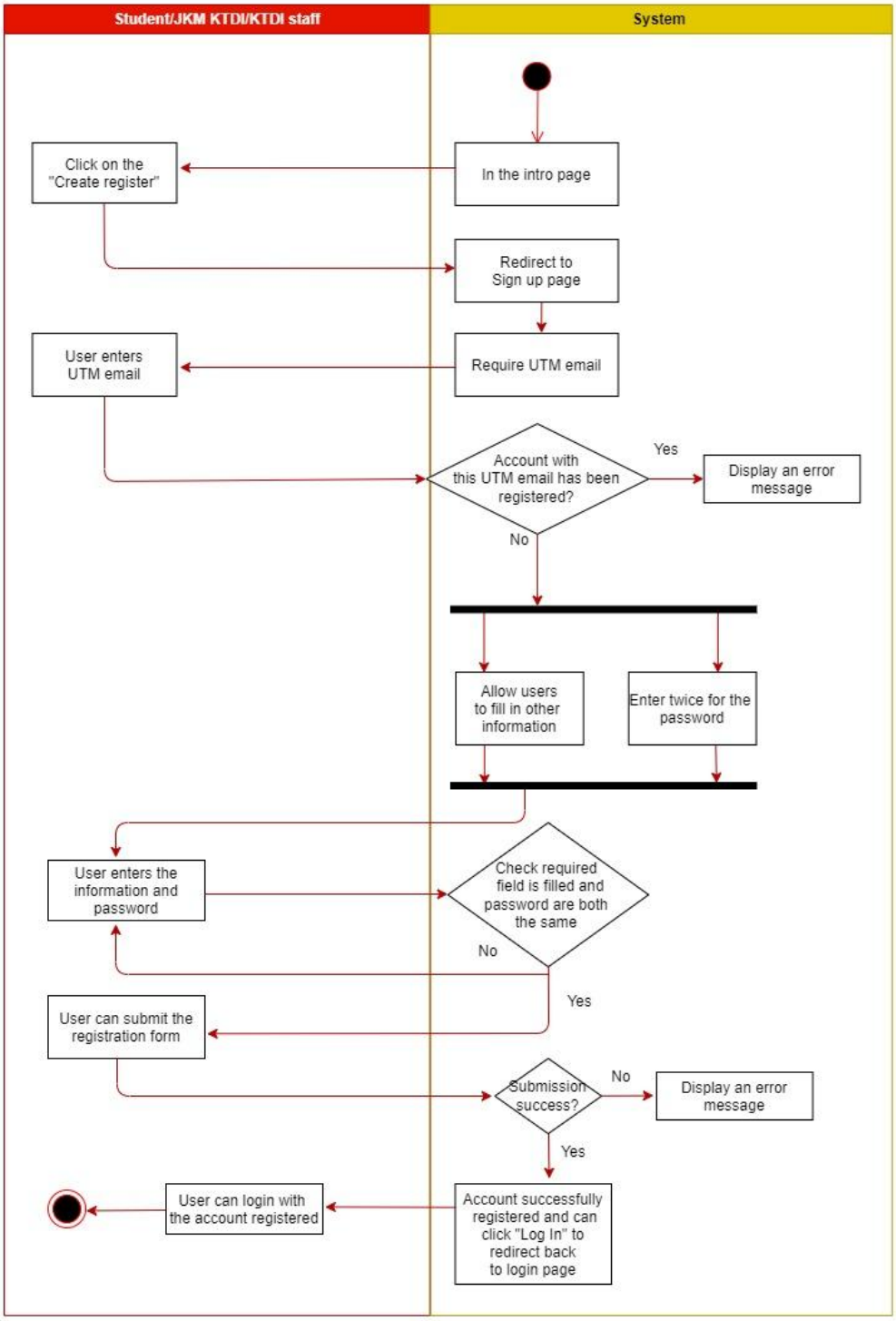

Figure 2.2.1.2: Activity Diagram of Register account

2.2.2 UC002: Use Case Login

Table 2.2.2: Use Case Description for Login

Use case: Login
ID: UC002
Actors: 1. Student 2. JKM KTDI 3. KTDI staff
Preconditions: ● User must have an account with their UTM email as the email address and a valid password that matched to it to log in the system
Flow of events: 1. The system presents the login page to the user. 2. User needs to enter their UTM email address and password. 3. User clicks one of the “sign in” buttons.(Sign in as a Student, Sign in as a JKM, Sign in as a Staff) 4. The system verifies the entered email address, password and role against the the stored user information 5. If the user clicks on "Sign in as a Student" and the entered email matches the entered password and user’s role, the system grants access to the student dashboard. 6. If the user clicks on "Sign in as a JKM" and the entered email matches the entered password and user’s role, the system grants access to the admin dashboard. 7. If the user clicks on "Sign in as a Staff" and the entered email matches the entered password and user’s role, the system grants access to the staff dashboard. 8. If the account is invalid, the system displays an error message indicating the issue. 9. The user can re-enter the email address and password.

Postconditions: ● User is logged into the system successfully.
Alternative flow 1: Invalid Credentials 1. If the system determines that the entered credentials are invalid, the system displays an error message indicating the email address or password is incorrect. 2. The user is prompted to re-enter the correct credentials.
Alternative flow 2: Forgot password 1. If a user forgets their password, they can reset it by clicking the "Reset here “ button. 2. The user will be redirected to “Reset password” page. 3. User needs to enter the email and new password for twice 4. New password entered must be matched.
Postconditions: ● The user successfully log in to the system.
Exception flow : Error during validation 1. System displays an error message when UTM email, password and role do not matched or invalid 2. User is required to re-enter the correct email address and password

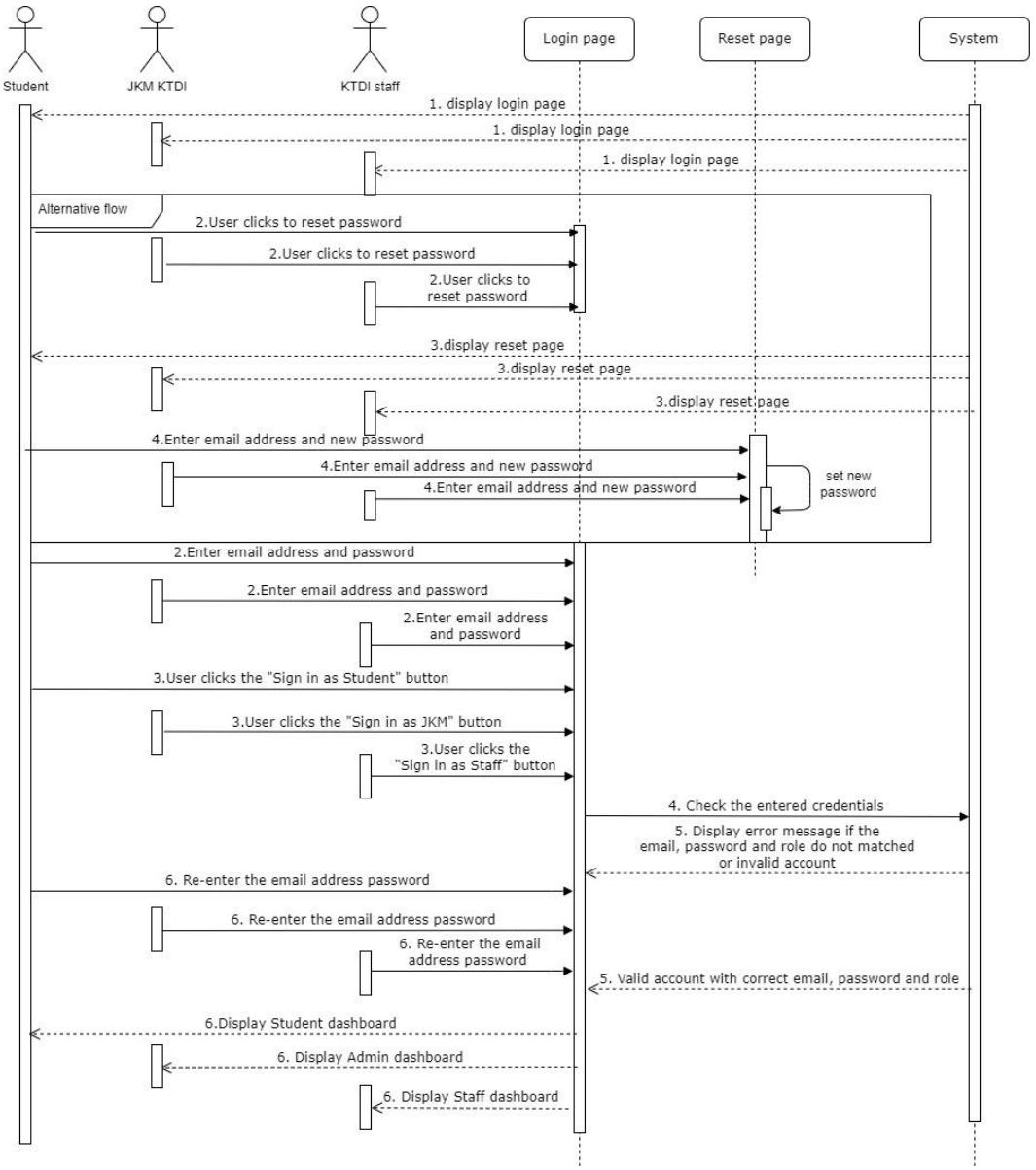

Figure 2.2.2.1: Sequence Diagram for Login

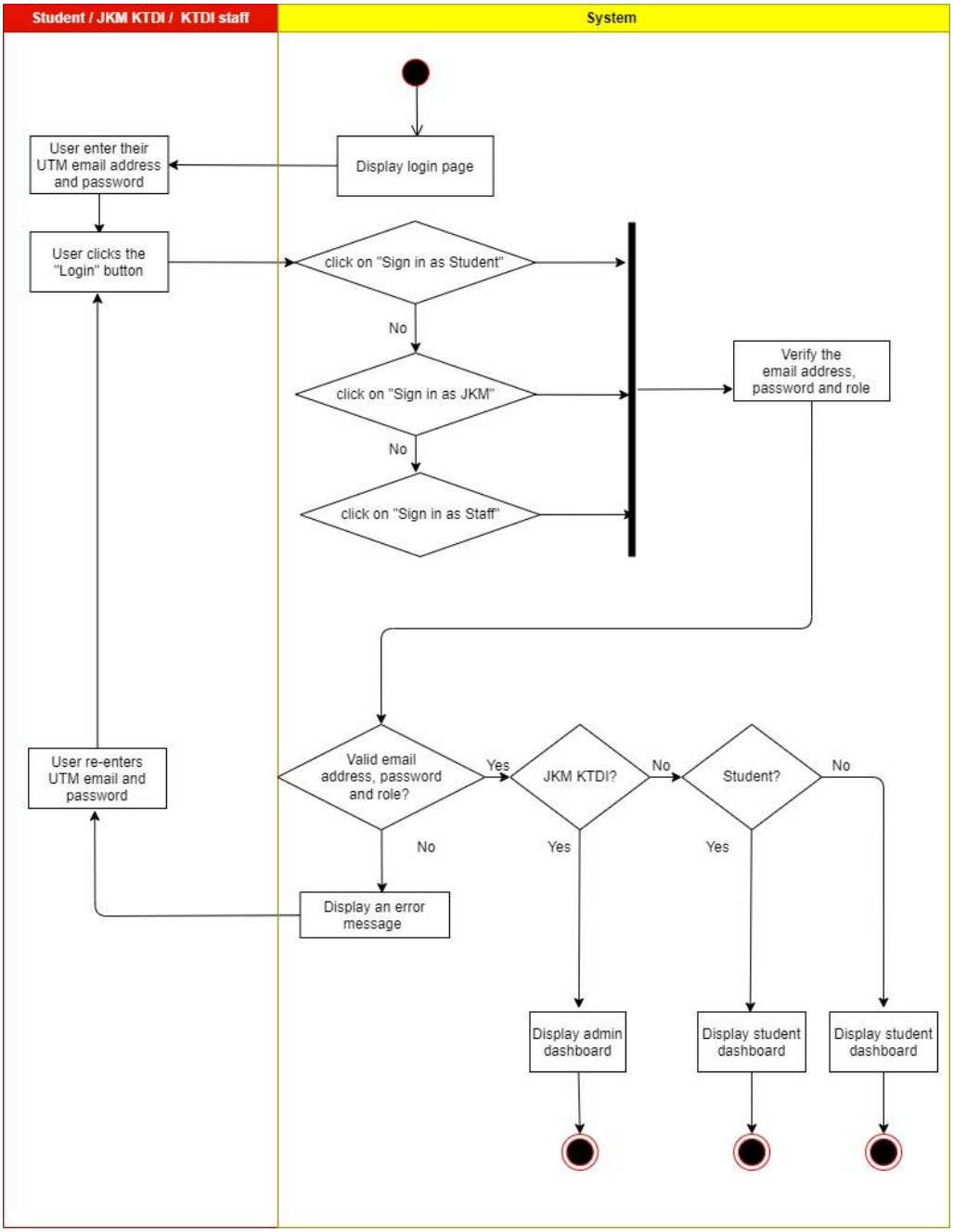

Figure 2.2.2.2: Activity Diagram of Login

Module: Create Event module

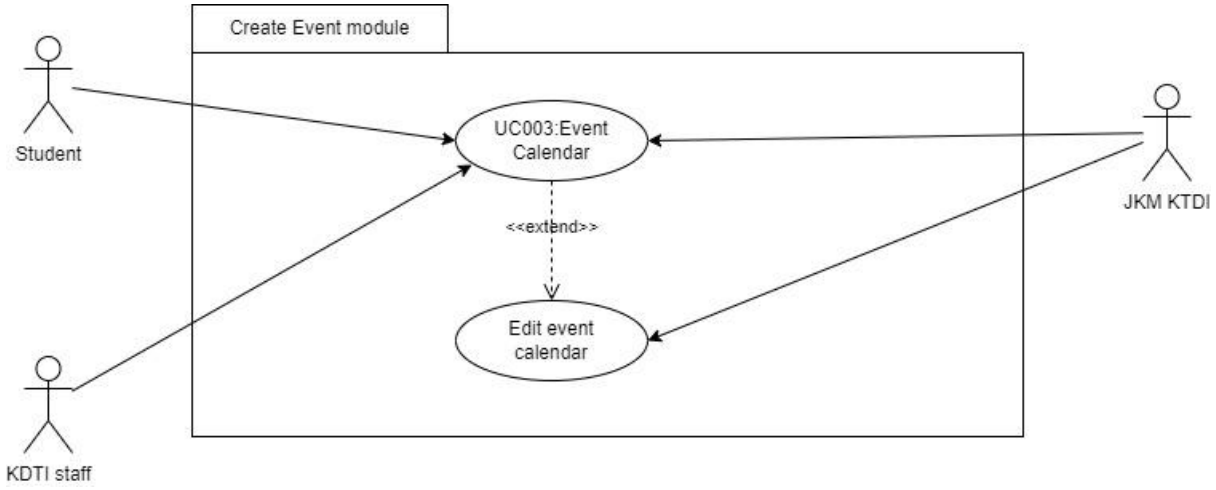

Figure 2.2 (d): Use Case Diagram for Create Event module

The use case includes in this create event module is stated as below:

III. UC003: Event calendar - The system shall allow JKM KTDI to upload event details on the respective date of the event calendar and allows students and KTDI staff to view more detailed information about the event.

