Software Requirements Specification

for

PETAKOM Management System

Version 2.0 approved

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Group 2

4/2/2023

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Revision History

Name	Date	Reason For Changes	Version
Hazmi Hazim	15/1/202	Requirement cannot be apply in the code	2

1. Introduction

1.1 Purpose of Document

The purpose of this document is to offer a detailed outline of the software requirements for the PETAKOM management system. The system includes several features that could aid PETAKOM in organising and administering PETAKOM activities such as bookkeeping, MT voting, and etc. This system gives users the ability to search for the most recent news and elections, while also offering current information about PETAKOM's operations.

The primary purpose of the software requirement specification (SRS) is to provide developers teams and stakeholders with vital information regarding the PETAKOM management system project's system structure, standards, and requirements. This document describes the functional and quality requirements, limitations, and standards for the system so that the developer team and stakeholders may understand how the system should function. This document also contains information regarding the design technique utilised to achieve the satisfaction of the stakeholders.

1.2 System Identification

System Name : PETAKOM Management System
Document ID Format : SRS-PTK-XXXXXXXX-VXX-XXX
Document ID : SRS-PTK-2022XXXXXX-V01-001
Abbreviations :-

1. SRS - Software Requirement Specification
2. PTK- PETAKOM
3. V01 - Version 1

This document will be recorded in the format of "SRS-PTK-XXXXXXXX-VXX-XXX". The first abbreviation in the format stands for Software Requirement Specification. The second abbreviation stands for PETAKOM. The 8 alphabet (X) stands for the final date of this document completed. The date is formatted as standard format in ISO8601 which is "YYYYMMDD". For example, "20220925" is the date of the document completed in the year 2022, twenty-fifth of September. The third abbreviation "VXX" stands for the Version number of the document. For instance, "V01" stands for version 1. The last alphabet "XXX" stands for the number of this document released. For example,"001" means that this document is released one only.

Use Case ID Format : UC-PTK-XXX
Use Case ID : UC-PTK-100
Abbreviations :-

1. UC - Use Case
2. PTK - PETAKOM

The use case in this document will be recorded in the format of "UC-PTK-XXXX". The first abbreviation "UC" stands for the use case. The second abbreviation"PTK" stands for PETAKOM. Lastly, the three alphabet "XXX" stands for the use case number. For example," 100" stands for use case 1.

Requirement ID Format : RQ-PTK-XXX
Requirement ID : RQ-PTK-100
Abbreviations :-

1. RQ - Requirement
2. PTK - PETAKOM

The requirement in this document will be recorded in the format of "RQ-PTK-XXXX". The first abbreviation "RQ" stands for the requirement. The second abbreviation"PTK" stands for PETAKOM. Lastly, the three alphabet "XXX" stands for the requirement number. For example," 100" stands for requirement 1.

1.3 System Overview

The PETAKOM management system consists of six modules that offer assistance to both the user and the administrator. These six modules consist of handling student and lecturer registration, PETAKOM activities management, annual calendar management, reporting and activity proposal generation, committee election and registration management, and PETAKOM and faculty bulletin management.

The system begins with the users registering an account and ensuring that they can log in. The database will save all information, including the username and password. Then, a PETAKOM committee will record all activities to maintain a record of what has been accomplished. Next, the system generates reporting and activity proposal summaries for the committee to review. Aside from that, the committee election procedure, including committee registration, will occur. The system facilitates committee announcements by displaying PETAKOM and faculty bulletin on the system's homepage.

The system allows users to make a registration for the coordinator. Coordinator can register their account by entering their staff ID, email and password. Then, all users (Student, Lecturer, Dean, Coordinator, PETAKOM Committee, and Head of Student Development) need to log in to their account by using their ID and password registered. As for the user profile, users can update, view and edit their profile such as change name, address, and mobile phone number. There is also a forgot password function where users can reset their password. Users need to enter their personal email address and the system will send the reset link to the email entered.

