



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECP3204: Software Engineering

System Documentation (SD)

KTDI EVENT MANAGEMENT SYSTEM

Version I

Date: 16 May 2023

Faculty: Faculty of Computing

Prepared by: Group Curiosity

Revision Page

a. Overview

Describe the content of the current version of SD (see below – the note in red).

b. Target Audience

State the targeted audience for the SD.

c. Project Team Members

List the team members in a table by stating their roles and the status for each assigned task e.g. by sections for this SD version (complete, partially complete, incomplete). If the assigned tasks are not done and have been assigned to other team members, state accordingly.

Member Name	Role	Task	Status
Low Ying Xi	Project Manager	Section 2.2	Incompleted
		Section 2.2.1	Completed
		Section 2.2.2	Completed
Camily Tang Jia Lei	Developer		
Koh Li Hui	User Experience Designer	Section 2.2.11	In Progress
		Section 2.2.12	In Progress
		Section 2.2.13	In Progress
		Section 2.3	Completed
		Section 2.4	Completed
Ng Shu Yu	Documentation Specialist		

d. Version Control History

Version	Primary Author(s)	Description of Version	Date Completed
1.0	Project Manager (Low Ying Xi)	Completed Chapter 2, Section 2.2.1	15/05/2023

1.0	Project Manager (Low Ying Xi)	Completed Chapter 2, Section 2.2.2	17/05/2023
1.0	User Experience Designer (Koh Li Hui)	Completed Chapter 2, Section 2.3	19/05/2023
1.0	User Experience Designer (Koh Li Hui)	Completed Chapter 2, Section 2.4	20/05/2023
1.0	Team leader 1 (Full Name)	Completed Chapter X, Section...	dd/mm/yyyy
1.0	Team leader 1 (Full Name)	Completed Chapter X, Section...	dd/mm/yyyy
1.0	Team leader 1 (Full Name)	Completed Chapter X, Section...	dd/mm/yyyy
1.0	Team leader 1 (Full Name)	Completed Chapter X, Section...	dd/mm/yyyy

Note: The title page should show the latest version. For your first submission (Assignment 2), the version should be 1.0, then 2.0 for Assignment 3, and then 3.0 for Assignment 4. Primary author(s) could be the team leaders who should compile all materials for the purpose of SD submission. [remove this note in red texts and the examples in the table above]

Note:

This System Documentation (SD) template is adapted from IEEE Recommended Practice for Software Requirements Specification (SRS) (IEEE Std. 830-1998), Software Design Descriptions (SDD) (IEEE Std. 10161998 1), and Software Test Documentation (IEEE Std. 829-2008) that are simplified and customized to meet the need of SECJ2203 course at Faculty of Computing, UTM. Examples of models are from Arlow and Neustadt (2002) and other sources stated accordingly.

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	2.4	Design Constraints		

1. Introduction

The following sections of the System Documentation (SD) should provide the details of the entire document comprising System Requirements Specification (SRS), System Design Document (SDD), and System Testing Document (STD). Remove the notes in read texts when submitting including these notes. For this Assignment 2, you are required to submit the partial SD by completing the SRS part only that covers Section 1.0 and Section 2.0.

1.1 Purpose

This subsection should:

- a) Delineate the purpose of the SD;*
- b) Specify the intended audience for the SD.*

The System Documentation (SD) serves the purpose of providing a comprehensive overview of the system development process. It is intended to be a reference manual for developers, testers, project managers, and clients involved in the system development. 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 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. By offering organised and thorough documentation, the SD ensures clarity, alignment, and reduces the likelihood of errors, thus enhancing productivity and improving the final project outcomes.

1.2 Scope

This System Documentation (SD) relates to the software application known as "KTDI Event Management System" and is intended to give readers a clear understanding of the system development process, including the System Requirements Specification (SRS), System Design Document (SDD), and System Testing Document (STD).

The "KTDI Event Management System" software product will be used by a variety of KTDI residents, including the staff, students, and JKM KTDI. Through social media channels like the university's whatsapp groups, telegram groups, and instagram accounts, the current event blasting system used by JKM KTDI is still not organised. Additionally, their manual attendance and feedback system, which uses Google Forms, is inefficient and time-consuming.

The scope of the “KTDI Event Management System” software product includes the following:

- ✓ Identifying the user and system requirements, including the requirements for functionality, performance, usability, reliability, and security.
- ✓ The software will be created using an agile-driven methodology, guaranteeing its scalability and maintainability.
- ✓ Software engineering best practices, such as coding standards, testing protocols, and quality assurance procedures, will be used to develop the software product.
- ✓ To make sure the software product satisfies all necessary specifications and operates as anticipated, it will be tested using a combination of manual and automated testing techniques.
- ✓ A user manual will be included with the software product when it is delivered to help users set it up and use it.

This subsection should:

- a) *Identify the software product(s) to be produced by name (e.g., Online Learning System, Emotion Chatbot Analyzer, etc.);*
- b) *Explain what the software product(s) will, and, if necessary, will not do;*
- c) *Describe the application of the software being specified, including relevant benefits, objectives, and goals;*

1.3 Definitions, Acronyms and Abbreviation

This subsection should provide the definitions of all terms, acronyms, and abbreviations used in the SD.

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 which 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 JOHOR

1.4 References

This subsection should:

- a) *Provide a complete list of all documents referenced elsewhere in the SD;*
- b) *Identify each document by title, report number (if applicable), date, and publishing organization;*
- c) *Specify the sources from which the references can be obtained.*

Specify a complete list of references using a standardised reference format.

1.5 Overview

This subsection should:

- a) *Describe what the rest of the SD contains;*
- b) *Explain how the SD is organized.*

The KTDI Event Management System software product is extensively described in the System Documentation (SD), which is available online. System Requirements Specification (SRS), System Design Document (SDD), and System Testing Document (STD) are the three main sections of this document.

The SD is organised as follow:

The SRS serves as an introduction and outlines the goal and parameters of the project. Additionally, it includes a brief description of the project as a whole and a list of all the acronyms and abbreviations that are used in this SRS. The second chapter focuses on the project's overall description and lists the project's general requirements as well as background requirements for the final product. The project's specific requirements, which include modules and diagrams for each of the use cases, are stated in the final chapter.

All parties involved in the design, testing, and deployment of the KTDI Event Management system are encouraged to use this SD document as a reference. It should be consulted at all stages of the software development lifecycle as it offers a clear and succinct overview of the software requirements and testing procedures.

Specific Requirements

*This section of SD serves as the SRS that should contain all the software requirements to a level of detail sufficient to enable designers to design a system to satisfy those requirements, and testers to test that the system satisfies those requirements. Throughout this section, every stated requirement should be externally perceivable by users, operators, or other external systems. These requirements should **include at a minimum a description of every input (stimulus) into the system, every output (response) from the system, and all functions performed by the system** in response to an input or in support of an output.*

2.1 User characteristics

2.1.1 UTM Students

- Students using the system are expected to have basic computer literacy skills and be comfortable using web-based applications.
- Students may have varying levels of familiarity with event management systems.
- They should be able to register for events and view event calendars to stay informed about upcoming events.
- They should be able to fill attendance and feedback forms for events they have attended.
- They should be able to view their own active quotas.
- Students may need assistance in navigating the system and understanding the registration process.
- It is important to provide clear instructions and user-friendly interfaces to accommodate students with different technical skills.

2.1.2 JKM KTDI

- JKM KTDI are responsible for managing and overseeing the event management system.
- They should have technical expertise in using the system and be familiar with the system's functionalities.
- JKM users should have administrative privileges to perform tasks such as managing event calendars, distributing event preparation tasks.
- They should have the ability to upload and manage registration links and attendance and feedback forms.

- They should be able to view and update the progress of events, calculate and view student's active quotas.
- JKM users should be able to view event registrations, attendance, and feedback submitted by students.

2.1.3 KTDI Staff

- Staff members are users who support the JKM in event management activities.
- They may have varying levels of technical expertise, but should be trained on using the system's functionalities.
- They should be able to view event calendars to stay informed about upcoming events.
- They should be able to view the progress of events, calculate and view student's active quotas.
- Staff members should be able to view event registrations, attendance, and feedback submitted by students.

2.2 System Features

An overview of the KTDI Event Management System will be provided in this section.

Authentication module

1. **UC001: Use Case Register account (all)**
2. **UC002: Use Case Login (all)**

Create event module

1. **UC003: Use Case Event calendar (JKM edit + all view)**

Event preparation module

1. **UC004: Use Case Task distribution (update progress) (JKM)**
2. **UC005: Use Case Upload registration link (JKM)**
3. **UC006: Use Case View progress (JKM) (Staff)**

Register event module

1. **UC007: Use Case Register event (student)**
2. **UC008: Use Case View registration (JKM) (Staff)**

Attendance & Feedback module

1. **UC009: Use Case Upload attendance & feedback link (JKM)**

2. **UC010: Use Case Fill attendance & feedback (student)**
3. **UC011: Use Case View attendance & feedback (JKM)(Staff)**

Active Quota module

1. **UC012: Use Case Calculate active quota (JKM)(Staff)**
2. **UC013: Use Case View active quota (all)**

Specify the product perspective.

Example.

The Emotion Chatbot Analyzer is a software system that operates on mobile devices, including both Android and iOS operating systems. The system provides a means for UTM students to better manage their emotional health and at the same time simplifies the process of seeking emotional support from UTM ccounselors The system also implemented a real-time cloud-based database for better user experiences.

Specify the product module and function..

Include use case diagram here – see example of Emotion Chatbot Analyzer below

Then, provide the description of each module and functions using table.

Example.

The system features is illustrated in Figure X.X below. The detail description of each module and functions is tabulated in Table X.X.