2.2.3 UC003: Use Case Event calendar

Table 2.2.3: Use Case Description for Event Calendar

Use case: Event Calendar
ID: UC003
Actors: 1. Student 2. JKM KTDI 3. KTDI Staff
Preconditions: The student, a JKM KTDI or KTDI staff member, is logged into the event management system.
Flow of events:

1. The student, a JKM KTDI or KTDI staff member, pressed at the “Event Calendar” section. 2. The system displays the events of the semester. 3. The JKM KTDI is able to upload event details on the respective date of the event calendar. 4. The student, JKM KTDI or KTDI staff member is able to view the event information by clicking on a specific date. 5. The system displays the poster, event details, and event objectives.
Postconditions: ● The JKM KTDI has successfully uploaded event details. ● The student or KTDI staff member, has successfully viewed the events available for the semester in KTDI.
Alternative flow 1: KTDI Staff or student selected a date with no events 1. In step 5, if no events are found, the system displays an error message. 1. The user is directed back to the main dashboard..
Postconditions: ● The user is notified that no events are scheduled for the selected date.
Exception flow (if any): Details of event is unavailable 1. In step 4, if any of the users selects an event on the event calendar that does not consist of any details, the system displays an error message. 2. The JKM KTDI will be notified to update the event details.

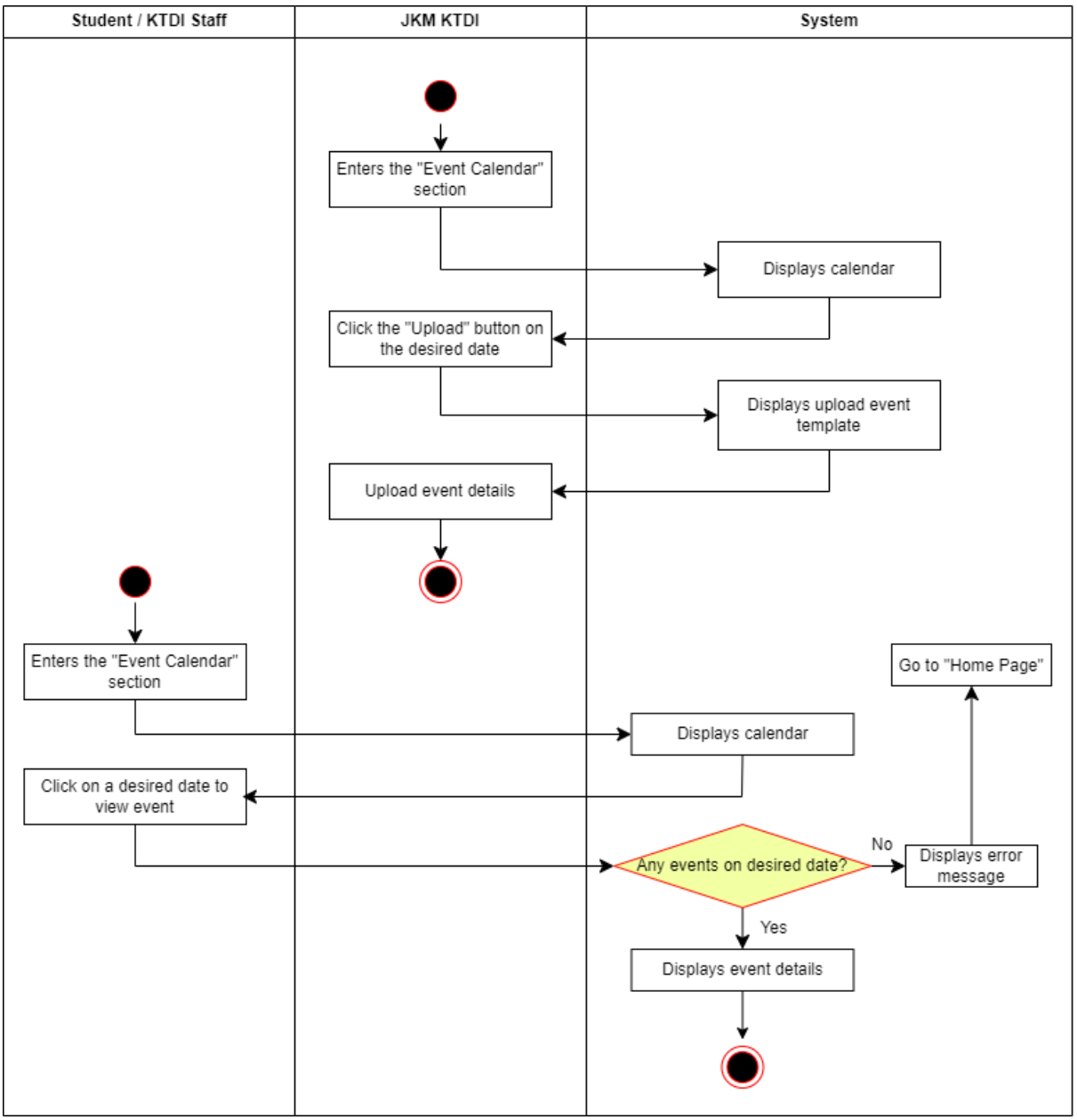

Figure 2.2.3.1: Activity Diagram of Event Calendar

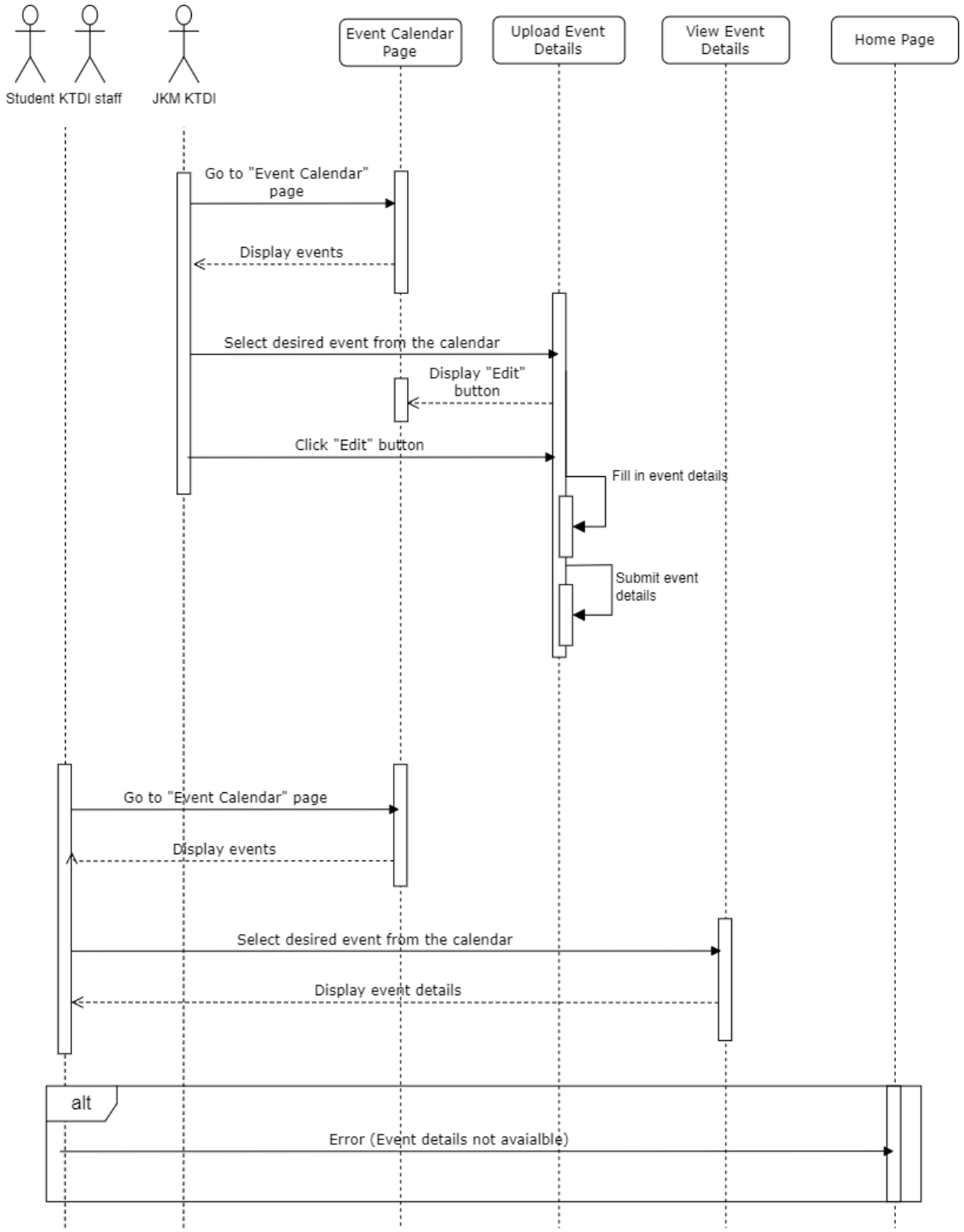

Figure 2.2.3.2: Sequence Diagram of Event Calendar

Module: Event Preparation module

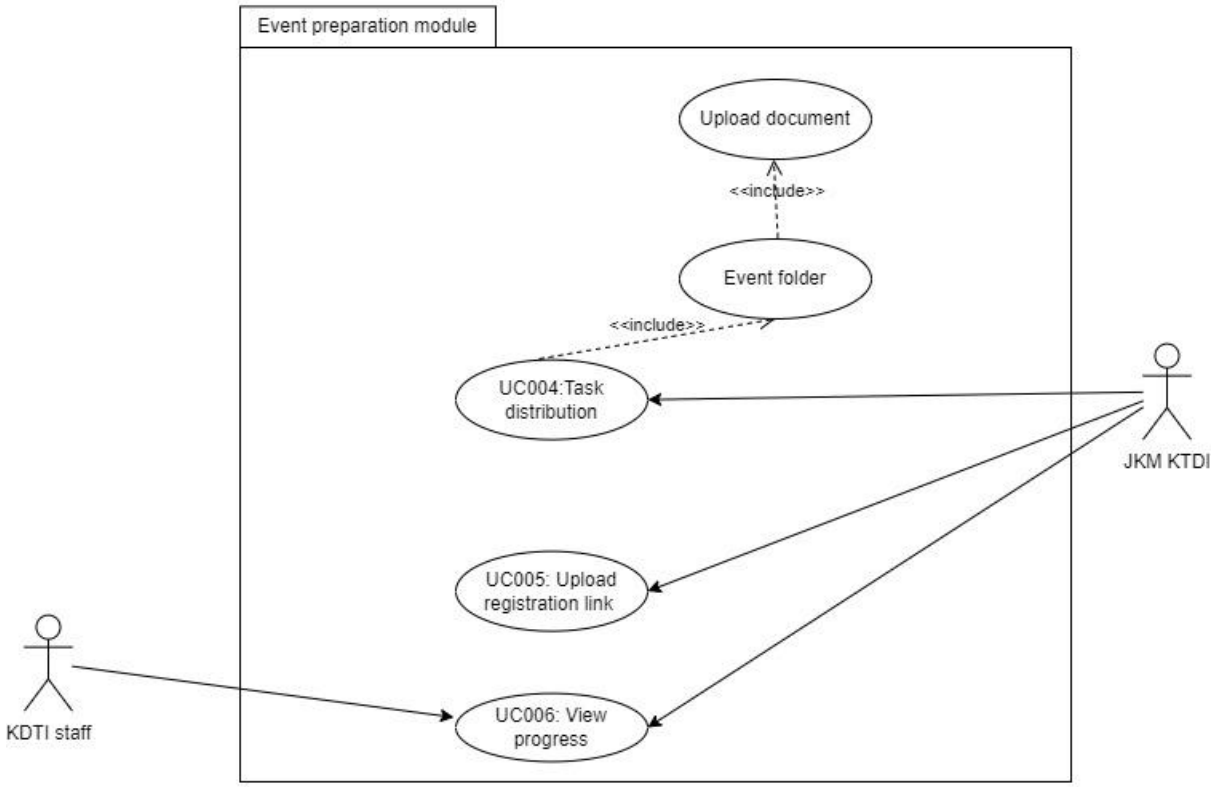

Figure 2.2 (e): Use Case Diagram for Event Preparation module

The use cases include in this event preparation module are stated as below:

IV. UC004: Task distribution - The system shall allow JKM KTDI to assign tasks to JKM member according to the unit, upload documents and update their task progress.

V. UC005: Upload registration link - The system shall allow JKM KTDI to upload the details of the event and the registration form link for students to register for the event.

VI. UC006: View progress - The system shall allow JKM KTDI and KTDI staff to view the progress of the task distributed by viewing the content in each unit's folder.

2.2.4 UC004: Use Case Task distribution

Table 2.2.4: Use Case Description for Task Distribution

Use case: Task Distribution

ID: UC004
Actors: 1. JKM KTDI
Preconditions: ● JKM KTDI members who are logged into the system.
Flow of events: 1. The JKM KTDI navigates to the “Task” page of the system. 2. The system shows a list of available events folders. 3. The JKM KTDI navigates to their desired event folder. 4. The system shows a list of the units for an event that includes higher-ranking committee members like the Director, Vice Director, Secretary, Treasurer, and Exco: Protocol, External Relations, Registration, Publicity, Souvenir, Multimedia, Activity, Technical, Food and Accomodation, Sponsor. 5. The JKM KTDI selects their unit folder. 6. The system displays an add button for uploading documents. 7. The JKM KTDI uploads their documents into their unit folder.
Postconditions: 1. The documents are successfully submitted into the folder. 2. The update is visible to other JKM KTDI and KTDI staff members.
Alternative flow 1: Event Not Found 1. In step 3, if the JKM / KTDI staff selects an event that does not exist or is not available, the system displays an error message. 2. The JKM / KTDI staff go back to the home page.
Postconditions: ● The JKM KTDI member is unable to open folders and edit their documents.

- The JKM KTDI member is notified about the issue and instructed to try accessing the folder again later. The system displays an error message.