The second module is about managing the PETAKOM activities in the system. Students, lecturers and PETAKOM committee can propose their desired activities through the Activities tab in the landing page. From here, they can fill all the necessary information about the activities that they proposed such as date and time, club name, advisor club, organizer, type of application (individual or club), type of activity (social interaction, festival, competition,etc..), total participants, venue, activity duration and budget. For an exception, only the PETAKOM committee can update and delete the activity proposal while others can only create and view the activity proposal. After completing the form, they can submit the form by clicking on the Submit button. Next, the proposed activities must be approved by the coordinator, dean and Head of Student Development.

Third module is about managing the calendar in the system. The PETAKOM committee updates semester dates, final exams, public holidays, annual activities, and adds and deletes dates. In addition to adjusting the dates after the approval of the proposed activities by the coordinator, dean, and head of student development, students and lecturers can follow the activities and dates of the events.

This module will be focused on generating the report for the system. This module will be used by multiple users, such as the Coordinator, PETAKOM Committee, the Dean of the faculty, and the Head of the Student Development. This module will focus on the reporting aspects of the event by generating a feedback form that can be submitted by the participants of the event that is handled by the PETAKOM organisation. The PETAKOM Committee will be the one that created the form first and can be seen by the Coordinator, Dean, and the Head of Student Development. The PETAKOM Committee are the only users that can create and update the form.

Module number 5 enables students to conduct votes and elections securely. Students are empowered to suggest who should be the representative for the Petakom committee. The voting system will protect the integrity of our votes by prohibiting voters from voting multiple times. A secure voting tool that allows the Petakom committee and Coordinator to collect input from the election results and closely examine the results in real-time. The Head of the Student Development will approve the new representative after the voting session. In conclusion, students are participating in the democratic process by voting. Students elect leaders to represent them and their ideas, and the leaders advocate on their behalf.

The sixth module focuses on delivering the most recent PETAKOM and faculty bulletin information. PETAKOM has a great deal of new material that must be shared with students and lecturers. In order to effectively convey the most recent information with students and lecturers, the system provides a platform for the committee to write and display bulletins on the homepage. The system provides a bulletin form that the committee must complete and confirm for publication. A list of created bulletins is provided for the committee to review, and they have the ability to update and delete bulletins at any time. On the homepage for students and lecturers, the system displayed all committee-created bulletins. Therefore, students and lecturers can readily get the most recent information regarding PETAKOM and faculty bulletin.

1.4 References

1. PETAKOM. (n.d.). Retrieved from https://fk.ump.edu.my/index.php/ms/others/staff-student/petakom
2. What Is A Wireframe? Everything You Need To Know (And More). Retrieved from https://careerfoundry.com/en/blog/ux-design/what-is-a-wireframe-guide/
3. The Collaborative Interface Design Tool. Figma. (n.d.). Retrieved from https://www.figma.com/.
4. Flowchart Maker & Online Diagram Software. (n.d.). Retrieved, from https://app.diagrams.net/

2. Overall Description

2.1 Product perspective

PETAKOM Management system is a system in which users provide and gain information to and from the system. There are six external users that manipulate the data into and from PETAKOM which are Student, Lecturer, Dean, Coordinator, PETAKOM Committee, and Head of Student Development. These six external entities display in the data flow of the context diagram.