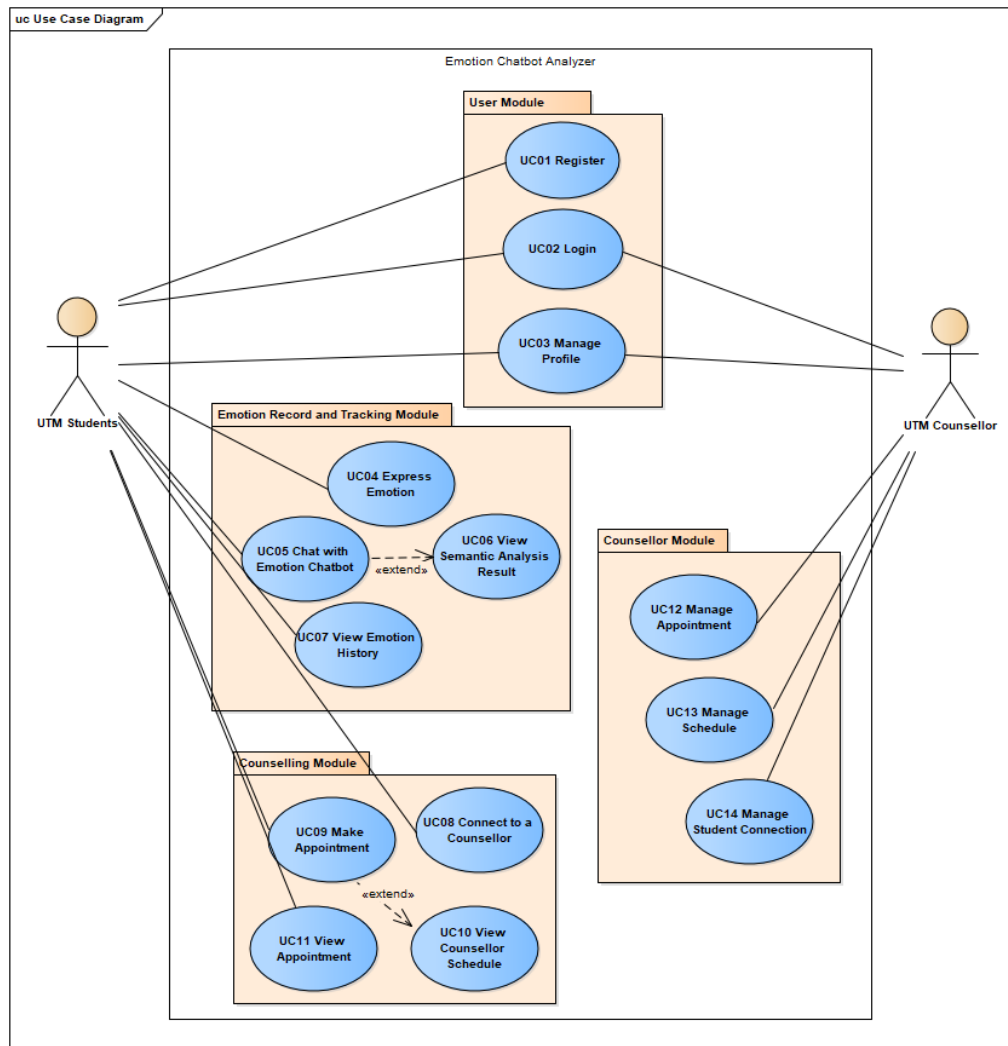


Figure X.X: Use Case Diagram for <Name of the System>

Table X.X: Description of Module and Functions for <Name of the 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 in UTM 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 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.
Register Event Module	UC007 – Register Event	This use case allows students to register an event by filling their personal information.
	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	
	UC010 – Fill attendance & feedback	
	UC011 – Fill attendance & feedback	

*[Include domain model i.e. **class diagram** without the operation part – only attributes without details on visibility and type, explain each class and its attributes including the relationships among the classes, see the example.]*

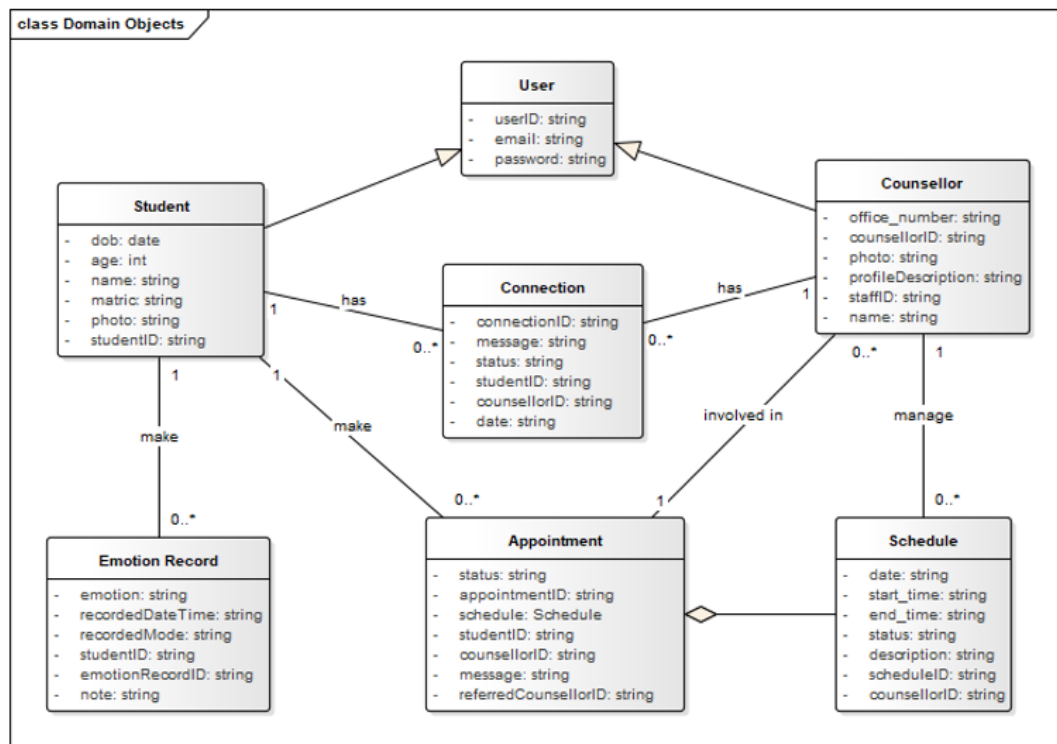


Figure X.X: Domain Model for <Name of the System>

Module: Authentication module

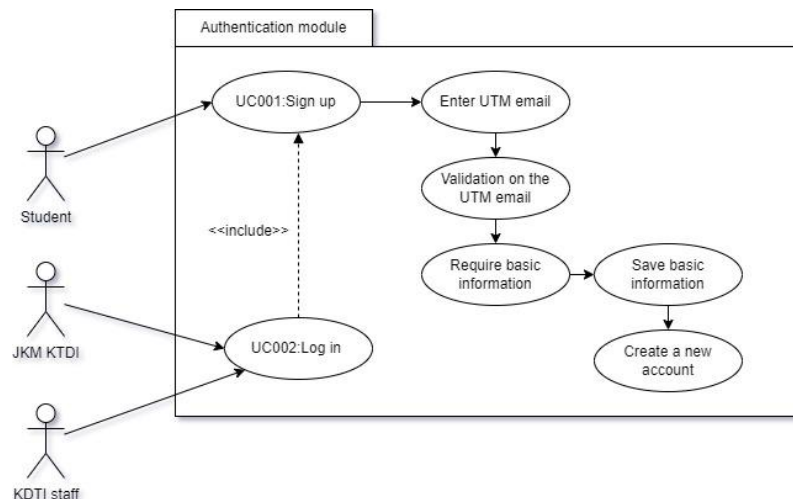


Figure X.X: Use Case Diagram for Authentication module

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

[Provide code for each use case such as UC001 and so on... Include Use Case Description for each use case as in the example below. If there are any alternative flows, add the rows accordingly. Otherwise, just remove the rows. Ensure each use case has its own unique ID and the name of the heading above corresponds to the name of use case in the use case diagram (refer to Figure X.X). Different scenarios of a use case require separate use case descriptions.]

Table 2.2.1: Use Case Description for Register account

Use case: Register account
ID: UC001
Actors: 1. Students
Preconditions: • Users must have UTM email as their email address for sign up.
Flow of events: 1. User will be in a login page of the system. 2. User clicks on the "Create new account", then one will be redirected to the Sign up Page. 3. User will need to fill their name, Matric number, 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.
Postconditions: • User successfully registered a new account. User can select a button to 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 be proceed