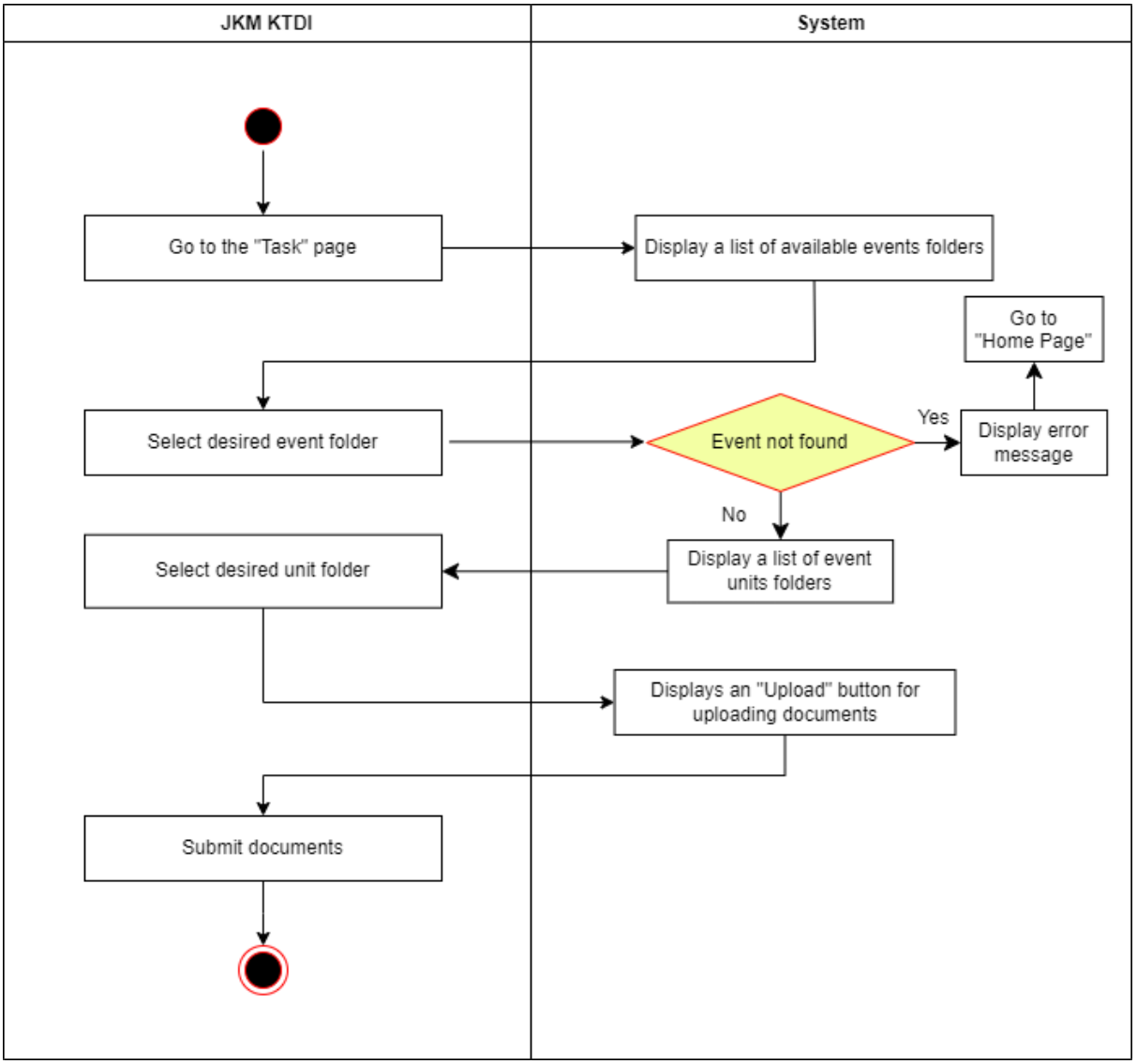

Figure 2.2.4.1: Activity Diagram of Task Distribution Event

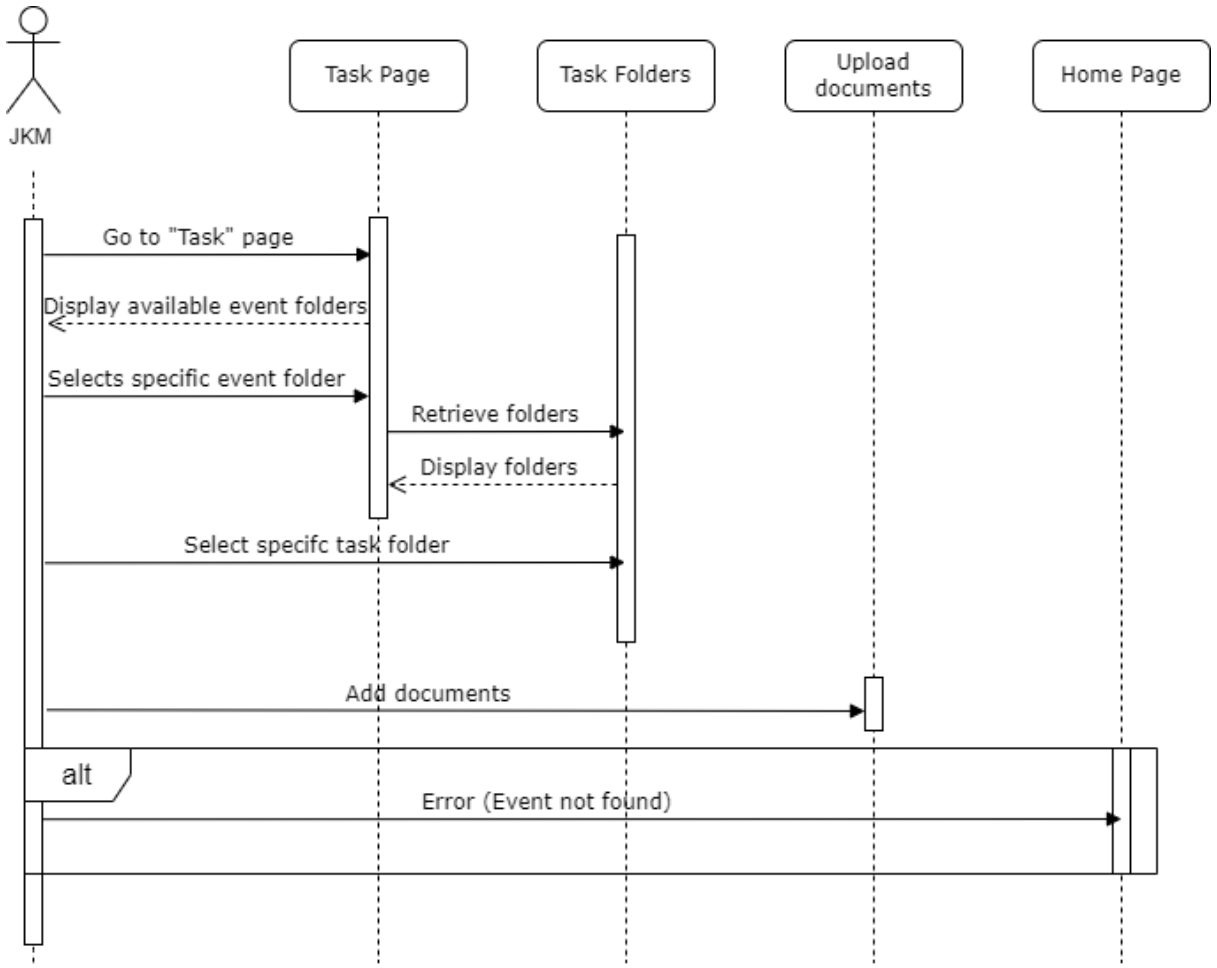

Figure 2.2.4.2: Sequence Diagram of Task Distribution Event

2.2.5 UC005: Use Case Upload registration link

Table 2.2.5: Use Case Description for Upload registration link

Use case: Upload registration link
ID: UC005
Actors: 1. JKM KTDI
Preconditions: 1. JKM KTDI members who are logged into the system.
Flow of events: 1. The JKM KTDI navigates to the event calendar page of the system.

2. The system displays a list of available events of the semester. 3. The JKM KTDI selects a desired event from the calendar. 4. The system displays an edit button. 5. The JKM clicks on the edit button to upload the registration link. 6. The system confirms the successful upload. 7. The registration link is now visible to the students for registration.
Postconditions: ● The link is now visible to the students for registration.
Alternative flow 1: Event is ongoing or finished 1. If the event is ongoing or finished, JKM KTDI is unable to upload the registration link and an error message is displayed. 2. The JKM KTDI goes back to the main dashboard.
Postconditions: ● The JKM KTDI is unable to upload the registration link.

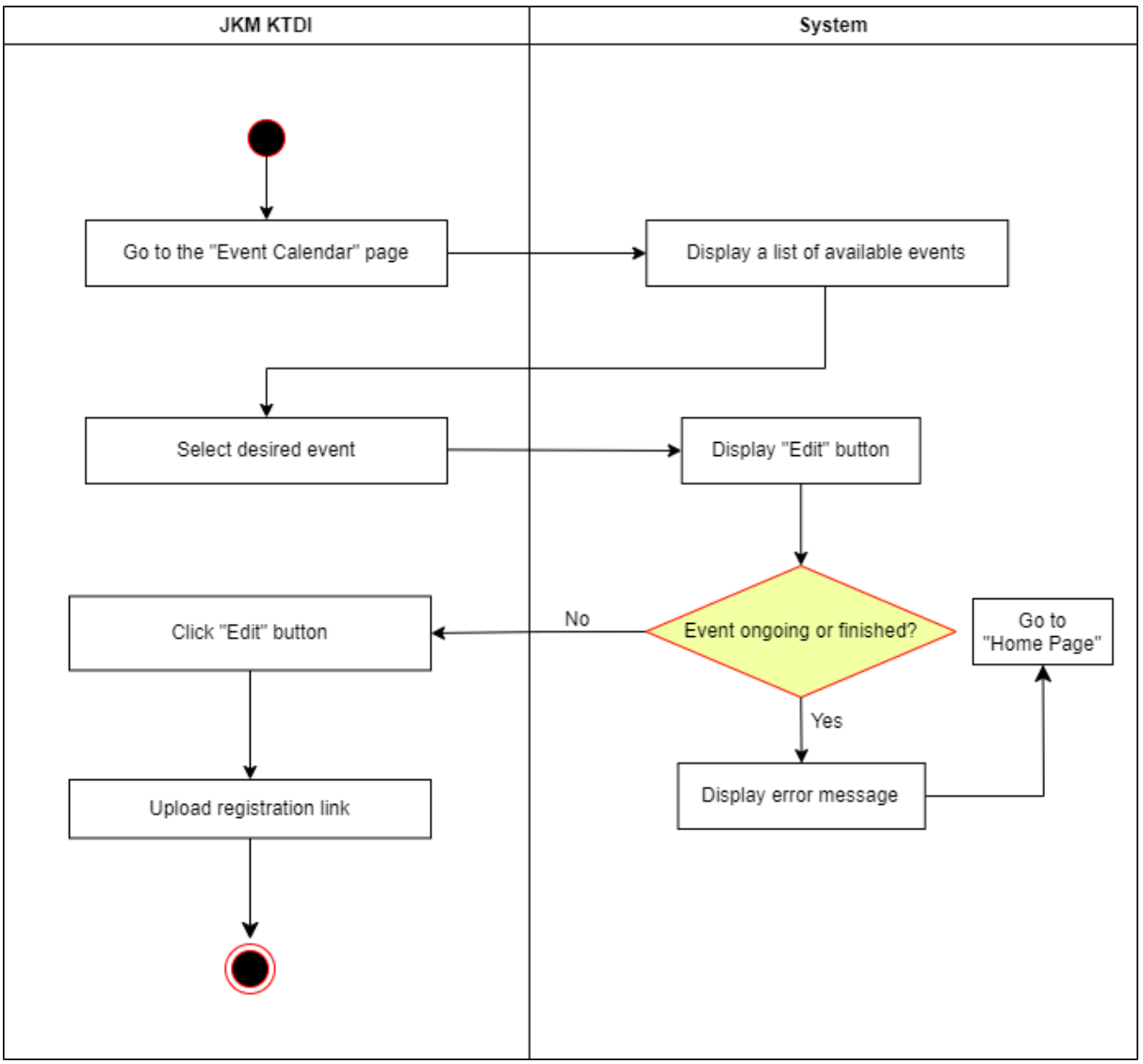

Figure 2.2.5.1: Activity Diagram of Upload Registration Link Event

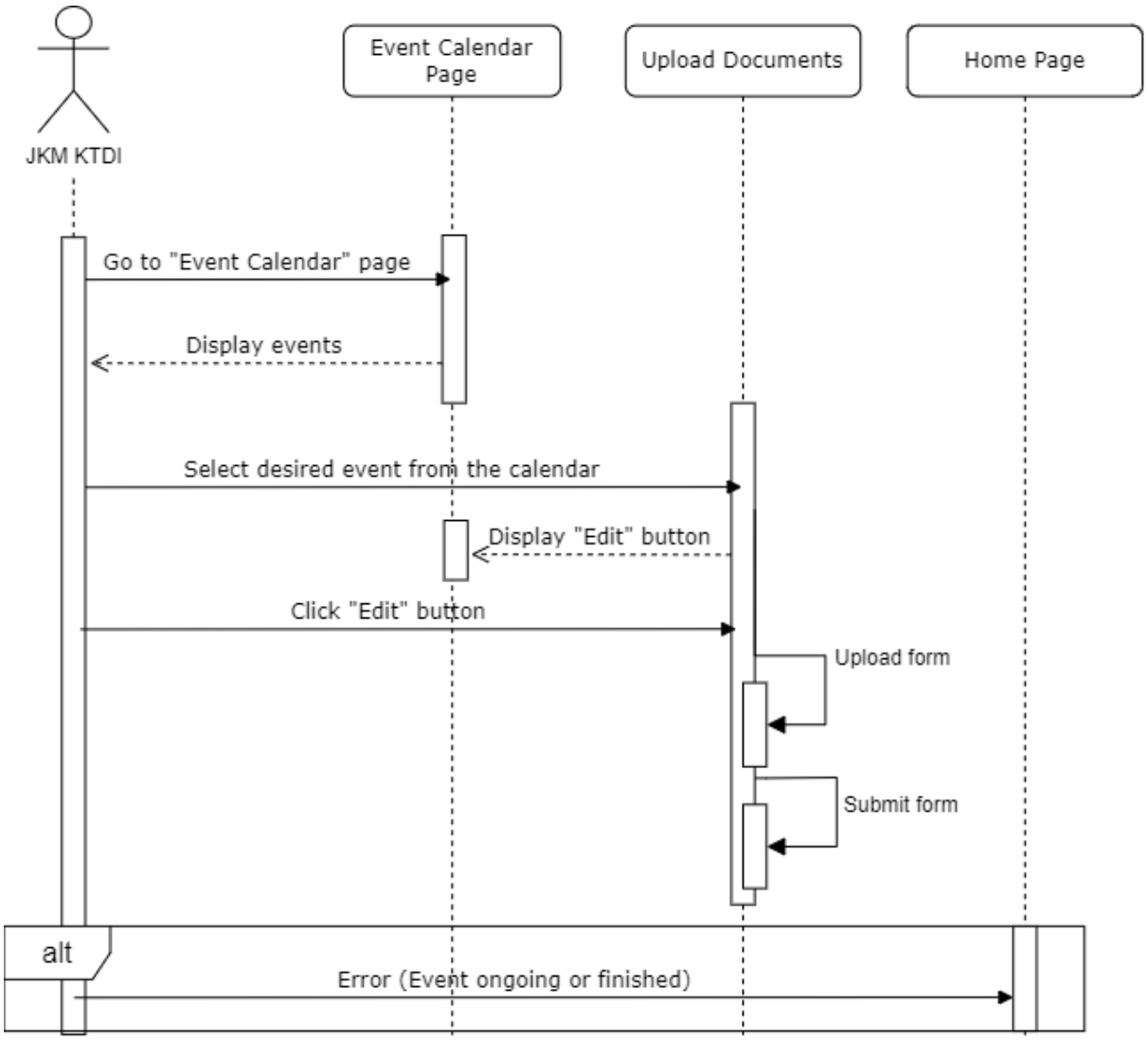

Figure 2.2.5.2: Sequence Diagram of Upload Registration Link Event

2.2.6 UC006: Use Case View progress

Table 2.2.6: Use Case Description for View Progress

Use case: View Progress
ID: UC006
Actors: 1. JKM KTDI 2. KTDI Staff
Preconditions:

● The JKM or KTDI staff member is logged into the event management system.
Flow of events: 1. The JKM or KTDI staff member navigates to the “Task” page of the system. 2. The system shows a list of available events folders. 3. The JKM or KTDI staff member selects the specific event folder they want to view progress for. 4. The system shows a list of available unit folders for the event. 5. The JKM or KTDI staff member selects the specific unit folder they want to view progress for.
Postconditions: ● The JKM or KTDI staff member has successfully viewed the progress for the selected event.
Alternative flow 1: Event Not Found 3. In step 3, if the JKM / KTDI staff selects an event that does not exist or is not available, the system displays an error message. 4. The JKM / KTDI staff go back to the home page.
Postconditions: ● The JKM or KTDI staff member is unable to view the progress of the event.