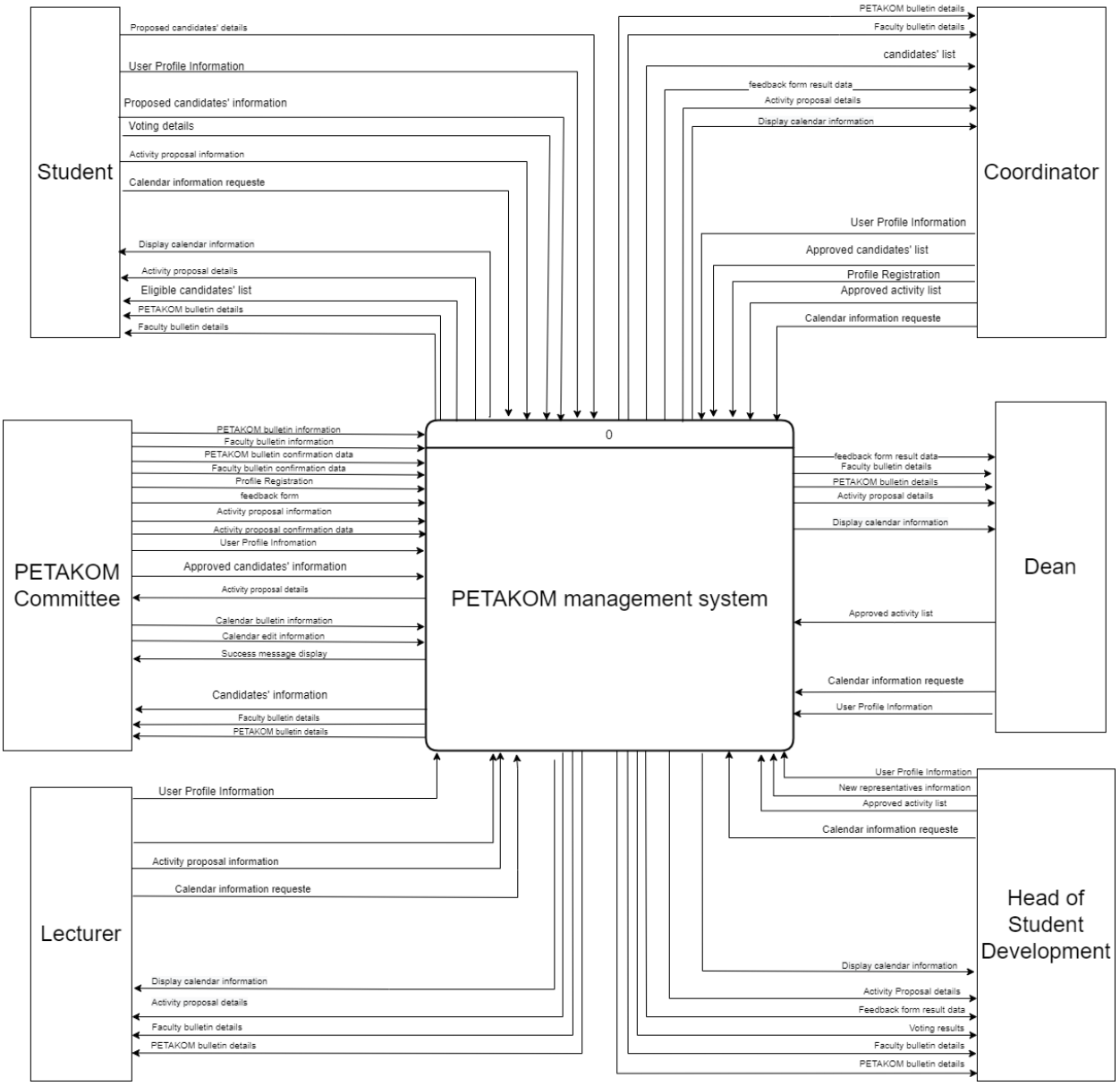


Figure 1.0 Context Diagram

2.2 Product Functions

This figure shows the use case diagram of the PETAKOM Management System. There are 7 use cases identified, which are:

- Authentication
- Manage User Profile
- Manage PETAKOM activities
- Manage calendar
- Generate report and activity proposal
- Manage committee election
- Manage PETAKOM and faculty bulletin