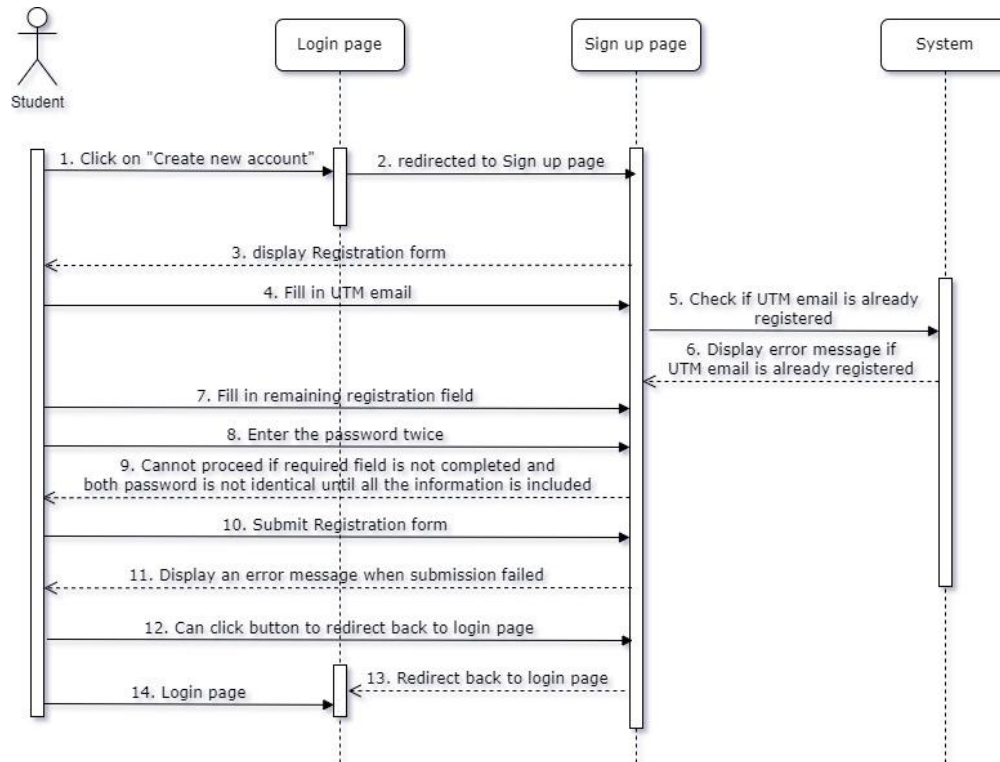


Figure 2.2.1.1: Sequence Diagram for Register account

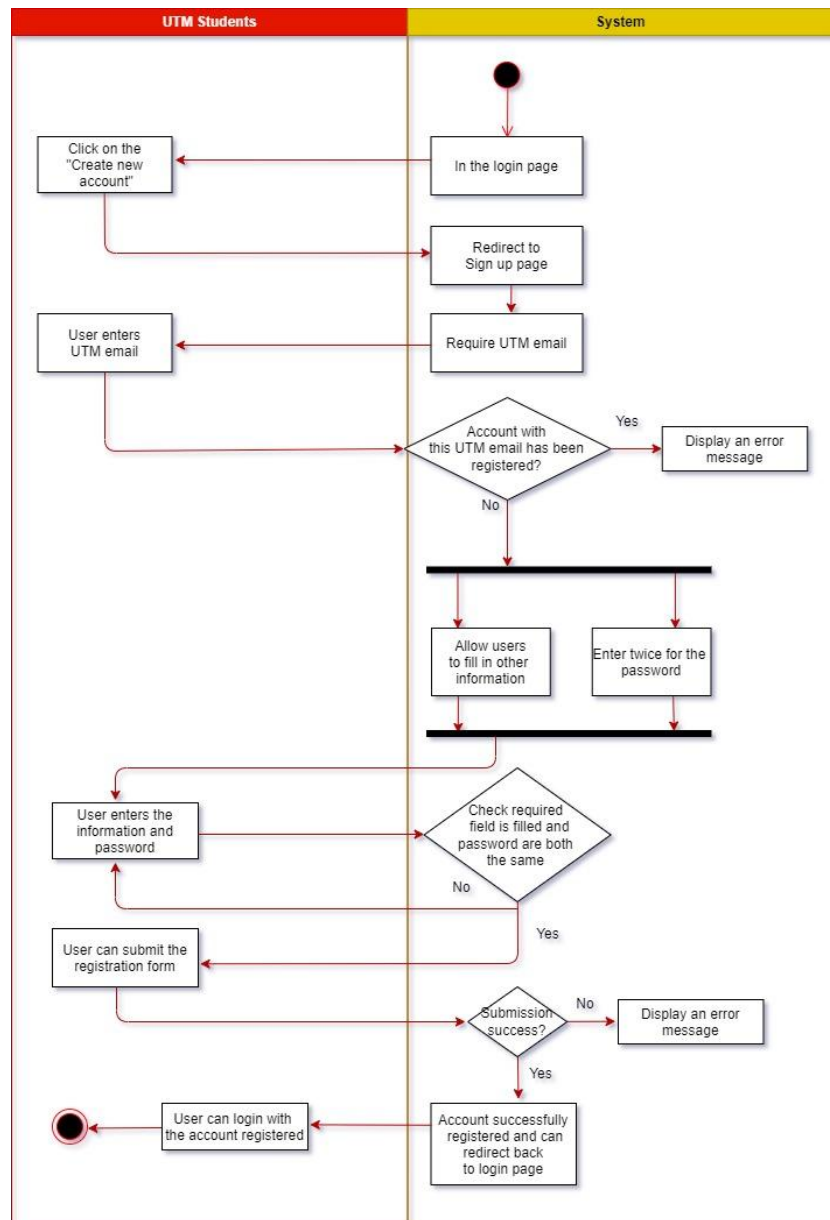


Figure 2.2.1.2: Activity Diagram of Register account

Example.

Use Case ID	UC01
Use Case Name	Register
Actor	1. UTM Student
Brief Description	This use case describes the process of registering for an account.
Pre-condition	Has active internet connection to the system
Normal Flow	<ol style="list-style-type: none"> 1. The use case starts when the user taps on “Create an account” at the login page. 2. System displays registration page containing registration form. 3. The user fills in the required details. 4. The user taps on “Sign Up”. 5. System validates the registration form. If the form is invalid, Exception 1 is followed. 6. System add the user account into user database. 7. System redirect user to home page. 8. The use case ends.
Exception Flow	<ol style="list-style-type: none"> 1. Invalid registration form <ol style="list-style-type: none"> 1.1. System displays error message

[Include system sequence diagram for each respective use case. See example below. May consider including different scenarios in different diagrams if necessary, to avoid clutter. Example as below.]

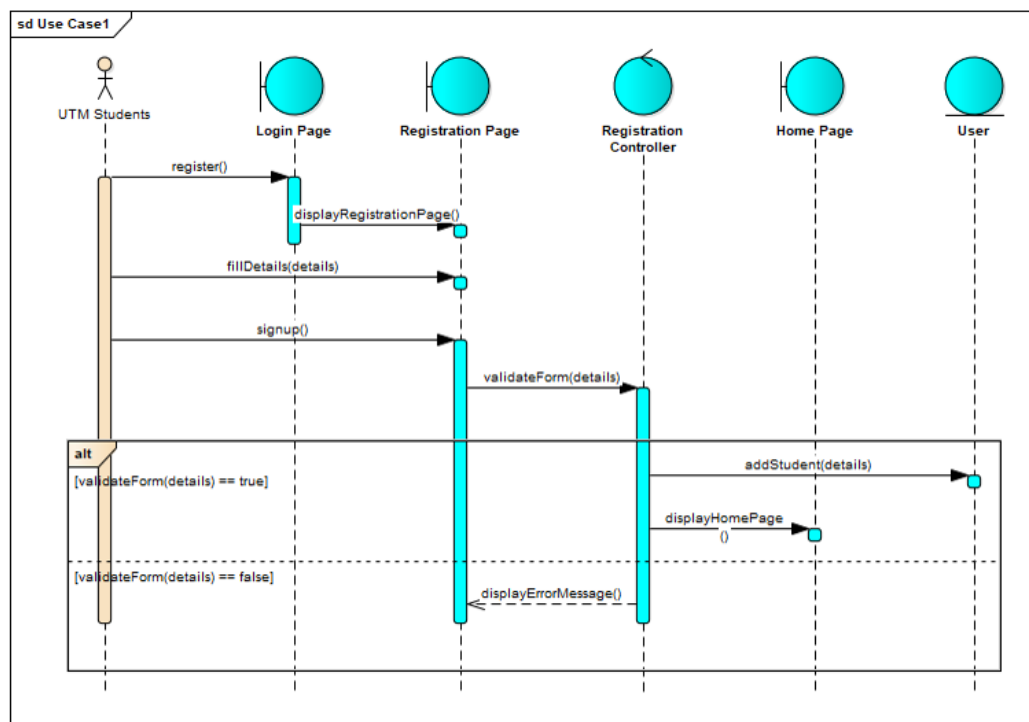


Figure X.X: Sequence Diagram for <Name of Use Case/Scenario if more than one scenario>

[Include activity diagram for each respective use case. See example below. May consider including different scenarios in different diagrams if necessary, to avoid clutter.]

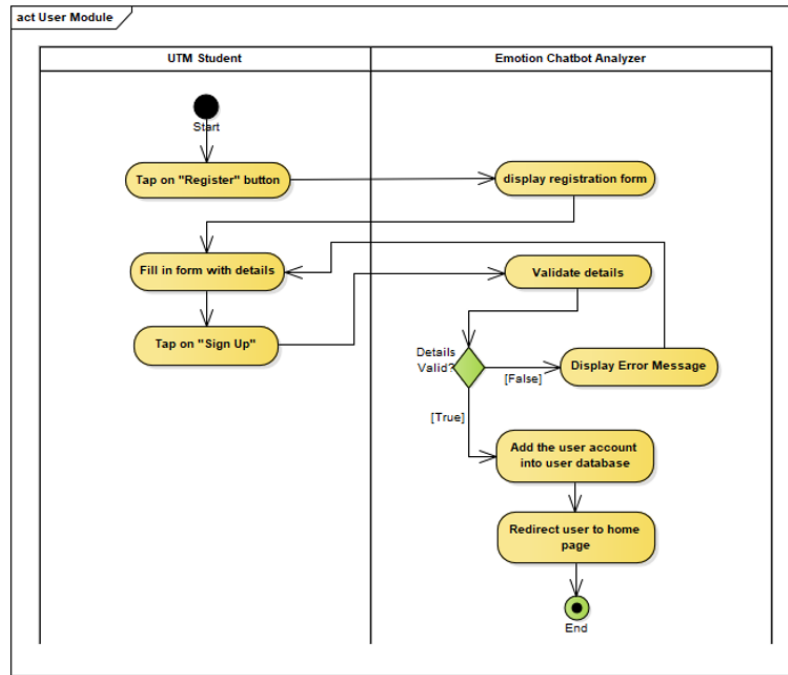


Figure X.X: Activity Diagram for <Name of Use Case/Scenario if more than one scenario>

2.2.2 UC002: Use Case Login

Table 2.2.2: Use Case Description for Login

Use case: Login
ID: UC002
Actors: <ol style="list-style-type: none"> 1. Student 2. JKM KTDI 3. KTDI staff
Preconditions: <ul style="list-style-type: none"> • 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: <ol style="list-style-type: none"> 1. The system presents the login page to the user. 2. User needs to enter their UTM email and password. 3. User clicks the "Login" button. 4. The system verifies the entered email address and password against the the stored user information

<ol style="list-style-type: none"> 5. If the user's role is "Student", the system grants access to the student dashboard. 6. If the user's role is "JKM KTDI" or "KTDI staff", the system grants access to the admin dashboard. 7. If the account is invalid, the system displays an error message indicating the issue. 8. The user can re-enter the email address and password.
<p>Postconditions:</p> <ul style="list-style-type: none"> • User is logged into the system successfully
<p>Alternative flow 1: Invalid Credentials</p> <ol style="list-style-type: none"> 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.
<p>Postconditions:</p> <p>The user successfully log in to the system</p>
<p>Exception flow : Error during validation</p> <ol style="list-style-type: none"> 1. System displays an error message when UTM email and password not matched or invalid 2. User is required to re-enter the correct email address and password