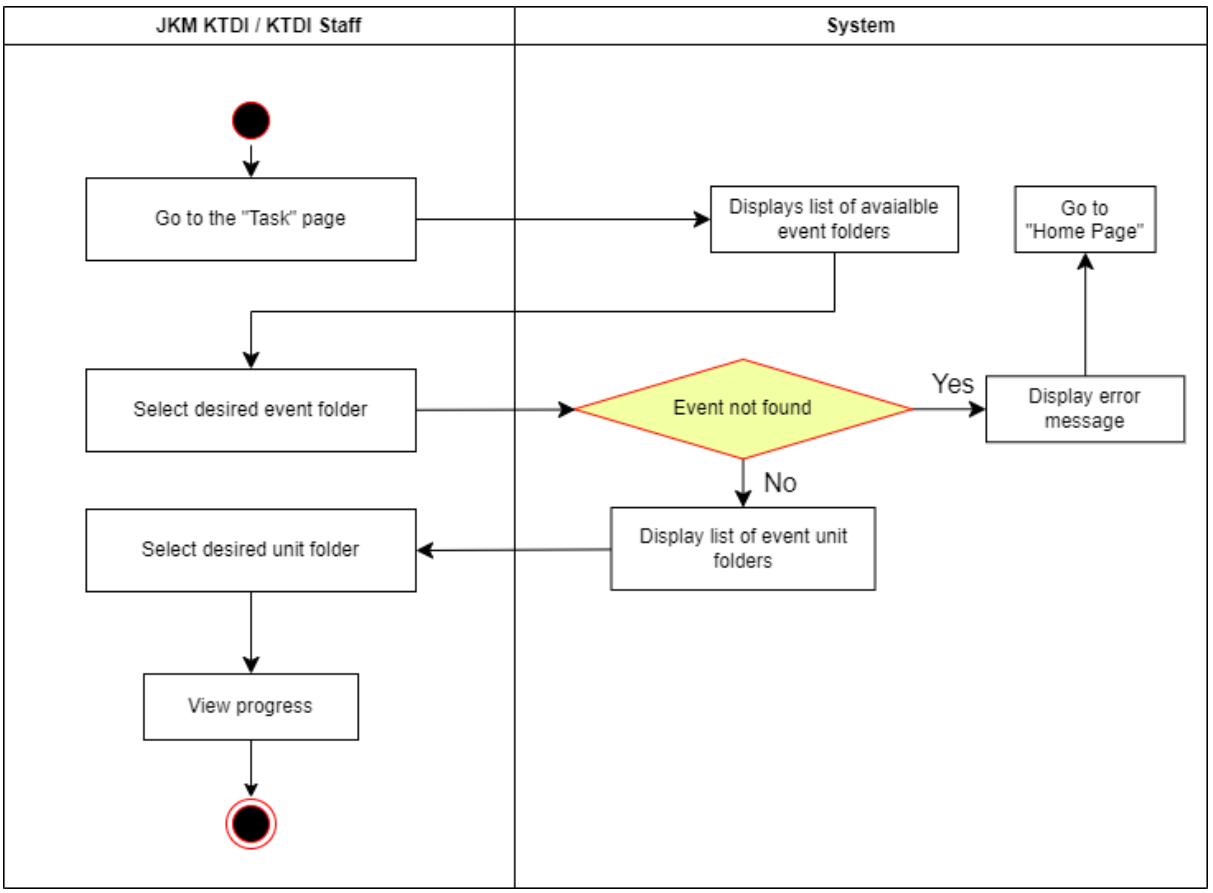

Figure 2.2.6.1: Activity Diagram of View Progress Event

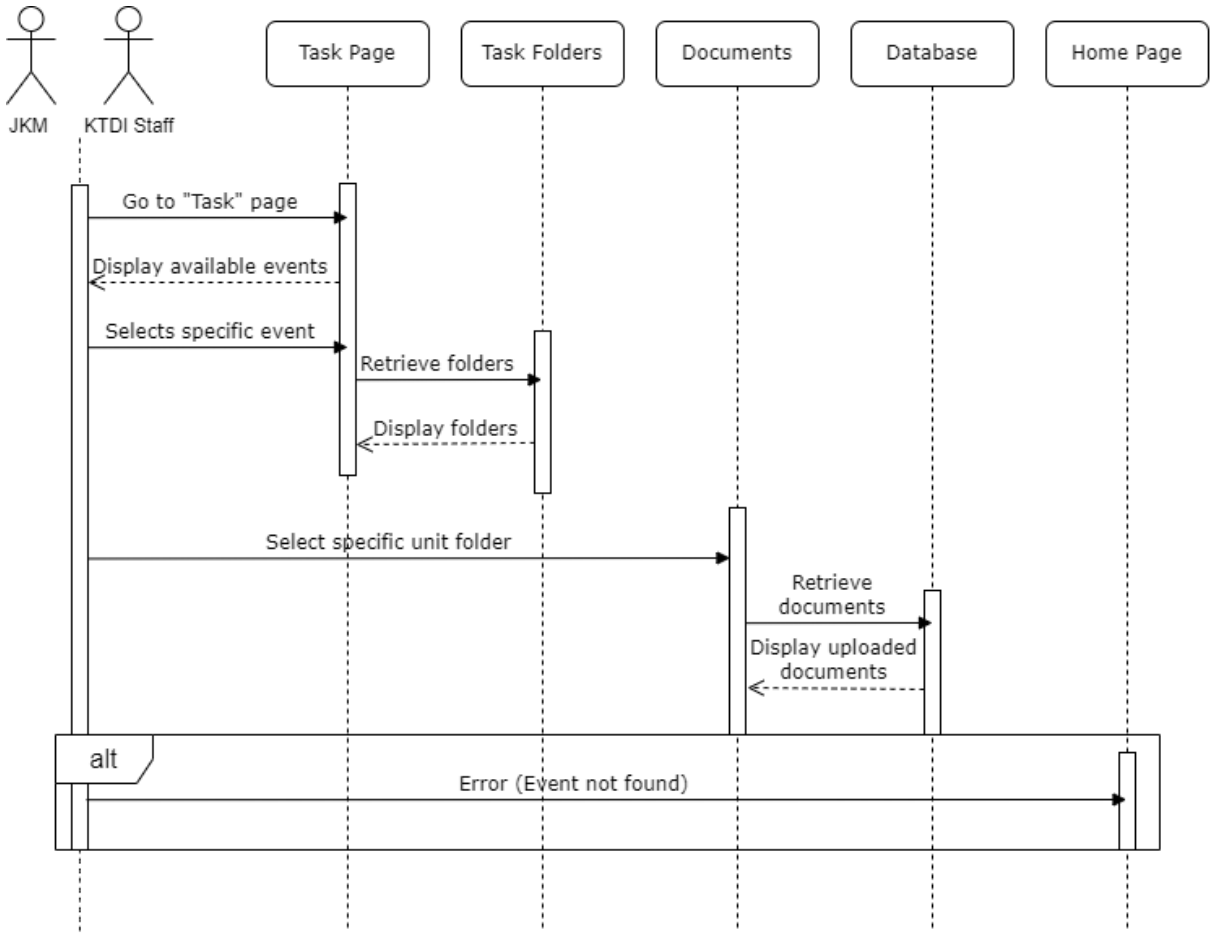

Figure 2.2.6.2: Sequence Diagram of View Progress Event

Module: Register Event module

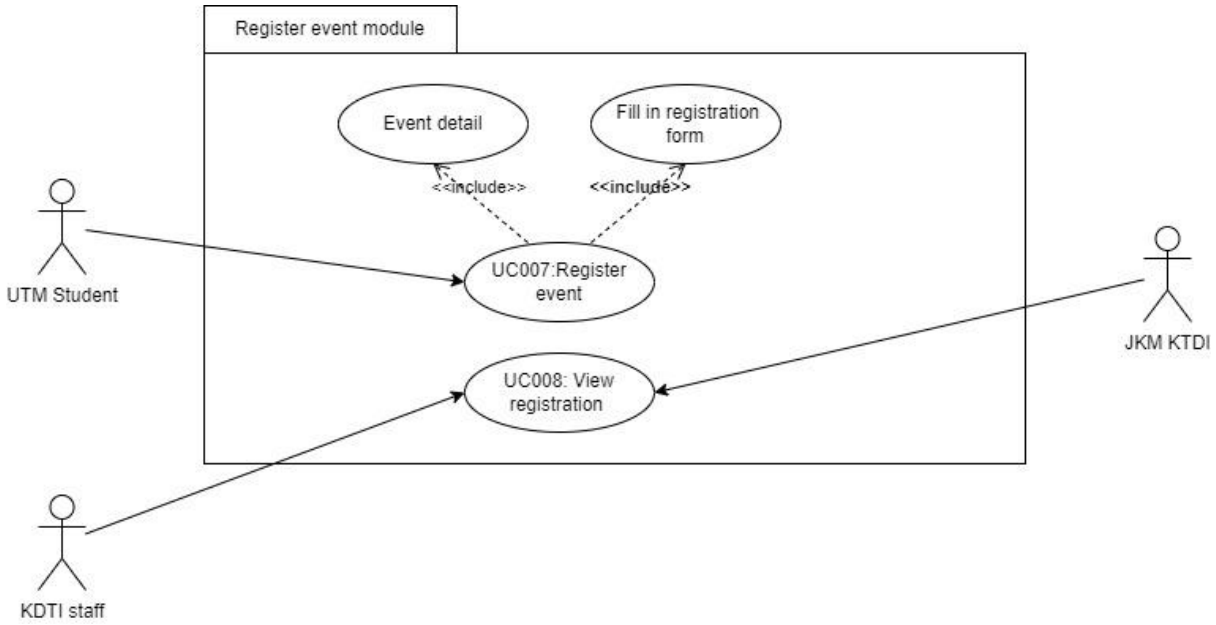

Figure 2.2 (f): Use Case Diagram for Register Event module

The use cases include in this register event module are stated as below:

VII. UC007: Register event - The system shall allow students to register an event by filling their personal information in the registration form. The system will store the registered event in student profile.

VIII. UC008: View registration - The system shall allow JKM KTDI and KTDI staff to view the users that have registered for an event.

2.2.7 UC007: Use Case Register event

Table 2.2.7: Use Case Description for Register Event

Use case: Register Event
ID: UC007
Actors: 1. Student
Preconditions: ● The student is logged into the event management system. ● The event registration link is open.
Flow of events: 1. The student navigates to the “Event Calendar” page of the system. 2. The system displays a list of available events. 3. The student selects the desired event from the calendar. 4. The system displays the event details, including date, time, location, and mode. 5. The student clicks on the register button. 6. The student fills in the required information. 7. The student submits the event registration form. 8. The system confirms the successful registration and displays the registered event on the student's profile page.

Postconditions:

- The student is registered for the selected event.
- The system updates the event registration count and availability.
- The student can view the registered event in their profile.

Alternative flow 1: Event Registration Full

1. In step 7, if the event has reached its maximum capacity or all available slots are filled, the system displays an error message.
2. The students go back to the home page.

Postconditions:

- The student is not registered for the event.

Exception flow (if any): Required field(s) is/are empty

1. An error message will be displayed by the system.
2. Submission cannot proceed.

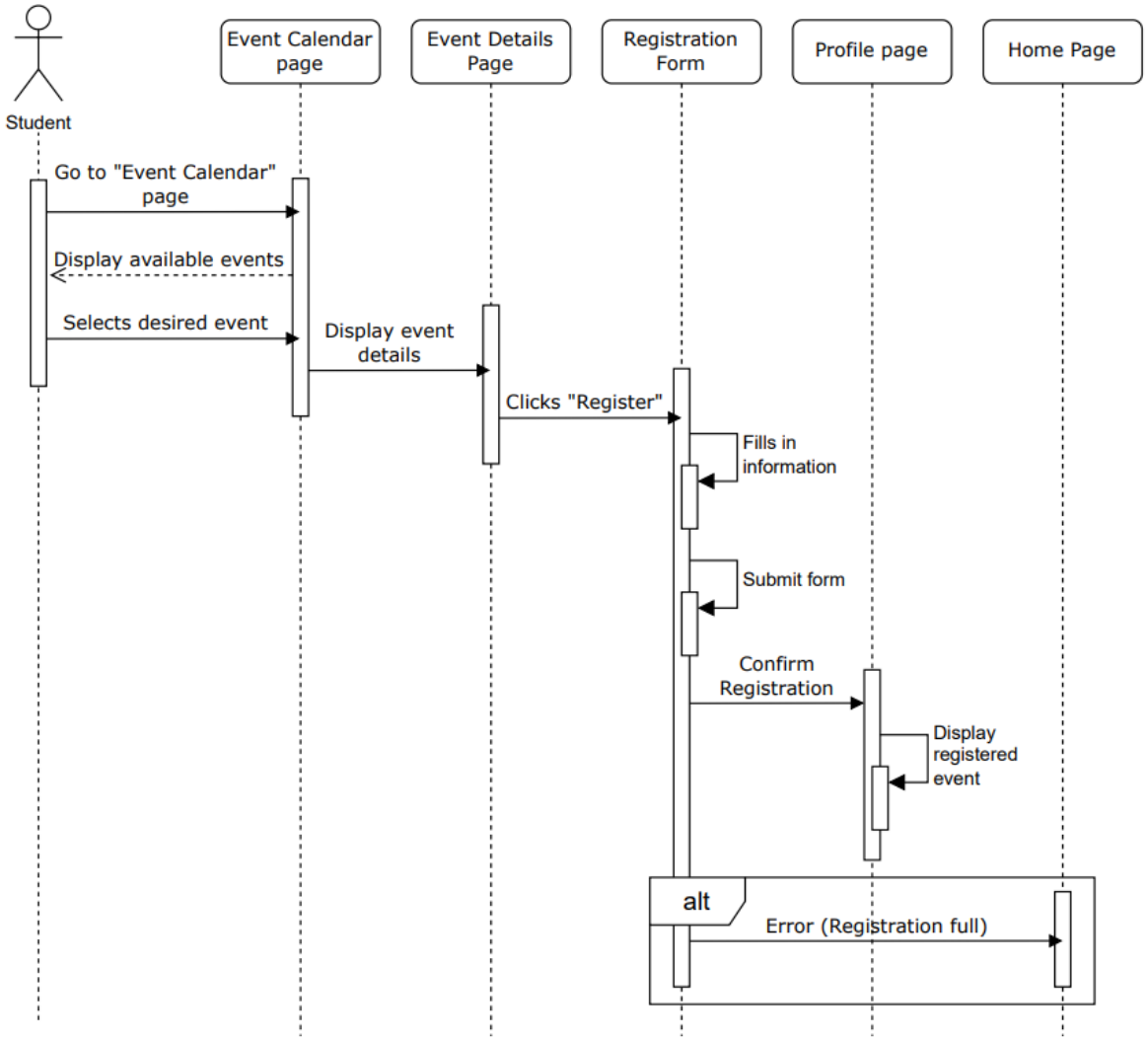

Figure 2.2.7.1: Sequence Diagram of Register Event

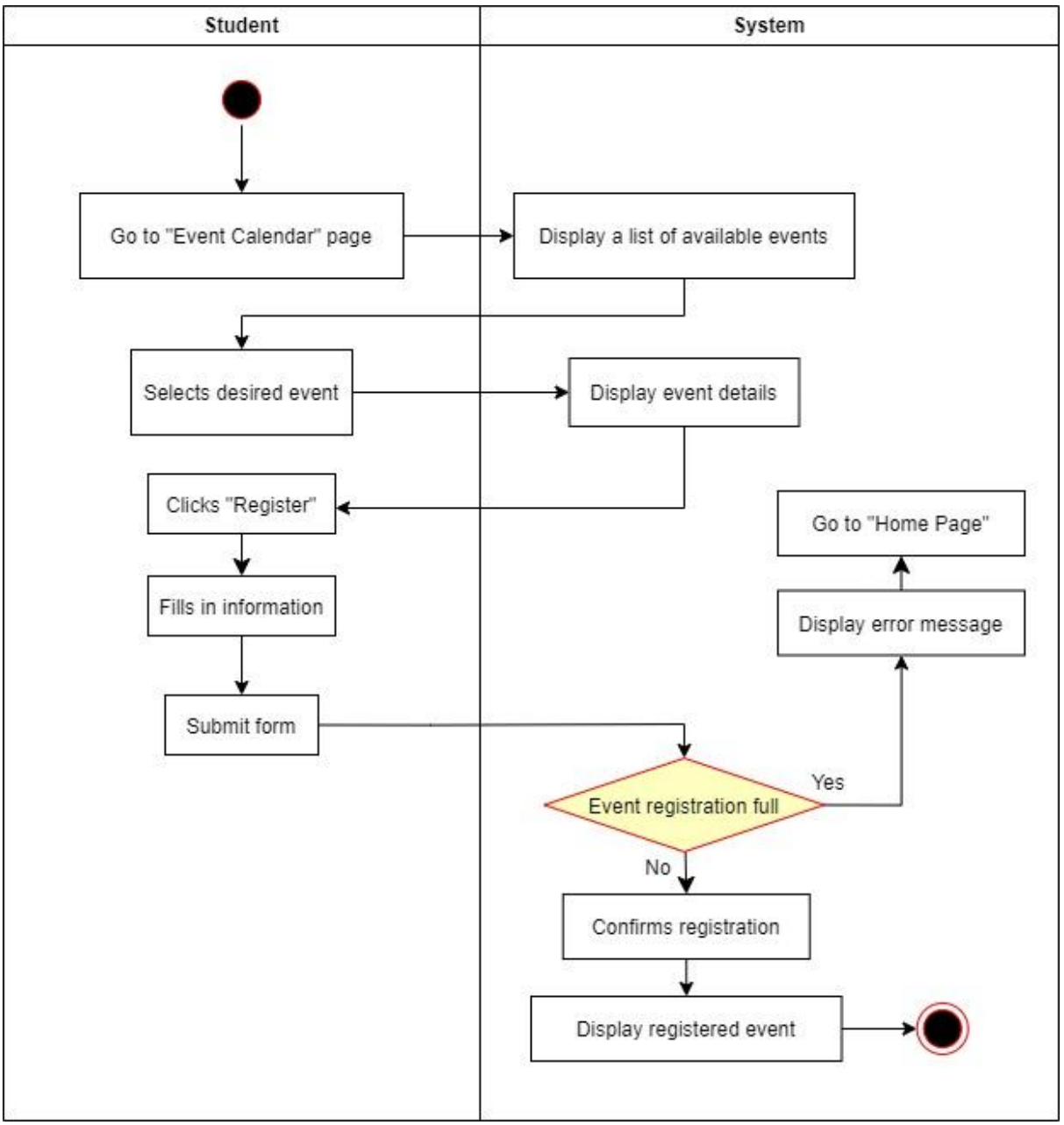

Figure 2.2.7.2: Activity Diagram of Register Event

2.2.8 UC008: Use Case View Registration

Table 2.2.8: Use Case Description for View Registration

Use case: View Registration
ID: UC008
Actors: 1. JKM KTDI

2. KTDI Staff
Preconditions: The JKM / KTDI staff is logged into the event management system.
Flow of events: 1. The JKM / KTDI staff navigates to the "Task" page of the system. 2. The system displays a list of events. 3. The JKM / KTDI staff selects the specific event they want to view registrations for. 4. The JKM / KTDI staff selects the "Participants" folder. 5. The system retrieves and displays a list of registered students for the selected event, including their names, matric number, ic number, contact number, year/program, college and email address.
Postconditions: ● The JKM / KTDI staff has successfully viewed the registrations for the selected event. ● The JKM / KTDI staff can access and utilise the registration data as necessary.
Alternative flow 1: Event Not Found 5. In step 3, if the JKM / KTDI staff selects an event that does not exist or is not available, the system displays an error message. 6. The JKM / KTDI staff go back to the home page.
Postconditions: ● The JKM or KTDI staff is aware that the selected event does not exist. ● The system does not display any student registration details.

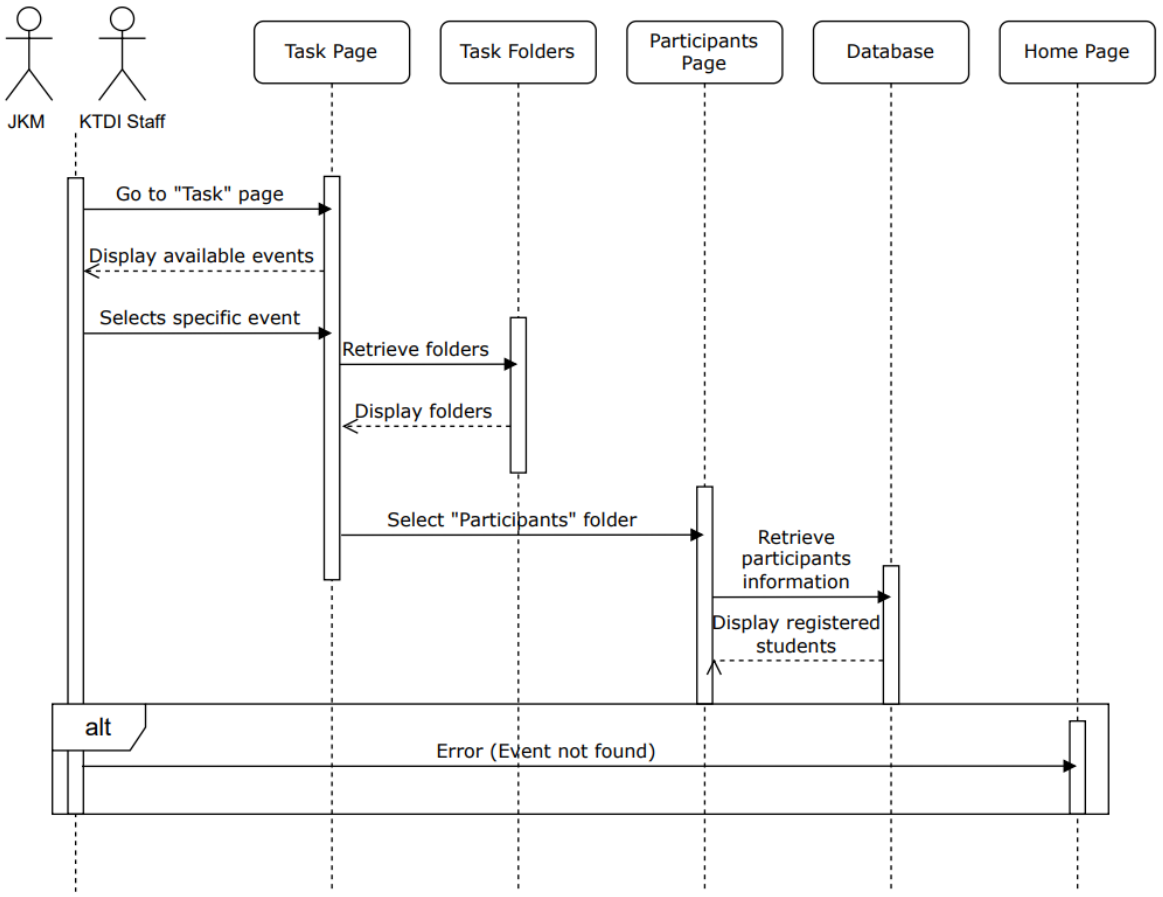

Figure 2.2.8.1: Sequence Diagram of View Registration Event

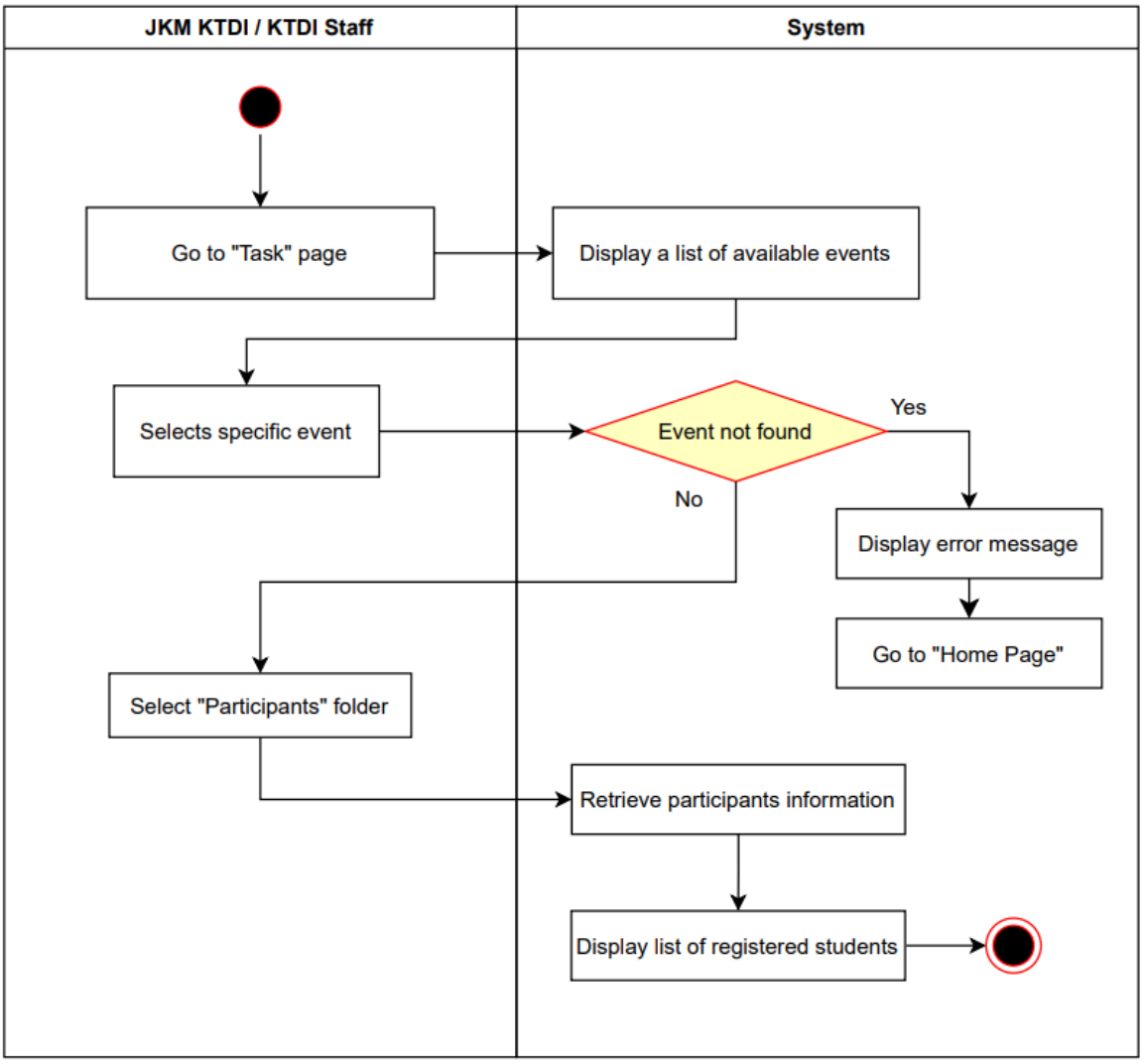

Figure 2.2.8.2: Activity Diagram of View Registration Event

Module: Attendance & Feedback module

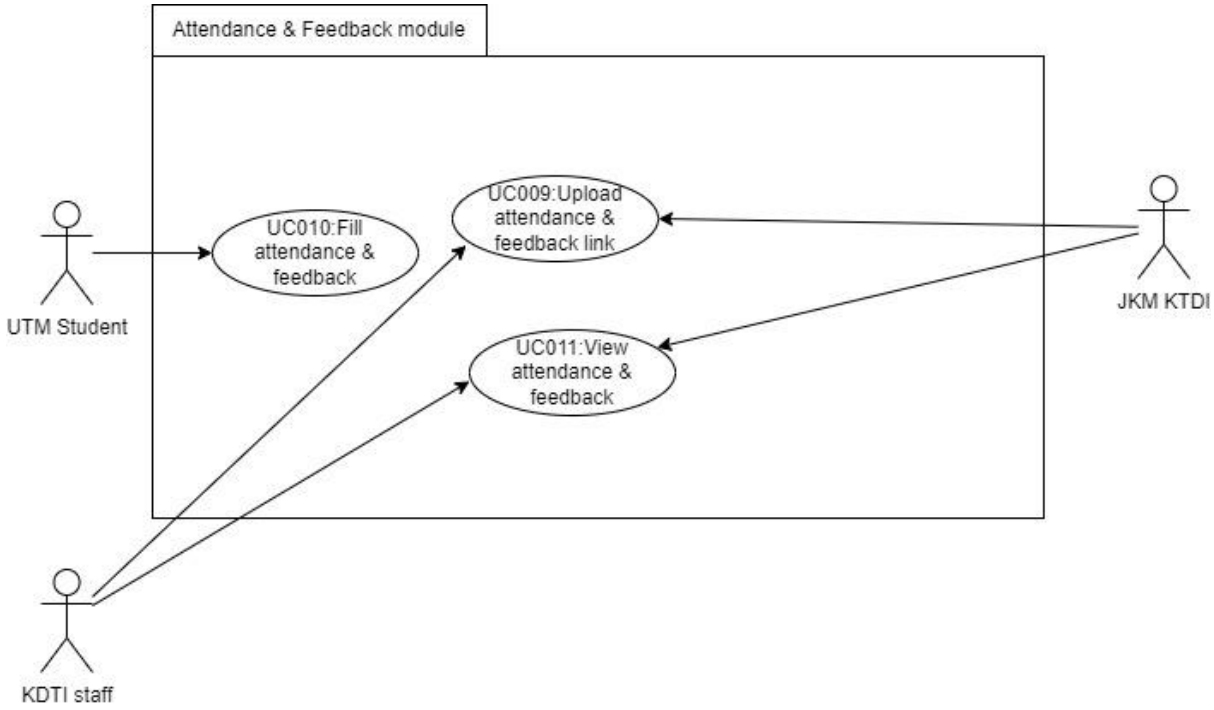

Figure 2.2 (g): Use Case Diagram for Attendance & Feedback Module

The use cases include in this attendance & feedback module are stated as below:

IX. UC009: Upload attendance & feedback link - The system shall allow JKM KTDI to upload the attendance and feedback link to students to record participants' attendance and feedback for the calculation of quota active and improvement of the event.

X. UC010: Fill Attendance & Feedback - The system shall allow students to fill in their attendance and feedback at the end of the event.

XI. UC011: View Attendance & Feedback - The system shall allow JKM KTDI and KTDI staff to view the attendance and feedback from students for an event in a list.

2.2.9 UC009: Use Case Upload Attendance and Feedback Link

Table 2.2.9: Use Case Description for Upload Attendance and Feedback Link Event

Use case: Upload Attendance & Feedback Link
ID: UC009
Actors: 1. JKM KTDI
Preconditions: ● The JKM is logged into the event management system.
Flow of events: 1. The JKM navigates to the "Event Calendar" page of the system. 2. The system displays a list of available events. 3. The JKM selects the specific event for which attendance and feedback links need to be uploaded. 4. The JKM clicks "Edit". 5. The JKM fills in the URLs of the attendance and feedback links. 6. The JKM clicks "Save".
Postconditions: ● The attendance and feedback links for the selected event are successfully uploaded and stored in the system. ● The students can view and access the uploaded links of their registered event.
Alternative flow 1: Unavailable URL 1. In step 6, if the JKM uploads an URL of the attendance and feedback link that is not available, the system displays an error message. 2. The JKM / KTDI staff go back to the home page.