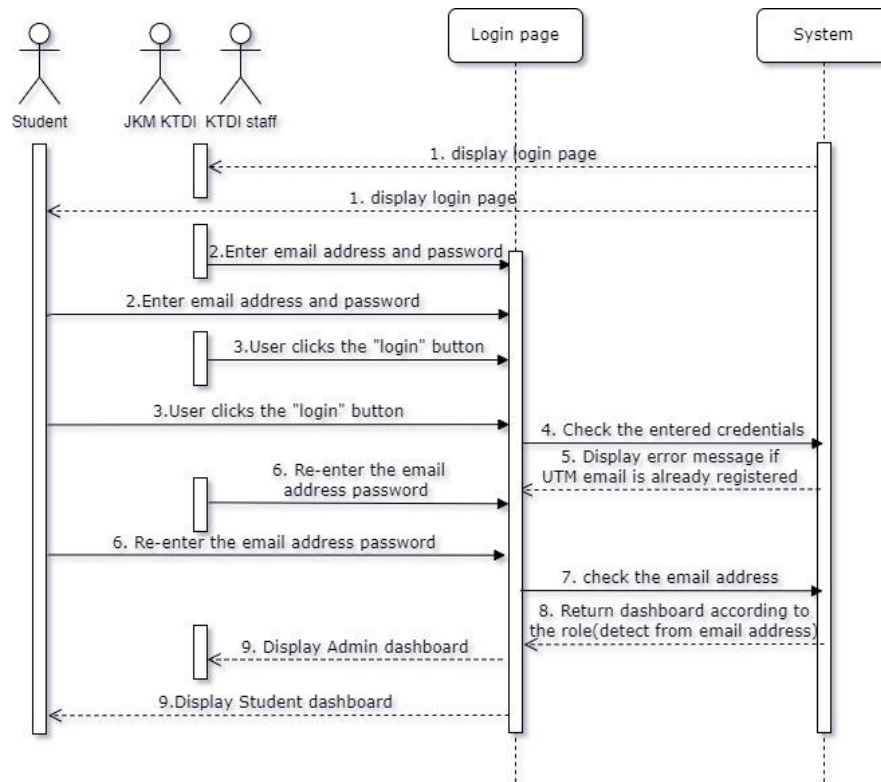


Figure 2.2.2.1: Sequence Diagram for Login

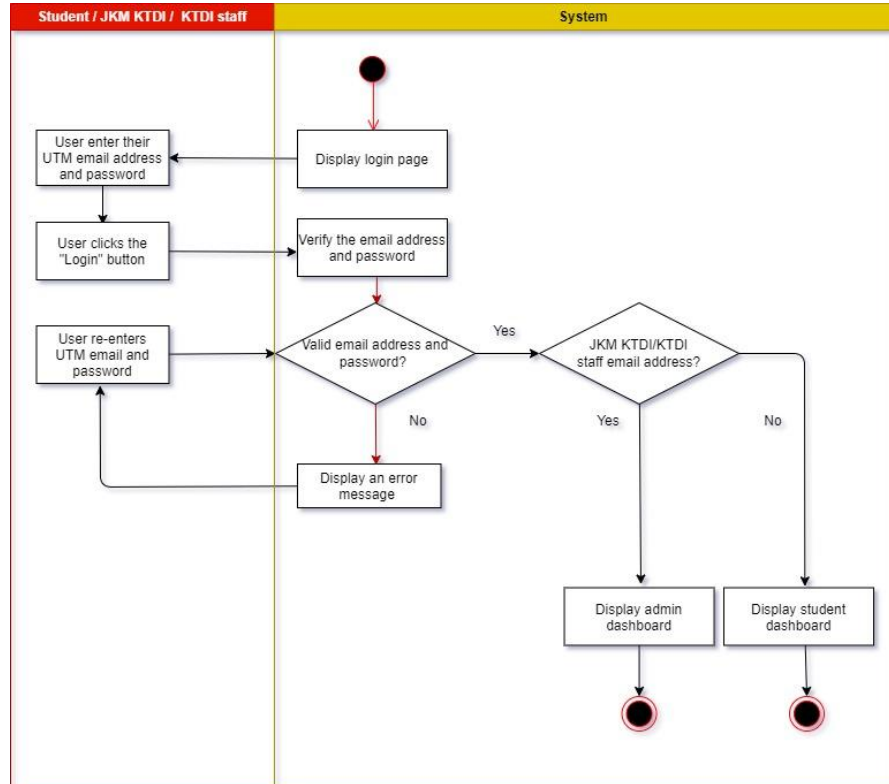


Figure 2.2.2.2: Activity Diagram of Login

2.2.3 UC003: Use Case Event calendar

Table X.X: Use Case Description for Event Calendar

Use case: Event Calendar
ID: UC003
Actors: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 1. The student, JKM KTDI or KTDI staff member is at the main page of the system. 2. The student, a JKM KTDI or KTDI staff member, pressed at the "Event Calendar" section. 3. The system displays the calendar of the semester. 4. The JKM KTDI is able to upload event details on the respective date of the event calendar. 5. The student, JKM KTDI or KTDI staff member is able to view by clicking on a specific date to view more detailed information. 6. The system displays the poster, event details, and event objectives. 7. From there, the student can register for the event by clicking on the registration link.
Postconditions: <ul style="list-style-type: none"> • The student, a JKM KTDI or KTDI staff member, has successfully viewed the events available for the semester in KTDI.
Alternative flow 1: No Events on Selected Date <ol style="list-style-type: none"> 3. In step 5, if no events are found, the system displays a message indicating that there are no events scheduled for that date. 4. The user can choose to select a different date or take other actions.
Postconditions: <ul style="list-style-type: none"> • 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.

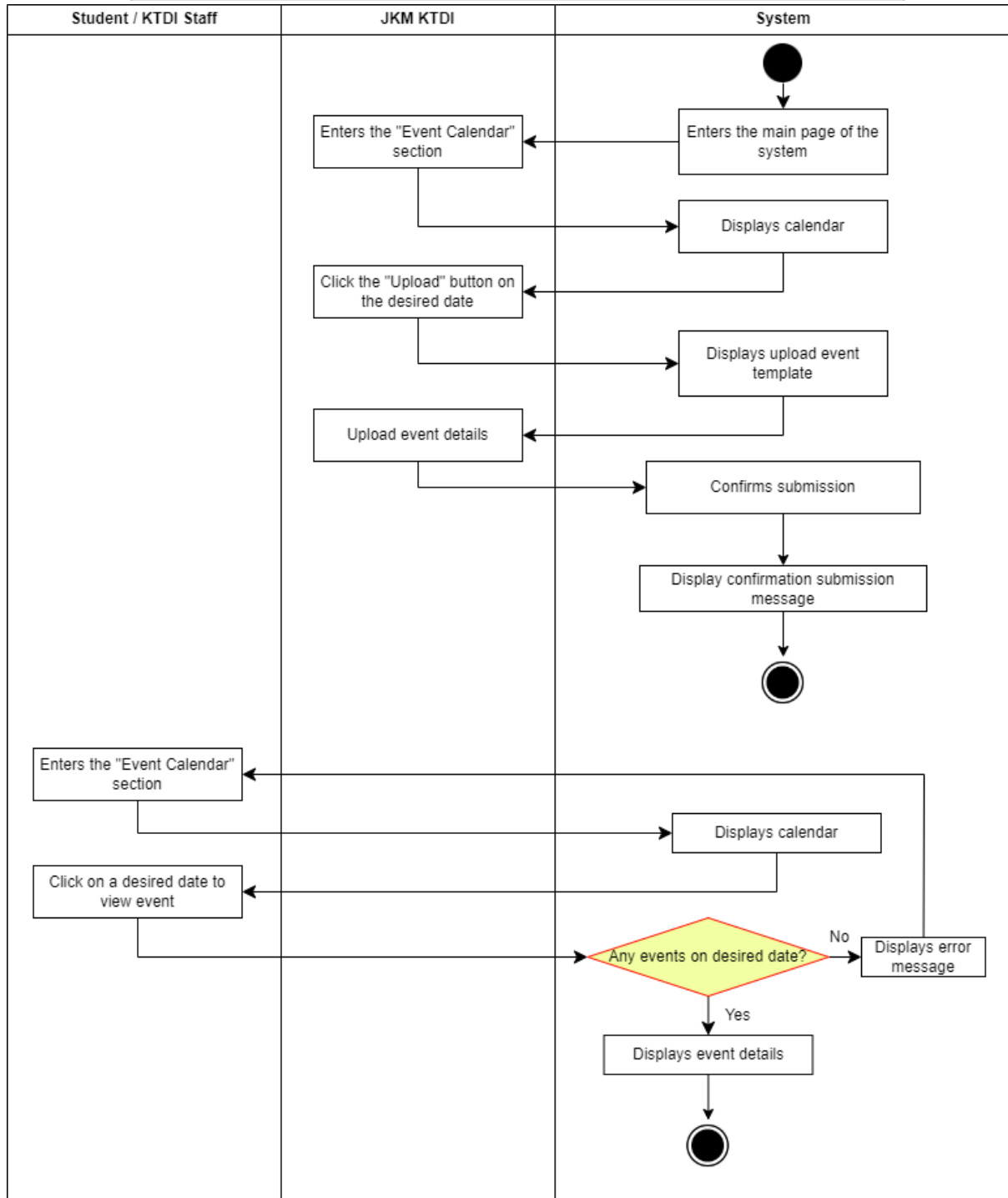


Figure X.X: Activity Diagram of Event Calendar Event

2.2.4 UC004: Use Case Task distribution

Table X.X: Use Case Description for Task Distribution

Use case: Task Distribution
ID: UC004
Actors: <ol style="list-style-type: none"> JKM KTDI
Preconditions: <ul style="list-style-type: none"> JKM KTDI members who are logged in and assigned to specific units for the event.
Flow of events: <ol style="list-style-type: none"> The assigned JKM KTDI navigates to the task distribution page of the system. 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 Accommodation, Sponsor. The assigned JKM KTDI selects their unit folder. The system displays a template for their unit update which includes, time date, comments, and uploading documents. The assigned JKM KTDI fills in all the required documents. The assigned JKM KTDI submits the update. The system confirms the successful upload and displays a confirmation message to the assigned JKM KTDI.
Postconditions: <ol style="list-style-type: none"> The documents are submitted into the system. The update is visible to other crew members and staff members.
Alternative flow 1: Unauthorised Access Attempt <ol style="list-style-type: none"> A JKM KTDI member who is not assigned to a particular unit attempts to access and edit the folders for that unit. The system recognizes the unauthorised access attempt. The system displays an error message informing the JKM KTDI member that they are not assigned to the unit and do not have permission to edit or access the folders.
Postconditions: <ul style="list-style-type: none"> The unauthorised JKM KTDI member is unable to edit or access the folders for the unit by displaying an error message

Alternative flow 2: Assigned JKM KTDI Member is Unable to Open Folder

1. An assigned JKM KTDI member attempts to open the folder for their assigned unit.
2. The system encounters an issue preventing the folder from being opened.
3. The system displays an error message indicating the inability to open the folder at the moment.
4. The JKM member goes back to the "Task Distribution" page.