Postconditions: ● The attendance and feedback links are not uploaded due to the event not being found.

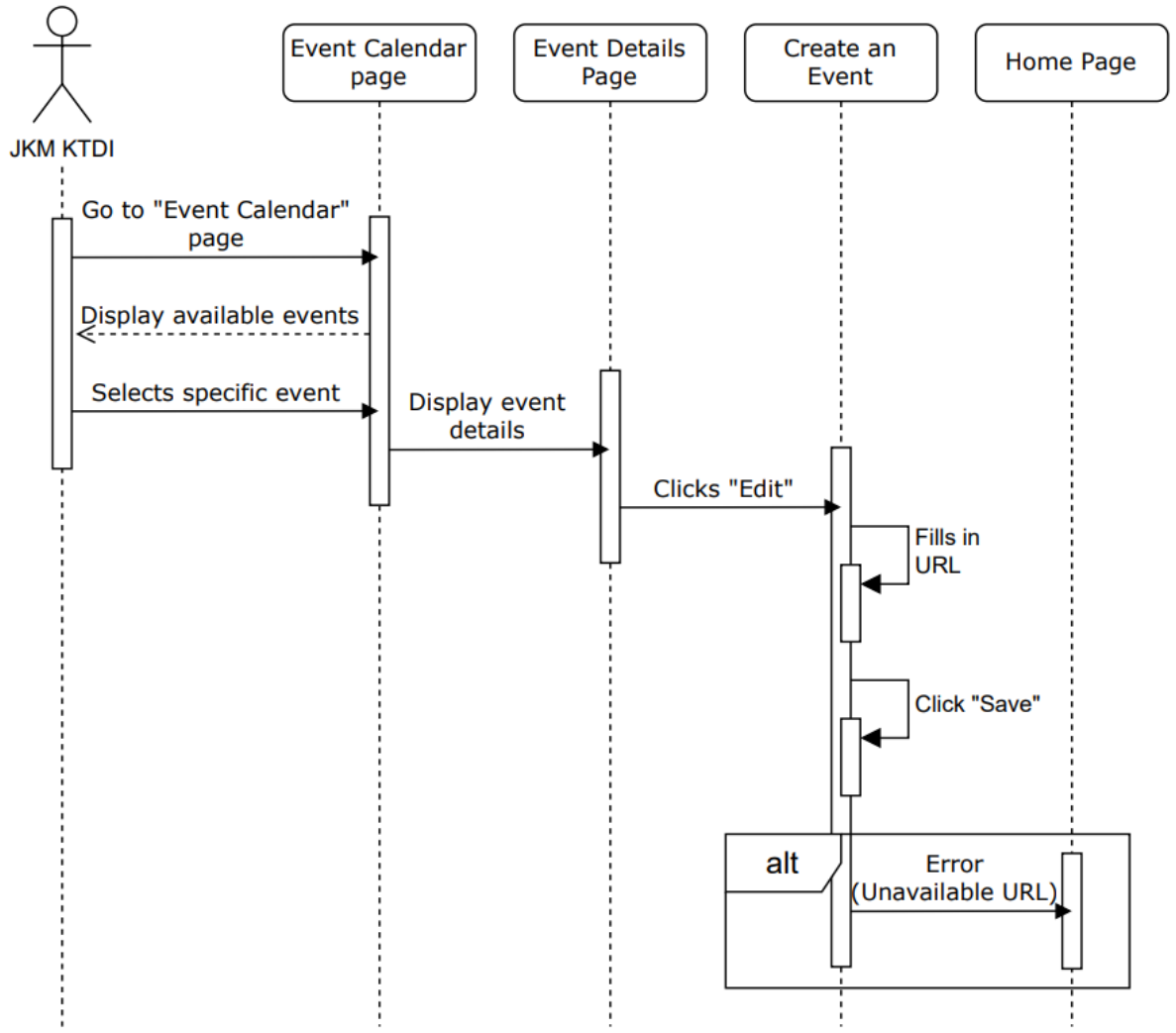

Figure 2.2.9.1: Sequence Diagram of Upload Attendance and Feedback Link Event

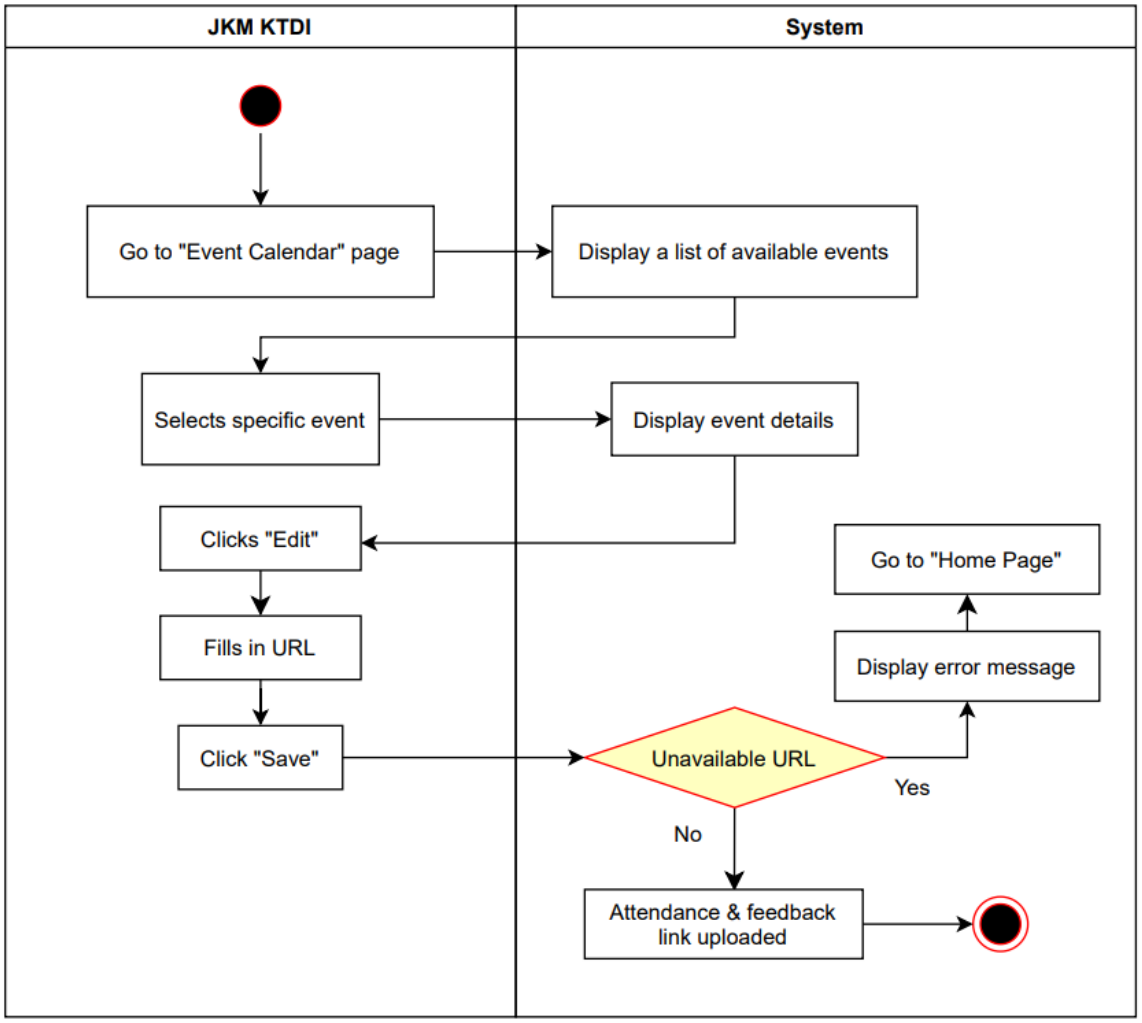

Figure 2.2.9.2: Activity Diagram of Upload Attendance and Feedback Link Event

2.2.10 UC010: Use Case Fill Attendance and Feedback

Table 2.2.10: Use Case Description for Fill Attendance and Feedback Event

Use case: Fill Attendance & Feedback
ID: UC010
Actors: 1. Student
Preconditions: 1. The student is registered for the event.

2. The event has taken place, and the attendance and feedback submission period is open.
3. The student is logged into the event management system.

Flow of events:

1. The student navigates to the “Profile” page of the system.
2. The system displays the registered event details, including the event name, title, date, merit, and attendance and feedback form.
3. The student clicks on the attendance and feedback link.
4. The system displays the attendance and feedback form.
5. The student fills in the required information and provides feedback regarding the event.
6. The student submits the attendance and feedback form.

Postconditions:

- The student's attendance and feedback for the event are successfully recorded in the system.

Alternative flow *1*: Late Submission

1. In step 3, if the student attempts to click the attendance and feedback links after the submission deadline has passed, the system displays an error message.
2. The student goes back to the home page.

Postconditions:

- The attendance and feedback forms are not displayed due to being late.

Exception flow (if any): Required field(s) is/are empty

1. An error message will be displayed by the system. 2. Submission cannot proceed.

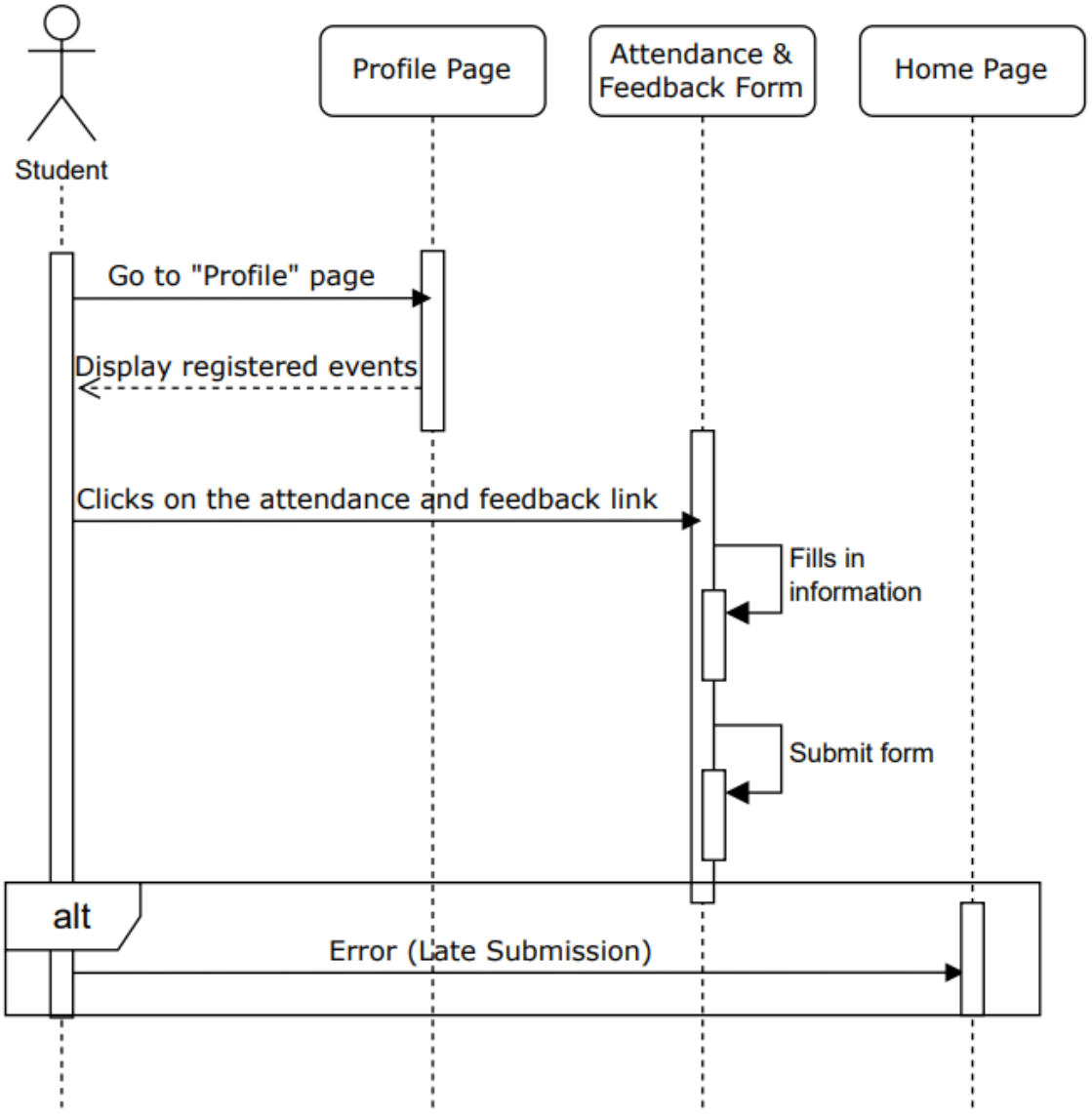

Figure 2.2.10.1: Sequence Diagram of Fill Attendance and Feedback Event

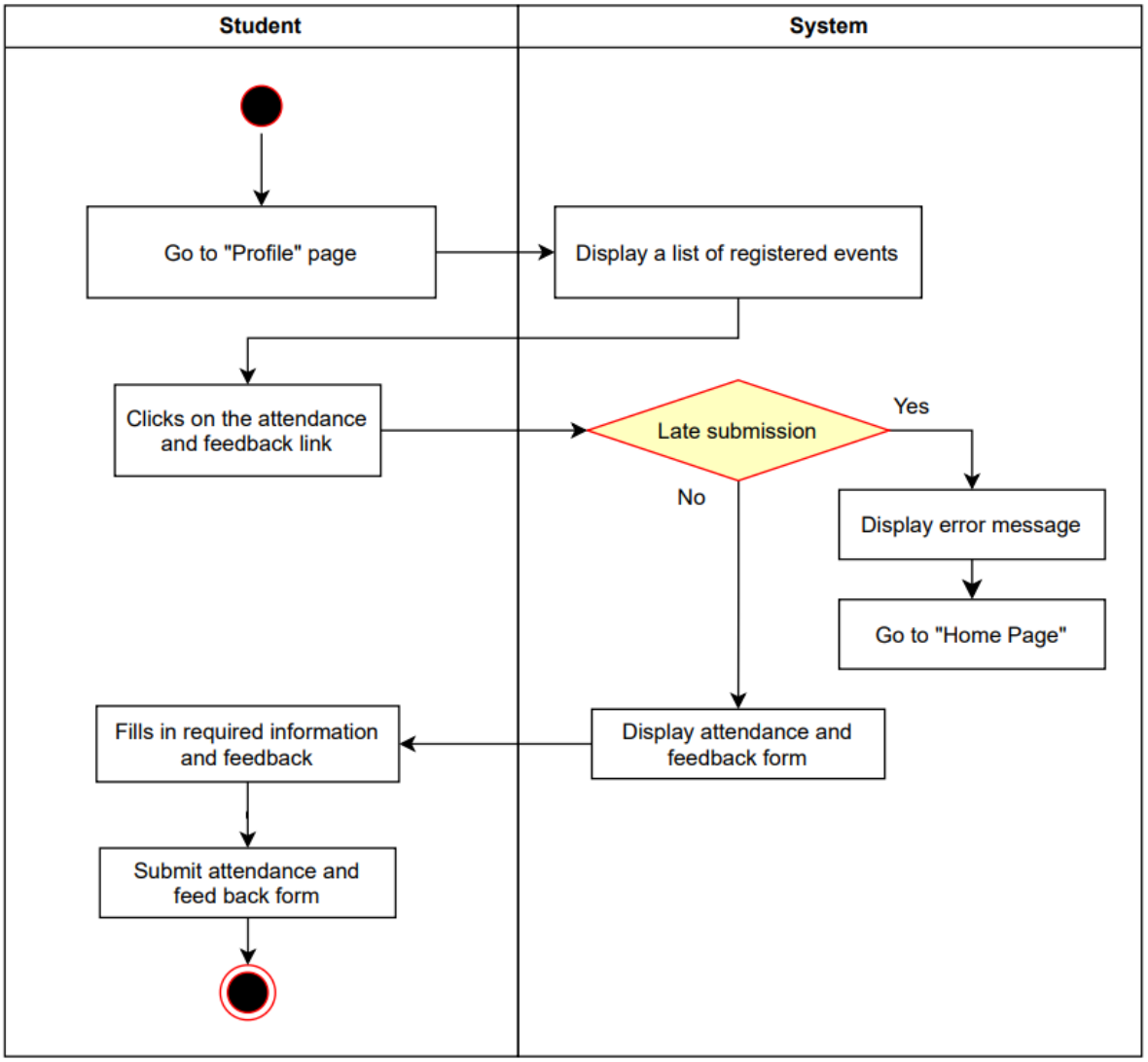

Figure 2.2.10.2: Activity Diagram of Fill Attendance and Feedback Event

2.2.11 UC011: Use Case View Attendance and Feedback

Table 2.2.11: Use Case Description for View Attendance And Feedback Event

Use case: View Attendance & Feedback
ID: UC011
Actors: 1. JKM KTDI 2. KTDI Staff
Preconditions: • The attendance and feedback form is uploaded.