Postconditions:

- The assigned JKM KTDI member is unable to open and edit the folder for their assigned unit.
- The assigned JKM KTDI member is notified about the issue and instructed to try accessing the folder again later. The system displays an error message.

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

1. The system detects the empty required field(s).
2. The system displays an error message indicating that the submission cannot be done due to the empty field(s).

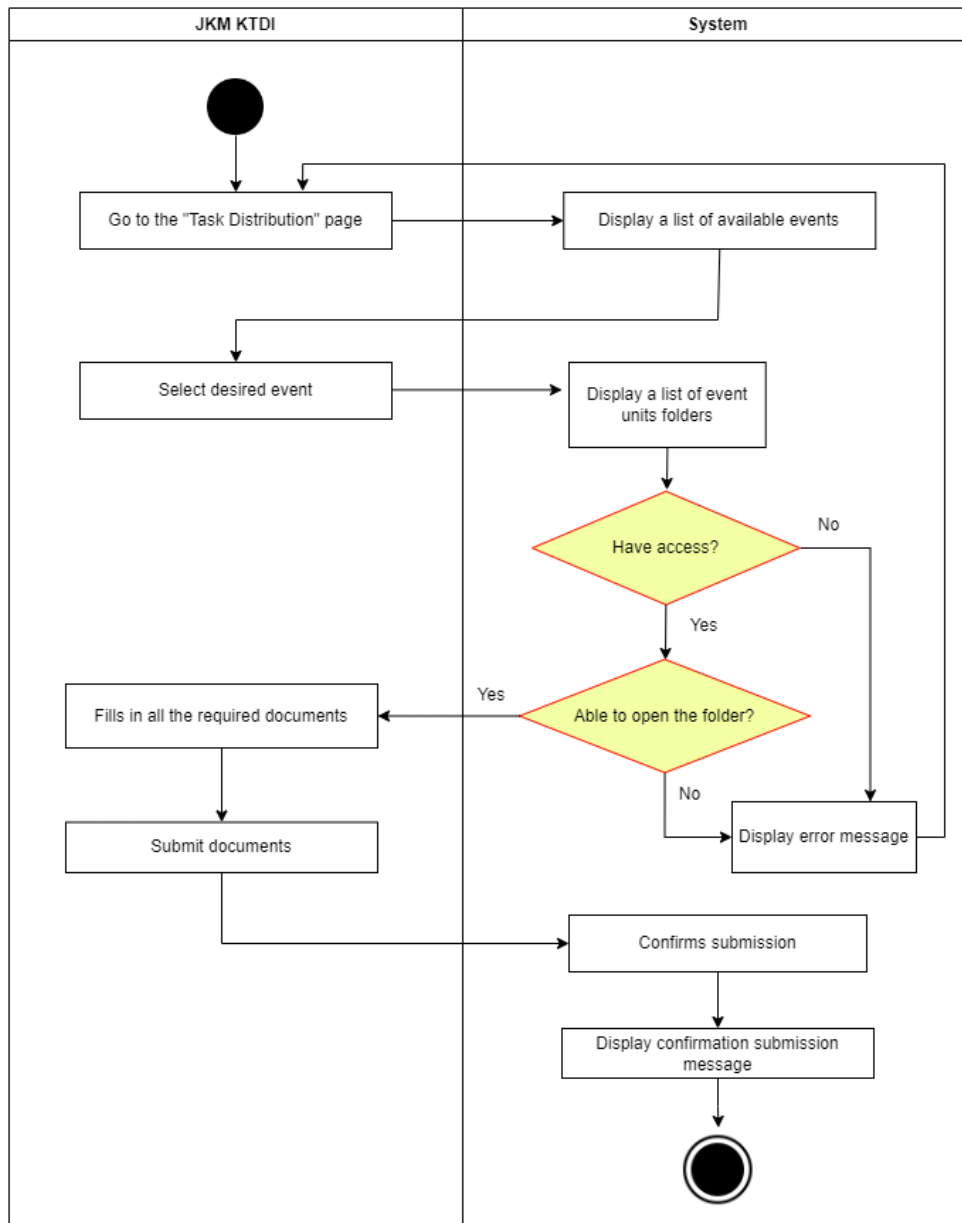


Figure X.X: Activity Diagram of Task Distribution Event

2.2.5 UC005: Use Case Upload registration link

Table X.X: Use Case Description for Upload registration link

Use case: Upload registration link
ID: UC005
Actors:

1. JKM KTDI
Preconditions: <ol style="list-style-type: none"> 1. JKM KTDI is logged in and assigned to the registration unit.
Flow of events: <ol style="list-style-type: none"> 1. The JKM KTDI navigates to the event registration page of the system. 2. The system displays a list of events of the semester. 3. The JKM KTDI selects the desired event from the list. 4. If the event is not ongoing or finished, the JKM KTDI uploads the registration link. 5. The uploaded registration link is now visible to the students for registration.
Postconditions: <ul style="list-style-type: none"> • The link is now visible to the students for registration.
Alternative flow 1: Event is ongoing or finished <ol style="list-style-type: none"> 1. In step 4, 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 "Event Registration" page.
Postconditions: <ul style="list-style-type: none"> • The JKM KTDI is unable to upload the registration link. • An error message is displayed indicating the invalid event selection.
Exception flow (if any): Required Field(s) is/are Empty <ol style="list-style-type: none"> 1. The JKM KTDI attempts to upload the registration link without providing the necessary information or link. 2. The system detects the empty required field(s). 3. The system displays an error message indicating that the upload cannot be completed due to the empty field(s). 4. The JKM KTDI is prompted to provide the required information or link before proceeding with the upload.