- The JKM or KTDI staff member is successfully logged into the event management system.

Flow of events:

1. The JKM or KTDI staff member logs into the"Task" section of the system using their credentials.
2. The system presents a list of event folders.
3. The JKM or KTDI staff member selects the specific event for which they want to view attendance and feedback.
4. The system displays the task delegation and respondents folders.
5. The JKM or KTDI staff member clicks on the "Attendance and Feedback" folder.
6. The system retrieves and displays the attendance and feedback details for the selected event, including the list of students who attended the event and their respective feedback replies in a list.

Postconditions:

- The JKM or KTDI staff member has successfully viewed the attendances and feedback for the selected event.
- The JKM or KTDI staff member can utilise and record the attendance data for future calculating active quota purposes.
- The JKM or KTDI staff member can record and pay attention to the feedback data for further improvement in upcoming events.

Alternative flow *1*: No Attendance and Feedback Can Be Found.

1. In step 4 and 5, if no student has filled in the attendance form for the selected event, the system displays an error message which indicates that there is no attendance and feedback received yet.

2. The JKM or staff member can choose to either continue viewing the attendance and feedback of another event or proceed to other tasks.
Postconditions: ● The system does not display any student attendance and feedback details for the selected event. ● The JKM or staff member is aware that no attendance has been filled by students for the selected event.
Exception flow (if any): Event Not Found 1. In step 4, the JKM or KTDI staff member selects an event that does not exist or hasn't been published, the system will display an error message. 2. The JKM or staff member is prompted to select an existing or valid event from the list of events.

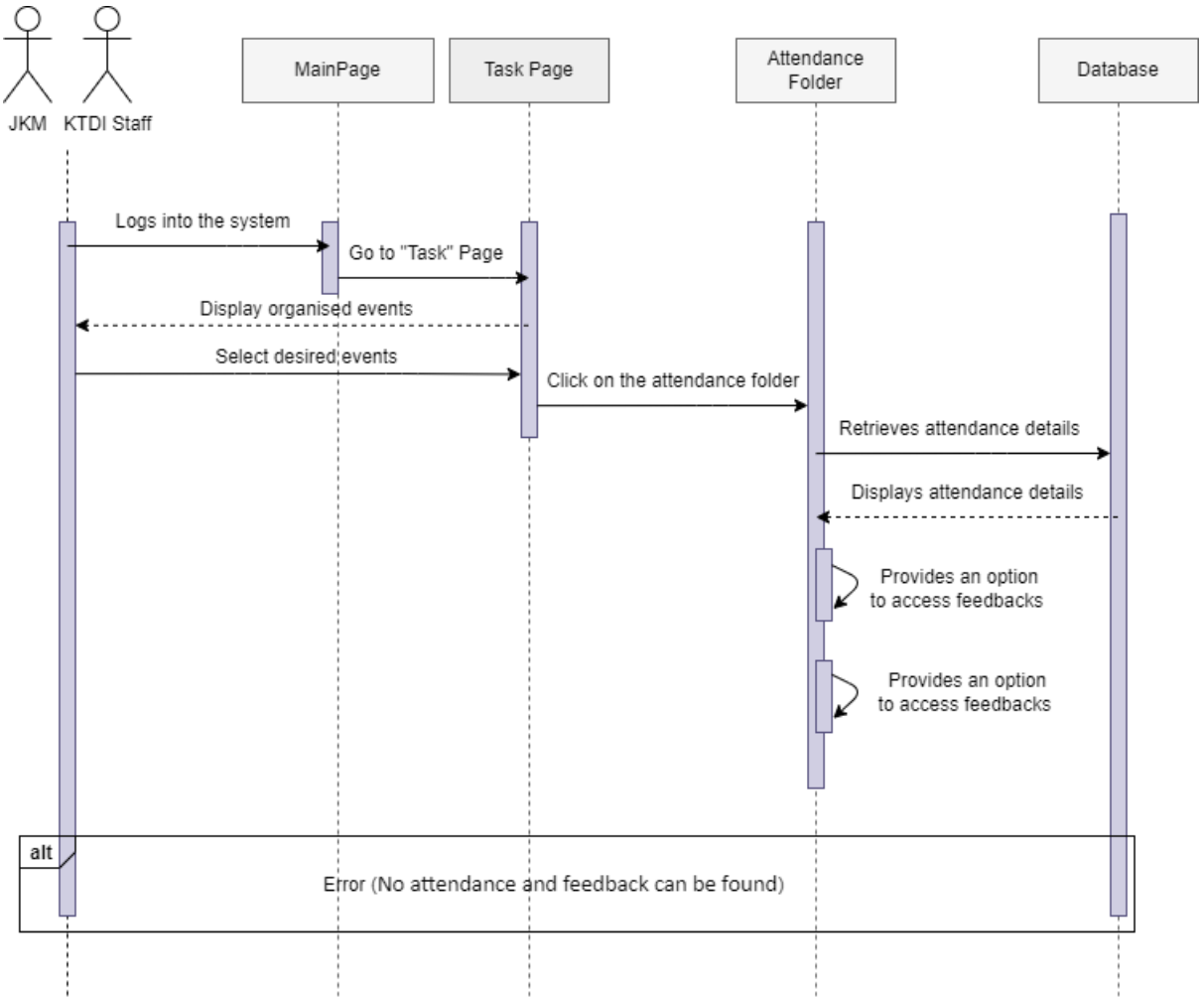

Figure 2.2.11.1: Sequence Diagram of View Attendance & Feedback Event

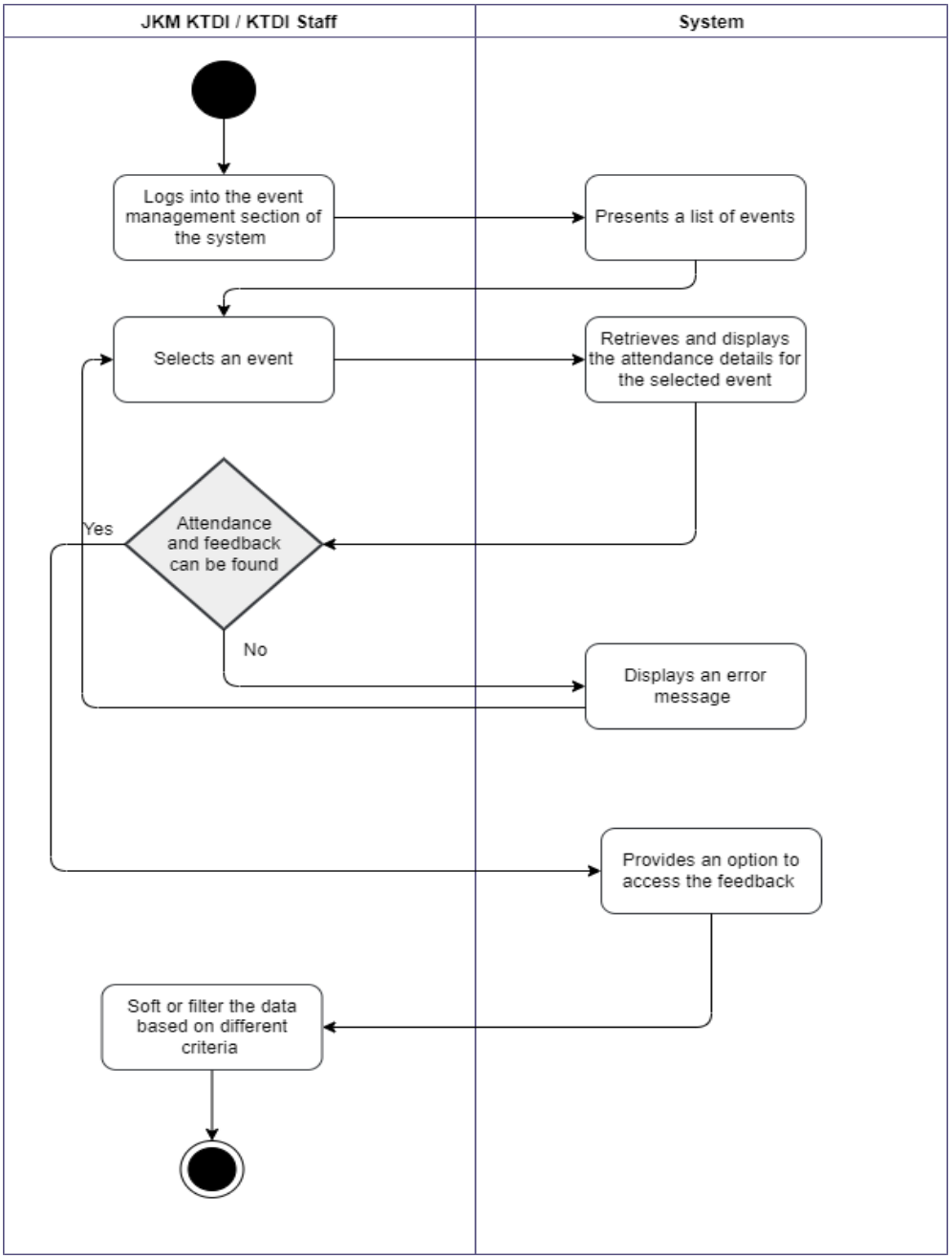

Figure 2.2.11.2: Activity Diagram of View Attendance And Feedback Event

Module: Active Quota module

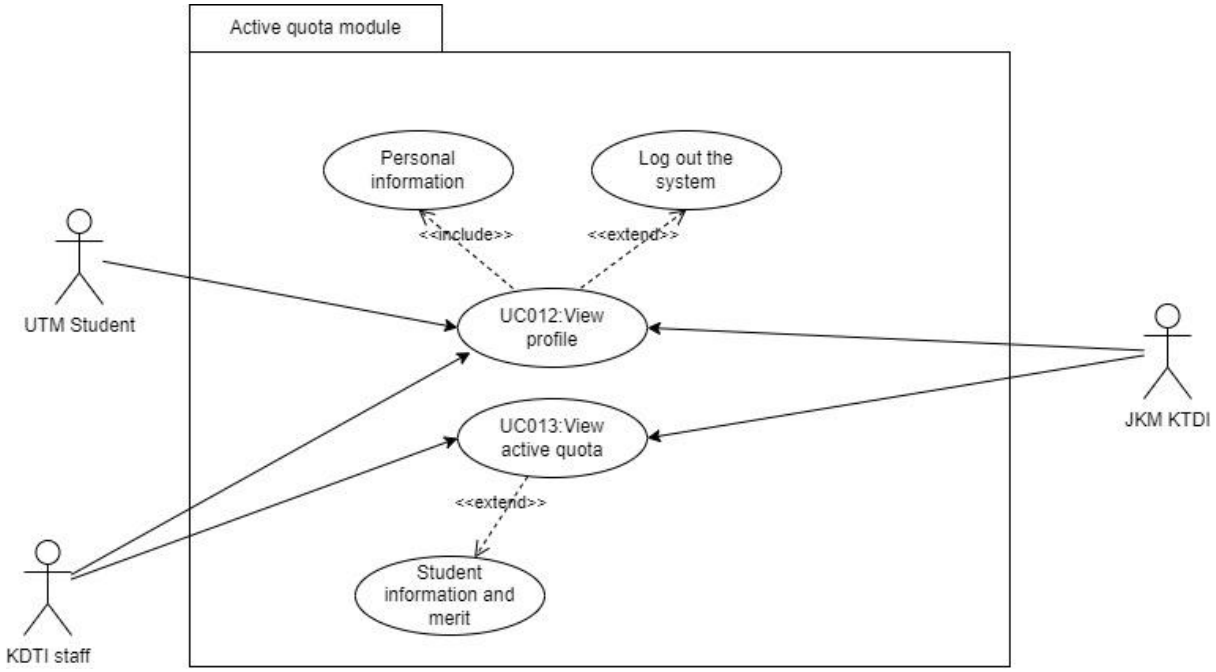

Figure 2.2 (h): Use Case Diagram forActive Quota Module

The use cases include in this active quota module are stated as below:

XII. UC012: View Profile - The system shall show the user's personal information and display the event joined in a list for JKM and students.

XIII. UC013: View Active Quota - The system shall show the list of all the students that participate in KTDI events with their KTDI merit score to identify quota active students.

2.2.12 UC012: Use Case View Profile

Table 2.2.12: Use Case Description for View Profile Event

Use case: View Profile
ID: UC012
Actors: 1. JKM KTDI 2. KTDI Staff

3. Student
Preconditions: ● The JKM, KTDI staff member, student is successfully logged into the event management system.
Flow of events: 1. The JKM, KTDI staff member, or student selects the "Profile" page of the system. 2. The system displays their respective profiles according to their credentials.
Postconditions: ● The JKM, KTDI staff members or students have successfully viewed their profile.
Alternative flow *1*: Profile information leakage 1. In step 1, the system encounters certain limitations or restrictions to make some information be hidden or accessible only to specific connections.
Postconditions: ● The system does not provide any access to its own profile for the third-party. ● Error message displayed.