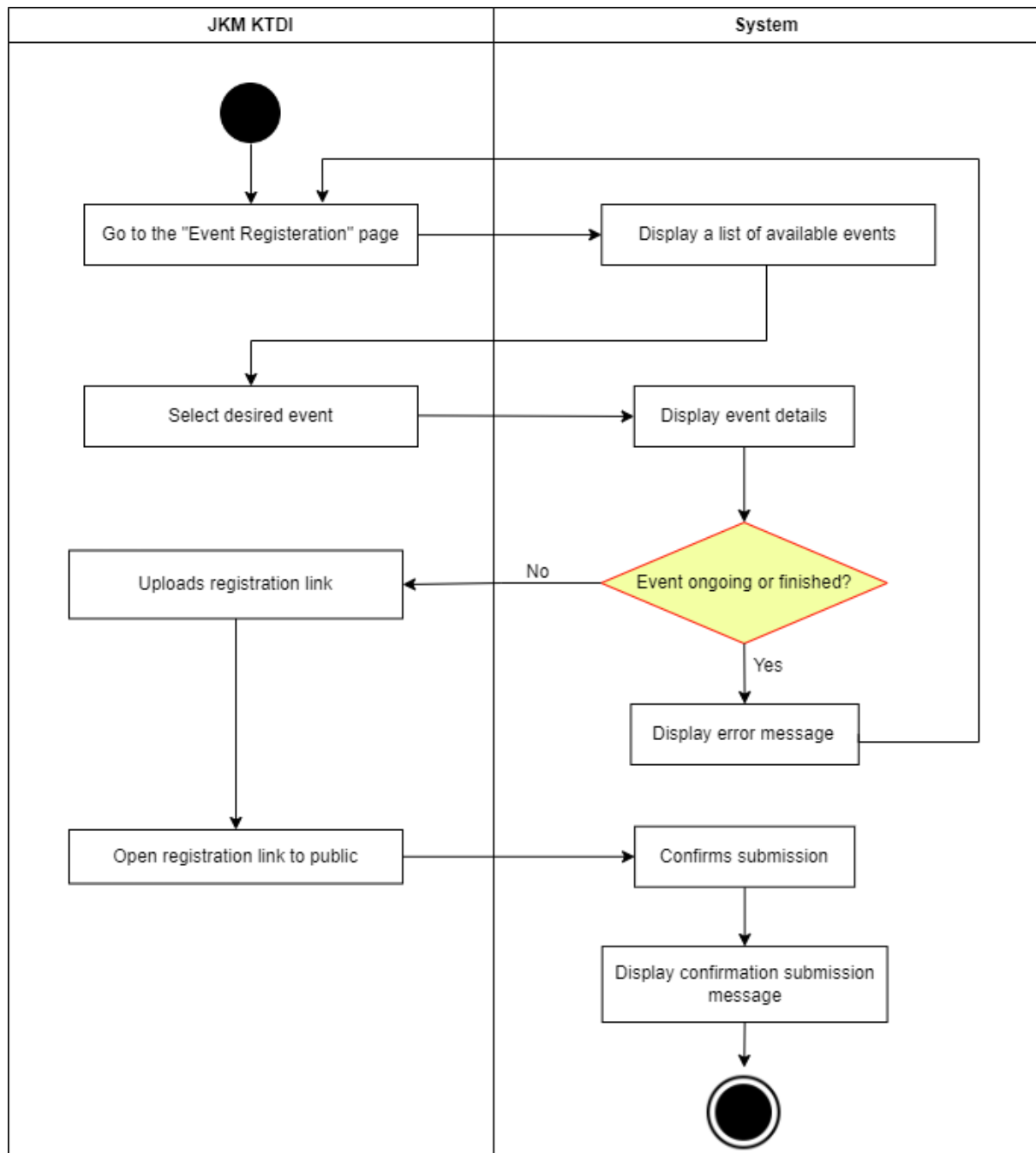


Figure X.X: Activity Diagram of Upload Registration Link Event

2.2.6 UC006: Use Case View progress

Table X.X: Use Case Description for View Progress

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

2. KTDI Staff
Preconditions: <ul style="list-style-type: none"> The JKM or KTDI staff member is logged into the event management system.
Flow of events: <ol style="list-style-type: none"> The JKM or KTDI staff member navigates to the event management section of the system. The system presents a list of events or a search functionality to locate the desired event. The JKM or KTDI staff member selects the specific event they want to view progress for. The system retrieves and displays a list of new updates made from JKM KTDI since the last progress. The JKM KTDI or KTDI staff member can click on a specific progress to view more details if available.
Postconditions: <ul style="list-style-type: none"> The JKM or KTDI staff has successfully viewed the progress for the selected event.
Alternative flow 1: Unable to Retrieve Progress <ol style="list-style-type: none"> In step 4, the system may encounter an error while retrieving the progress updates for the selected event. The system displays an error message indicating the inability to retrieve the progress at the moment. The JKM or KTDI staff member is instructed to try accessing the progress again later. The JKM or KTDI staff member is navigated back to the "Task Distribution" page.
Postconditions: <ul style="list-style-type: none"> The JKM or KTDI staff member is unable to view the progress of the event and receives an error message.
Exception flow (if any): Event Not Found <ol style="list-style-type: none"> In step 3, if the JKM or KTDI staff member selects an event that does not exist or is not available, the system displays an error message. The JKM or KTDI staff member is prompted to select a valid event from the available list.

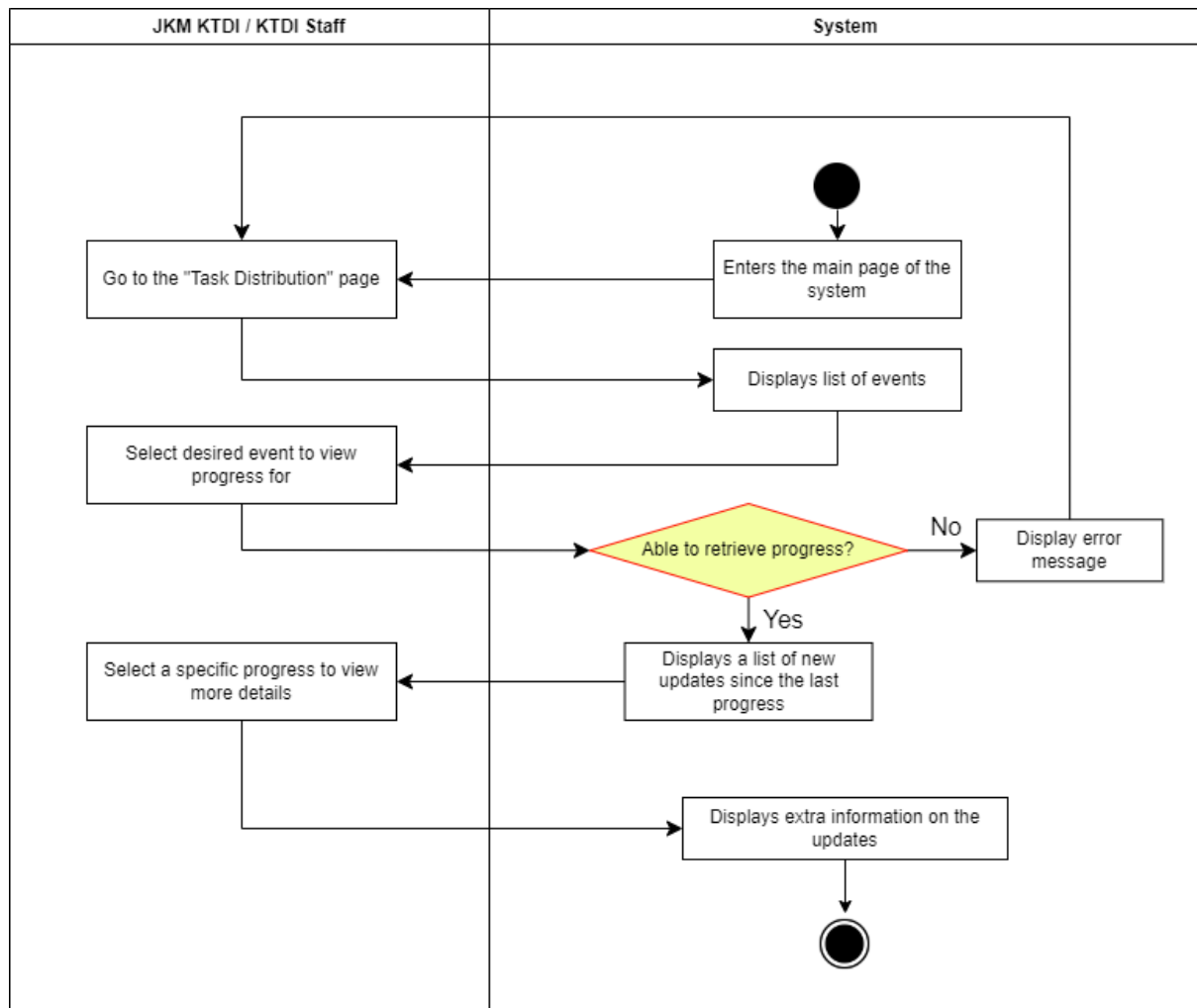


Figure X.X: Activity Diagram of View Progress Event

2.2.7 UC007: Use Case Register event

Table X.X: Use Case Description for Register Event

Use case: Register Event
ID: UC007
Actors: 1. Student
Preconditions: <ul style="list-style-type: none"> The student is logged into the event management system. The event registration period is open.
Flow of events: <ol style="list-style-type: none"> The student navigates to the event registration page of the system. The system displays a list of available events for registration. The student selects the desired event from the list. The system displays the event details, including date, time, location, and any specific requirements or instructions. The student fills in the required information. The student submits the event registration form.

7. The system confirms the successful registration and displays a registration confirmation message to the student.
Postconditions: <ul style="list-style-type: none"> • 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 event history or profile.
Alternative flow 1: Event Registration Full <ol style="list-style-type: none"> 1. In step 5, if the event has reached its maximum capacity or all available slots are filled, the system displays a notification indicating that the event is full. 2. The students go back to the event registration section.
Postconditions: <ul style="list-style-type: none"> • The student is not registered for the event. • The system does not update the event registration count or availability.
Exception flow (if any): Required field(s) is/are empty <ol style="list-style-type: none"> 1. An error message will be displayed by the system 2. Submission cannot be proceed

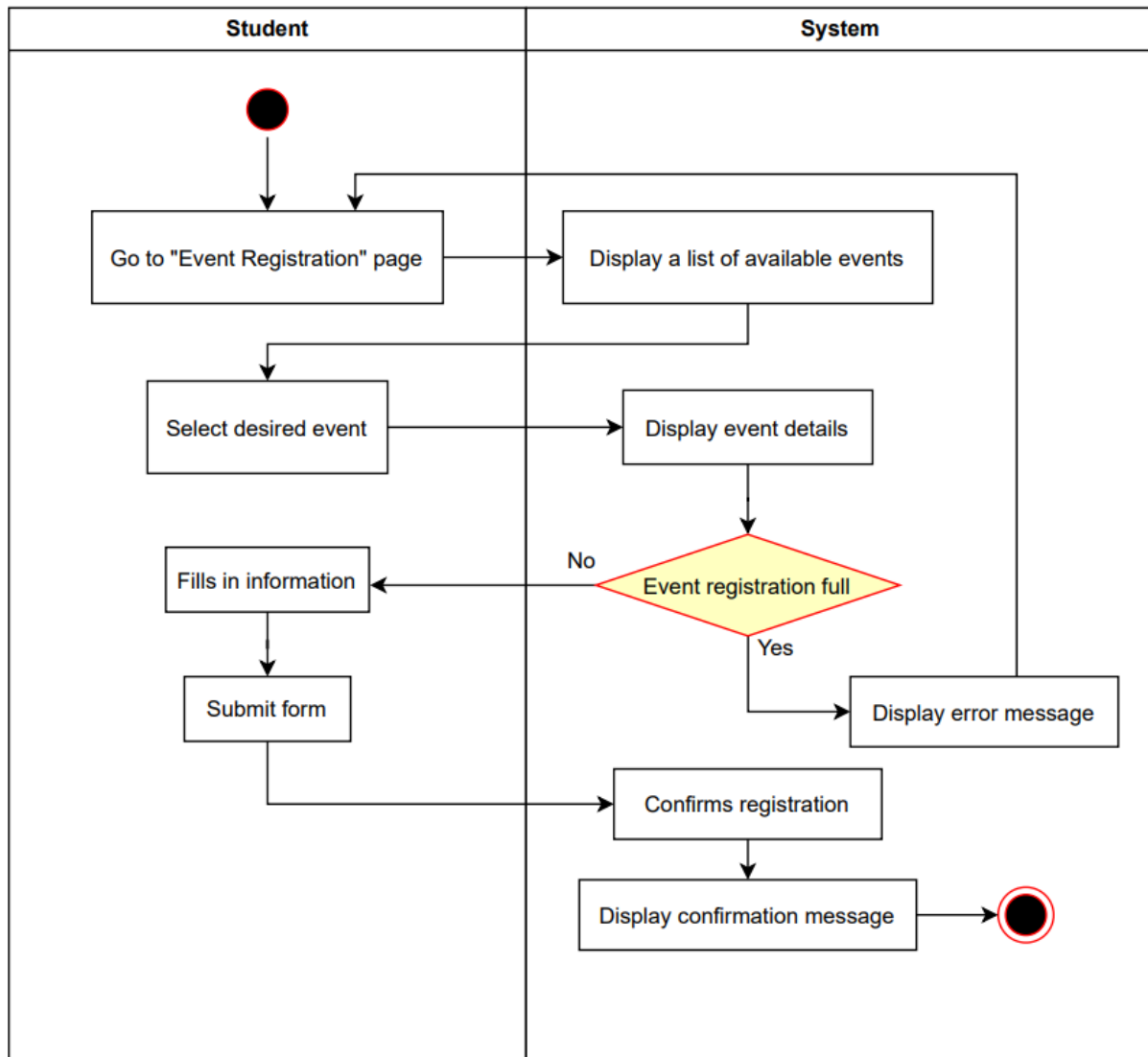


Figure X.X: Activity Diagram of Register Event

2.2.8 UC008: Use Case View Registration

Table X.X: Use Case Description for View Registration

Use case: View Registration
ID: UC008
Actors: <ol style="list-style-type: none"> JKM KTDI KTDI Staff
Preconditions: The JKM or KTDI staff member is logged into the event management system.
Flow of events: <ol style="list-style-type: none"> The JKM or KTDI staff member navigates to the event management section of the system.