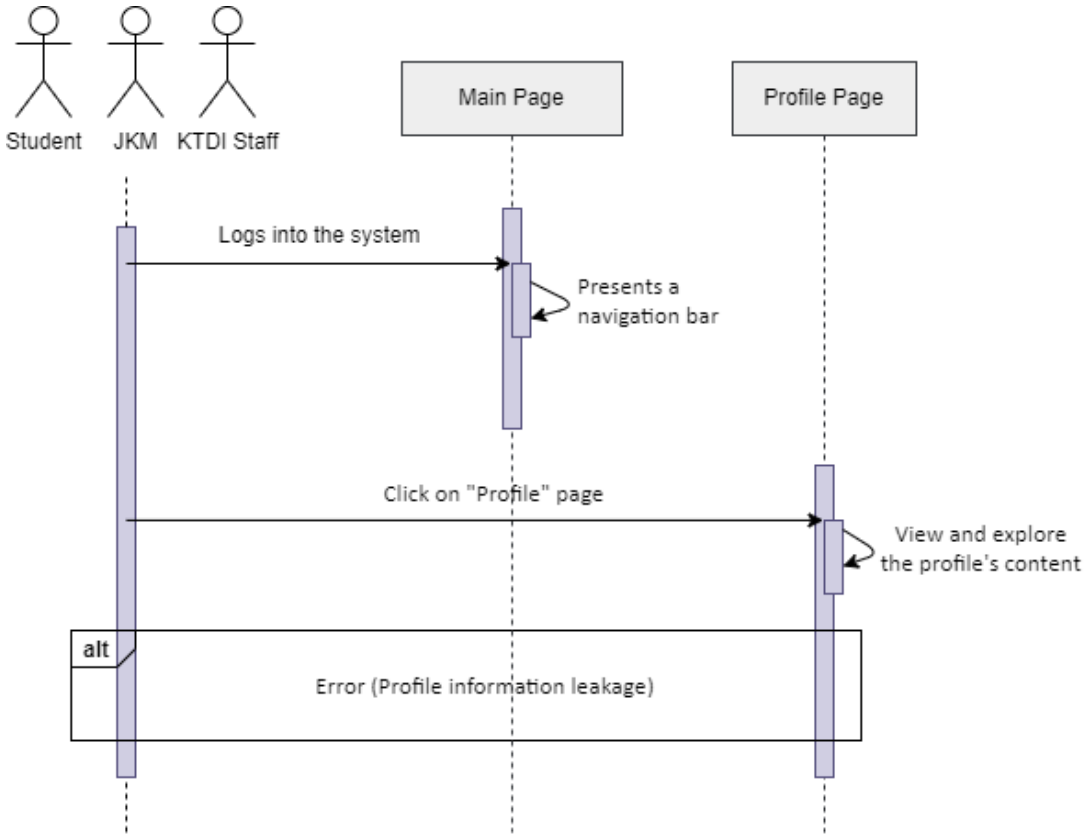

Figure 2.2.12.1: Sequence Diagram of View Profile Event

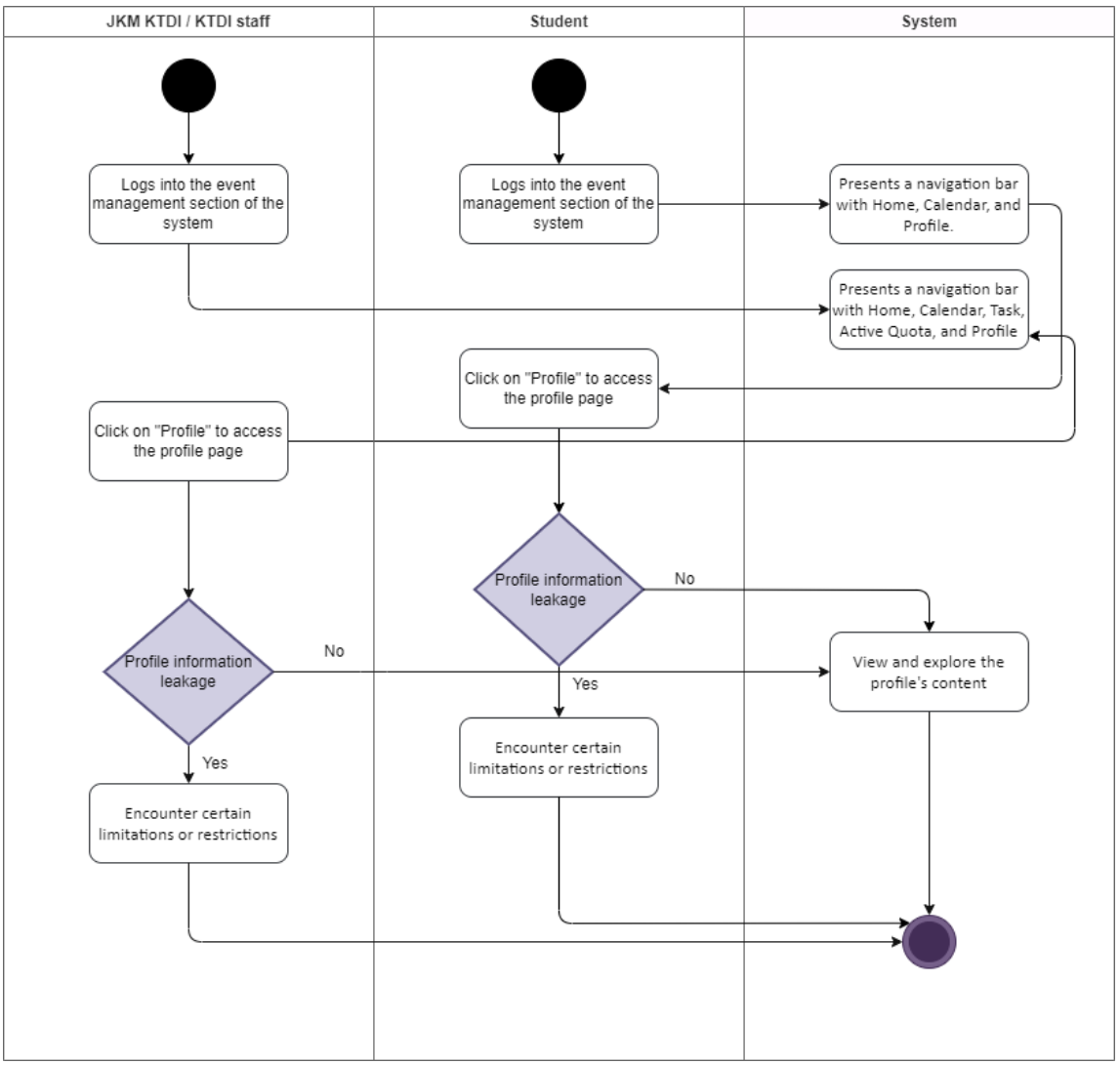

Figure 2.2.12.2: Activity Diagram of View Profile Event

2.2.13 UC013: Use Case View Active Quota

Table 2.2.13: Use Case Description for View Active Quota Event

Use case: View Active Quota
ID: UC013
Actors: 1. JKM KTDI 2. KTDI Staff
Preconditions:

• The students, JKM and KTDI staff members are successfully logged into the event management system.
Flow of events: 1. The JKM or KTDI staff member enters the main page and clicks on “Active Quota” to view a list of students' merits. 2. The system retrieves and displays the calculated active quota information, including the current quota status, and any details related to the respective students information.
Postconditions: • The JKM or KTDI staff member has successfully viewed the active quota list. • The JKM or KTDI staff member gets to know their current active quota status of every student.
Alternative flow *1*: No Active Quota Status is Defined. 1. In step 1, if the student did not attend any event which equally means that he or she did not fill in any of the attendance or feedback form, the system will display zero status on that student, indicating that no active quota is currently assigned or applicable.
Postconditions: 1. The JKM or KTDI staff member notices that there is no active quota status on the student, indicating that he or she did not fill in the attendance and feedback form.

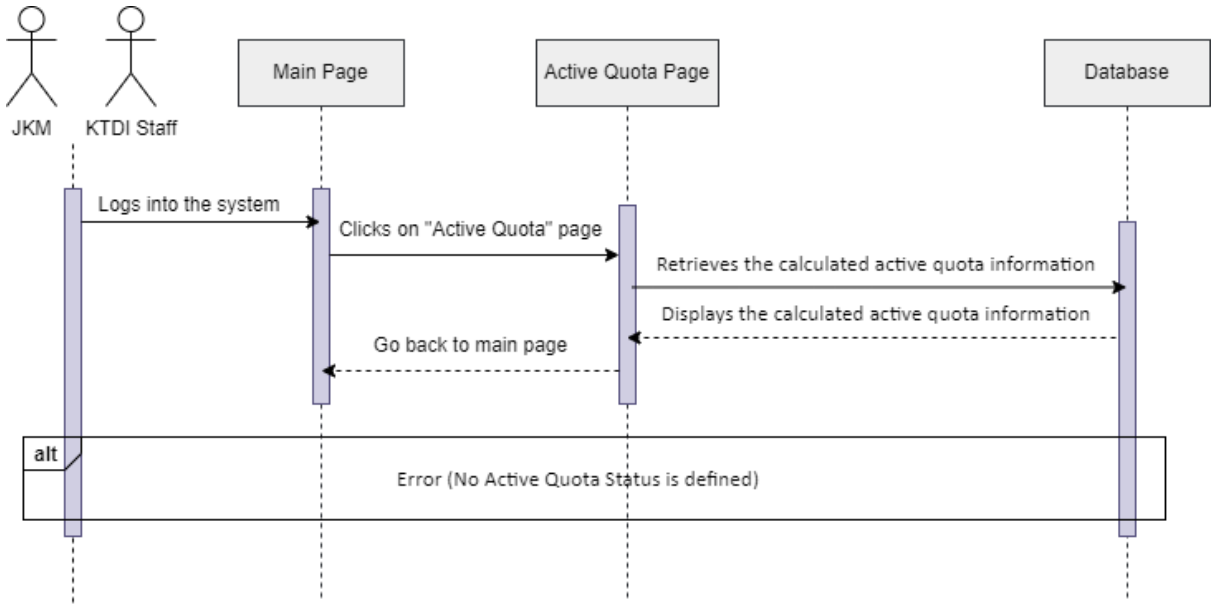

Figure 2.2.13.1: Sequence Diagram of View Active Quota Event

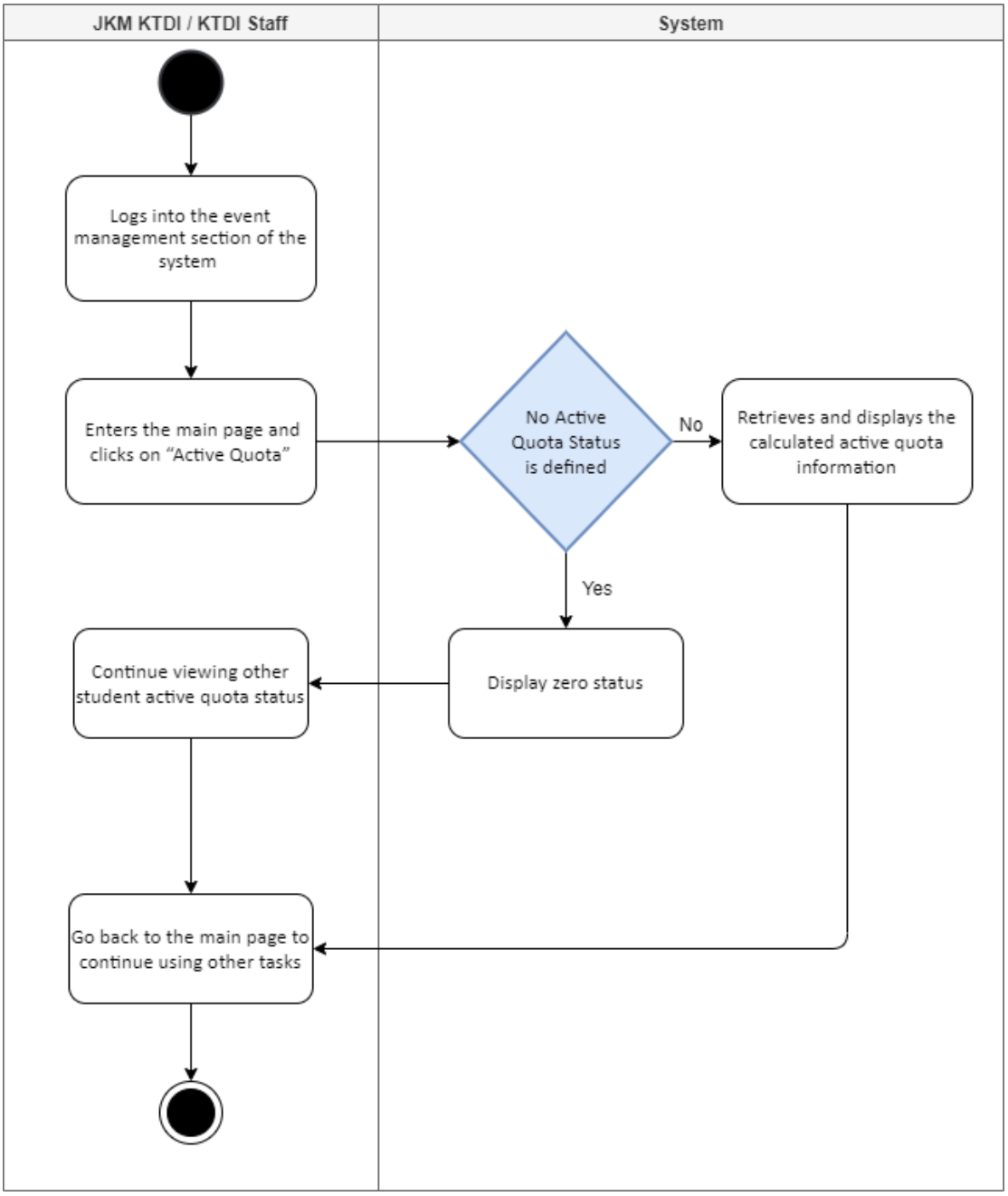

Figure 2.2.13.2: Activity Diagram of View Active Quota Event

2.3 Software System Attributes, Performance and Other Requirements

2.3.1 Software System Attributes

1. **SSA1 Usability Requirements**

   The system should be user-friendly, and easy to navigate. The system should be able to notify the system admin when any registration, attendance or feedback is received.

2. **SSA2 Reliability Requirements**

   The ability of the system to handle large volumes of data and user interactions without failures or disruptions to make sure the user can successfully make their registration for the selected event.

3. **SSA3 Maintainability Requirements**

   The ease with which the system can be updated with new features, fixed and enhanced by improving the coding to the system and adapted to evolving users needs, ultimately reducing maintenance costs and improving the system's longevity.

4. **SSA4 Portability Requirements**

   The system becomes flexible and adaptable to different platforms, environments, and user requirements.

5. **SSA5 Compatibility Requirements**

   The system can effectively communicate data or services with other systems, provide seamless interactions, and deliver consistent functionality across different platforms, software environments, and interfaces.

2.3.2 Performance Requirements

1. **PR 1 Response Time**

   The ability of the system to load fast and respond immediately with an user request or multiple users requests at a time.

2. **PR 2 Throughput**

   The number of user requests can be handled and processed fast without any significant slowdowns or bottlenecks within a given time frame.

3. **PR 3 Capacity**

   The maximum number of users or the amount of data that the system can handle while maintaining its optimal performance and scalability.

4. **PR 4 Scalability**

The ability of the system to scale up or down based on demand without significant degradation in performance or functionality.

5. **PR 5 Availability**

   The system is accessible 24/7 and operational for users whenever they need to interact with it.

2.3.3 Other Requirements

1. **OR 1 Security**

   The system must always protect the integrity, confidentiality, and availability of data entered the system as well as prevent unauthorised access to system functions, in order to ensure a secure user experience.

2. **OR 2 Safety**

   The system should be able to create a secure and safe environment for the users by preventing or mitigating potential hazards, virus infection or risks.

2.4 Design Constraints

1. **DS1 Hardware constraints**

   The system must be designed to run on a device with minimum of 8GB of RAM and minimum of 100GB of storage.

2. **DS2 Security constraints**

   The system must be designed by implementing specific security measures, adhering to data protection guidelines, and ensuring the confidentiality and integrity of user data. Only the authentication users have access to log in to this system.

3. **DS3 Compatibility constraints**

   The system must be designed to be compatible with Windows and MacOs operating systems, thus promoting smooth system operation.

4. **DS4 Scalability constraints**

   The system must be designed to handle an increasing number of events, attendees, and concurrent users without significant degradation in performance.