<ol style="list-style-type: none"> The system presents a list of events or a search functionality to locate the desired event. The staff member selects the specific event they want to view registrations for. The system retrieves and displays a list of registered students for the selected event, including their names, contact information, and any additional details provided during registration. The staff member can sort or filter the registration list based on different criteria such as name, registration date, or other relevant parameters. The staff member can click on a specific student's registration to view more detailed information if available. If needed, the staff member can download or export the registration data for further analysis or record-keeping purposes.
Postconditions: <ul style="list-style-type: none"> The JKM or KTDI staff member has successfully viewed the registrations for the selected event. The staff member can access and utilise the registration data as necessary.
Alternative flow 1: No Registrations Found <ol style="list-style-type: none"> In step 4, if no students have registered for the selected event, the system displays a message indicating that there are no registrations found. The staff member can choose to either search for another event or proceed with other tasks.
Postconditions: <ul style="list-style-type: none"> The staff member is aware that no registrations have been made for the selected event. The system does not display any student registration details.
Exception flow (if any): Event Not Found <ol style="list-style-type: none"> In step 3, if the JKM or KTDI staff member selects an event that does not exist or is not available, the system displays an error message. The staff member is prompted to select a valid event from the available list.

2.2.9 UC009: Use Case Upload Attendance & Feedback Link

Table X.X: Use Case Description for <Name of Use Case>

Use case: View Attendance & Feedback
ID: UC011

Actors:
Preconditions:
Flow of events:
Postconditions:
Alternative flow <i>n</i>:
Postconditions:
Exception flow (if any):

2.2.10 UC010: Use Case Fill Attendance & Feedback

Table X.X: Use Case Description for <Name of Use Case>

Use case: View Attendance & Feedback
ID: UC011
Actors:
Preconditions:
Flow of events:
Postconditions:
Alternative flow <i>n</i>:
Postconditions:
Exception flow (if any):

2.2.11 UC011: Use Case View Attendance & Feedback

Table X.X: Use Case Description for View Attendance And Feedback

Use case: View Attendance & Feedback
ID: UC011
Actors:

<ol style="list-style-type: none"> 1. JKM KTDI 2. KTDI Staff
<p>Preconditions:</p> <ul style="list-style-type: none"> • The registration link is uploaded and visible to the students. • The JKM or KTDI staff member is successfully logged into the event management system.
<p>Flow of events:</p> <ol style="list-style-type: none"> 1. The JKM or KTDI staff member logs into the event management section of the system using their credentials. 2. The system presents a list of events or a search functionality to locate the desired event. 3. The JKM or KTDI staff member selects the specific event for which they want to view attendance and feedback. 4. The system retrieves and displays the attendance details for the selected event, including the list of students who attended the event and their respective attendance status. 5. The system also provides an option for the JKM KTDI or KTDI staff member to access the feedback submitted by students for the selected event, including the comments and ratings. 6. The JKM or staff member can sort or filter the data based on different criteria such as date, student name, or specific feedback keywords. 7. The JKM or staff member can generate reports summarising attendance and feedback data for further analysis and record-keeping purposes.
<p>Postconditions:</p> <ul style="list-style-type: none"> • 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.
<p>Alternative flow 1: No attendance and feedback can be found.</p> <ol style="list-style-type: none"> 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.

<p>2. The JKM or staff member can choose to either continue viewing the attendance and feedback of another event or proceed to other tasks.</p>
<p>Postconditions:</p> <ul style="list-style-type: none"> • 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.
<p>Exception flow (if any): Event not found</p> <ol style="list-style-type: none"> 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.

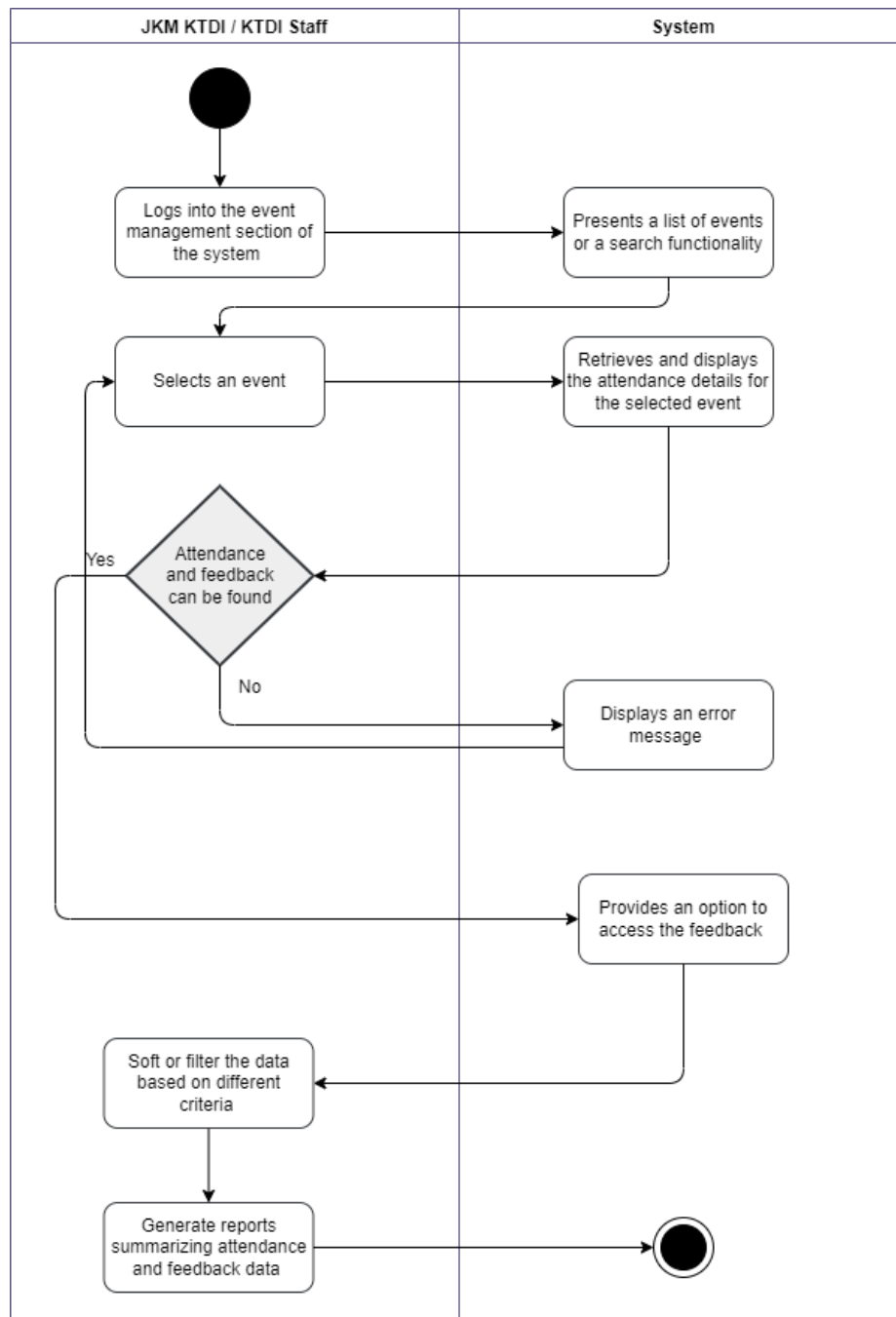


Figure 2.2.11: Activity Diagram of View Attendance And Feedback

2.2.12 UC012: Use Case View Profile

Table 2.2.12: Use Case Description for View Profile

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

2. KTDI Staff 3. Student
Preconditions: <ul style="list-style-type: none"> The JKM or KTDI staff member is successfully logged into the event management system.
Flow of events: <ol style="list-style-type: none"> The JKM or KTDI staff member logs into the event management section of the system using their credentials. The system presents a navigation bar with Home, Calendar, Task, Active Quota and Profile for JKM KTDI and KTDI staff, meanwhile Home, Calendar and Profile for students. The JKM, KTDI staff member or students can click on Pro The JKM or KTDI staff member calculates the active quota for each student in different categories by summing the marks for each attendance record. The high committee, crew and participants will get different marks. The calculated active quota is compared against the defined quota limit. If the student's active quota is within the limit, it indicates that they have successfully reached the allowed attendance threshold and entered the same college in the following semester of the year. If the quota is below the limit, the student has not yet reached the attendance requirement. The system triggers actions or notifications to notify them of their achievement whenever the active quota for every student is updated. The JKM KTDI or KTDI staff member updates and stores the quota status for each student, including the points they get from the attended event in the system. The JKM KTDI or KTDI staff will repeat the above flow of events for subsequent events and continuously calculate and update the active quota based on the students' participation through the system.
Postconditions: <ul style="list-style-type: none"> The JKM or KTDI staff member has successfully calculated and updated the active quota status for each student involved. The student gets notified about their updated active quota status.

Alternative flow 1:Students attendance not found.

1. In step 4, if JKM or KTDI staff member selects a student who did not attend any event yet, the system will not display any attendance data.
2. The JKM or staff member prompts to either continue viewing the other students' attendance data for calculating active quota purposes or proceed to other tasks.

Postconditions:

- The system does not display any attendance data and event details for the selected student.
- The JKM or staff member is aware that no event has been participated by the selected student.

Exception flow (if any):

1. In step 4, the JKM KTDI or KTDI staff found that some events attended by the selected student are unable to use them for calculating active quota.
2. JKM KTDI or KTDI staff is prompted to skip those events and continue the other event.

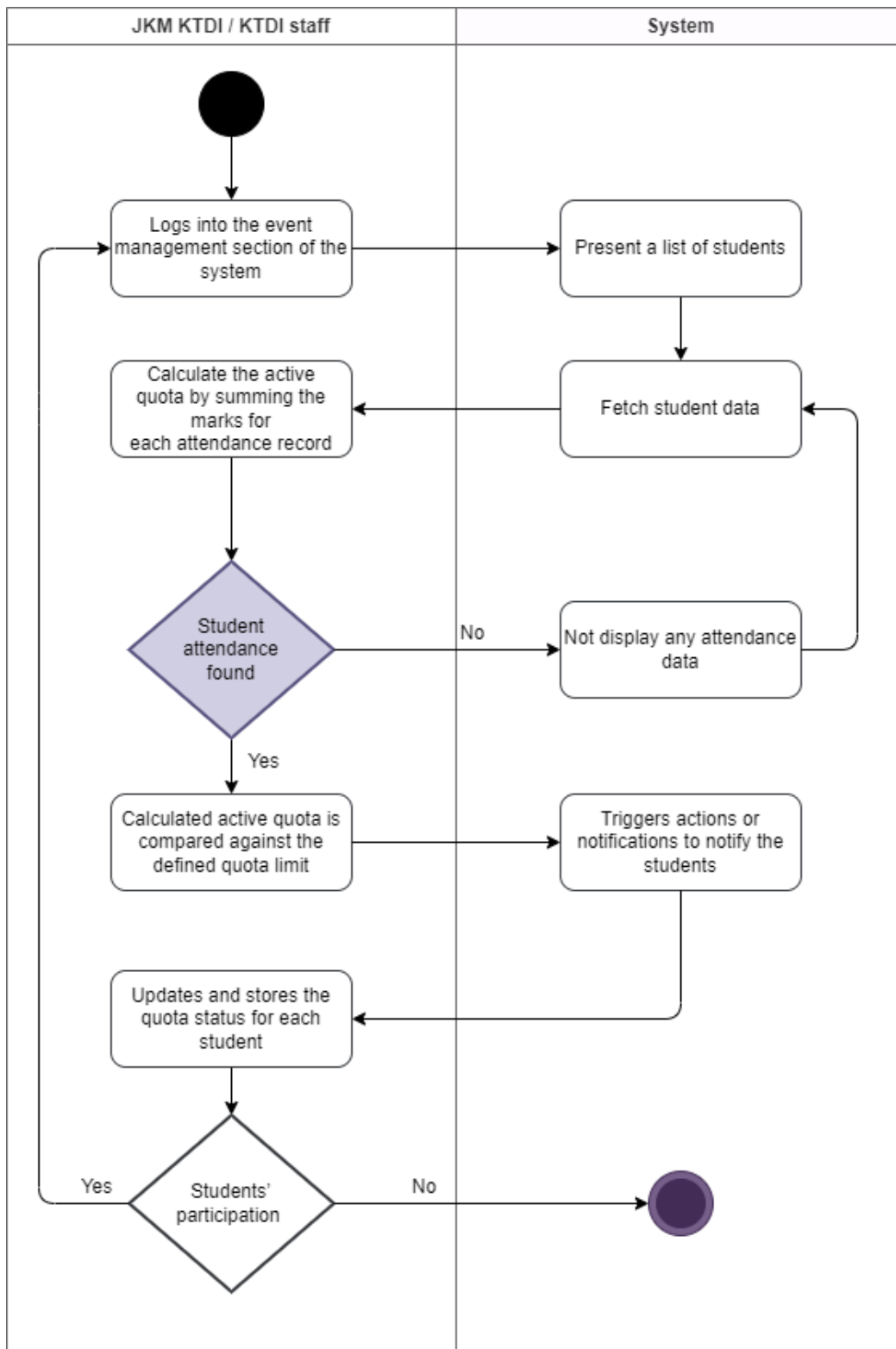


Figure 2.2.12: Activity Diagram of Calculate Active Quota

2.2.13 UC013: Use Case View Active Quota

Table 2.2.13: Use Case Description for View Active Quota

Use case: View Active Quota
ID: UC013
Actors: <ol style="list-style-type: none"> 1. JKM KTDI 2. KTDI Staff 3. Student
Preconditions: <ul style="list-style-type: none"> • The students, JKM and KTDI staff members are successfully logged into the event management system. • The JKM or KTDI staff member has made the active quota status visible to the students.
Flow of events: <ol style="list-style-type: none"> 1. The student, JKM or KTDI staff member logs into the event management section of the system using their credentials. 2. The student, JKM or KTDI staff member navigates to the section of the system that provides access to the active quota information. 3. The system retrieves and displays the calculated active quota information, including the total quota, progress towards the quota, and any additional details or metrics related to the active quota. 4. The student, JKM or KTDI staff member may have the option to interact with the active quota information by drilling down into specific events or time periods. 5. Once the user has finished viewing the active quota, they may choose to log out of the system or continue using other tasks through the system.
Postconditions: <ul style="list-style-type: none"> • The student, JKM or KTDI staff member has successfully viewed the active quota status. • The student gets to know their current active quota status and can take intermediate action if needed.
Alternative flow 1: No Active Quota defined. <ol style="list-style-type: none"> 1. In step 3, if the student did not attend any event, the system will display an error message, indicating that no active quota is currently assigned or applicable.

<p>2. The student can proceed to log out or continue with other tasks, meanwhile the JKM or KTDI staff member can choose to either continue viewing other student active quota status or continue with other tasks.</p>
<p>Postconditions:</p> <ul style="list-style-type: none"> • The student is aware that no active quota is available as no valid event is attended.
<p>Exception flow (if any):Student access denied.</p> <ol style="list-style-type: none"> 1. In step 3, if the student is unable to view the active quota status, the system displays an error message, indicating that the status isn't visible to the student yet and it is still under the process. 2. The student can choose to either log out of the system and try again after a period of time or proceed to other tasks.

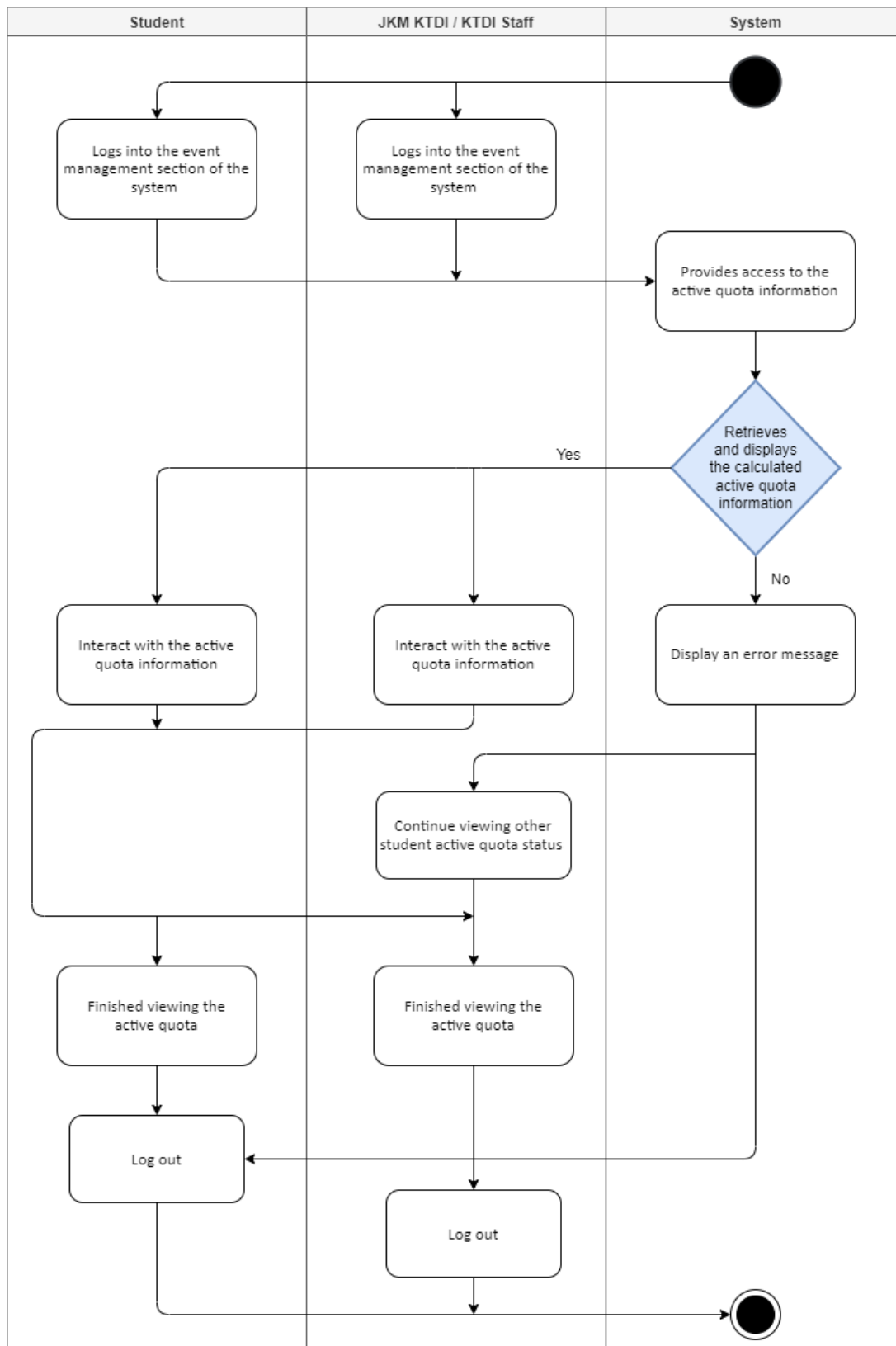


Figure 2.2.13: Activity Diagram of View Active Quota

2.3 Software System Attributes, Performance and Other Requirements

2.3.1 Software System Attributes

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.

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.

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.

SSA4 Portability Requirements

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

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

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.

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.

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.

PR 4 Scalability

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

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

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.

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

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.

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.

DS3 Compatibility constraints

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

DS4 Scalability constraints

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