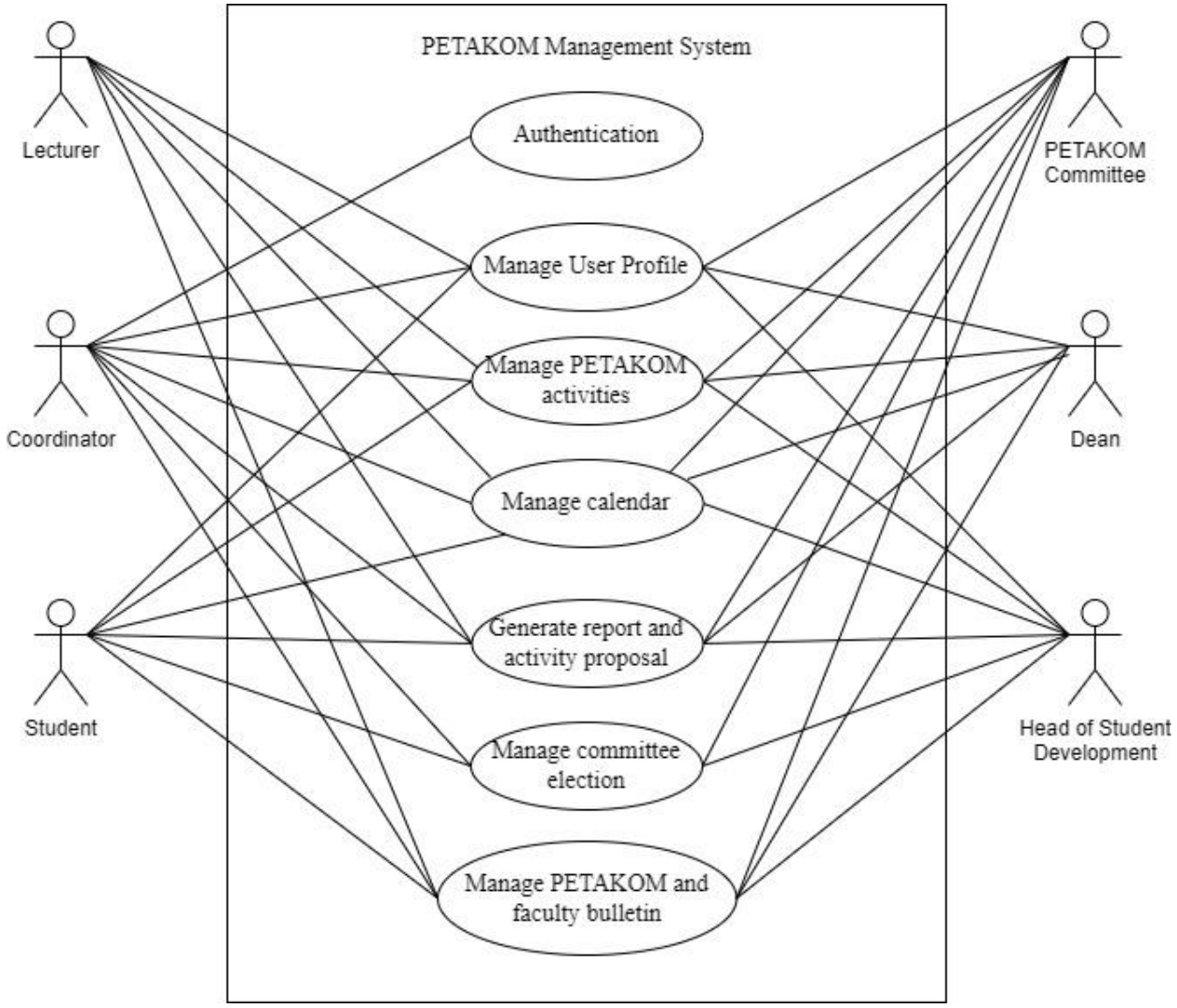


Figure 2.0 Use Case Diagram

3. Detail Requirements Description

3.1 Software Product Features

3.1.1 Authentication (HAZMI HAZIM CB20117)

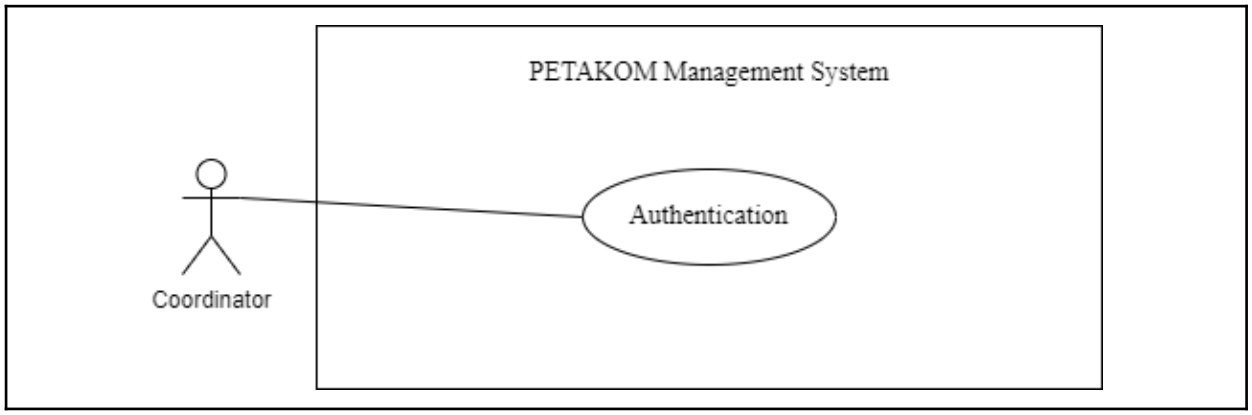


Figure 2.1 Use Case Diagram For Authentication

Table 1.0 Use Case Description For Authentication

Use Case ID	UC-PTK-100
Brief Description	This use case is used to coordinator register their account to manage all the PETAKOM activity.
Actor	Coordinator
Pre-Conditions	The system is in home page.
Basic Flow	1. The use case starts when users clicks <<Register>> button in the login page. **[RQ-PTK-100]** 2. The user enters their staff ID, email, and password. [R1: Password requirement] **[RQ-PTK-101]** 3. The user clicks <<Register>> button. **[RQ-PTK-102]** 4. The system checks the staff ID and password. [E1: Registration Failed] 5. The system saved the data entered. 6. The system display message. 7. The user click <<Login>> button. **[RQ-PTK-103]** 8. The user enter their ID and password registered. **[RQ-PTK-104]** 9. The user click <<Login>> button. **[RQ-PTK-105]** 10. The system checks the ID and password. [A1: Forgot Password] [E2: Login Failed] 11. The user redirect to the dashboard. 12. The user click <<Register Member>> button. **[RQ-PTK-106]**

	13. The user enter new member id. **[RQ-PTK-107]** 14. The user select role of member such as student, lecturer, dean, PETAKOM committee and head of student development. **[RQ-PTK-108]** 15. The user click <<Save>> button **[RQ-PTK-109]** 16. The system save data. 17. The system display message. 18. The use case ends.
Alternative Flow	**A1 : Forgot Password [RQ-PTK-110]** 1. The user click<<Forgot Password>> button 2. The user enter email registered to reset password. 3. The user click <<Send Reset Password Link>> button 4. The system send reset link to the email entered.
Exception Flow	**E1 : Registration Failed** 1. The system display an error message. 2. The system clears the id, email and password. 3. The use case continues. **E2 : Login Failed** 1. The system display an error message. 2. The system clears the id and password. 3. The use case continues.
Post-Conditions	1. The registration is successful. 2. The login is successful.
Rules	**R1: Password Requirements** 1. Password must at least 6 characters. 2. Space is not allowed.
Constraints	Not applicable
Sequence Diagram	Refer Appendix B.1.0

3.1.2 Manage User Profile (HAZMI HAZIM CB20117)

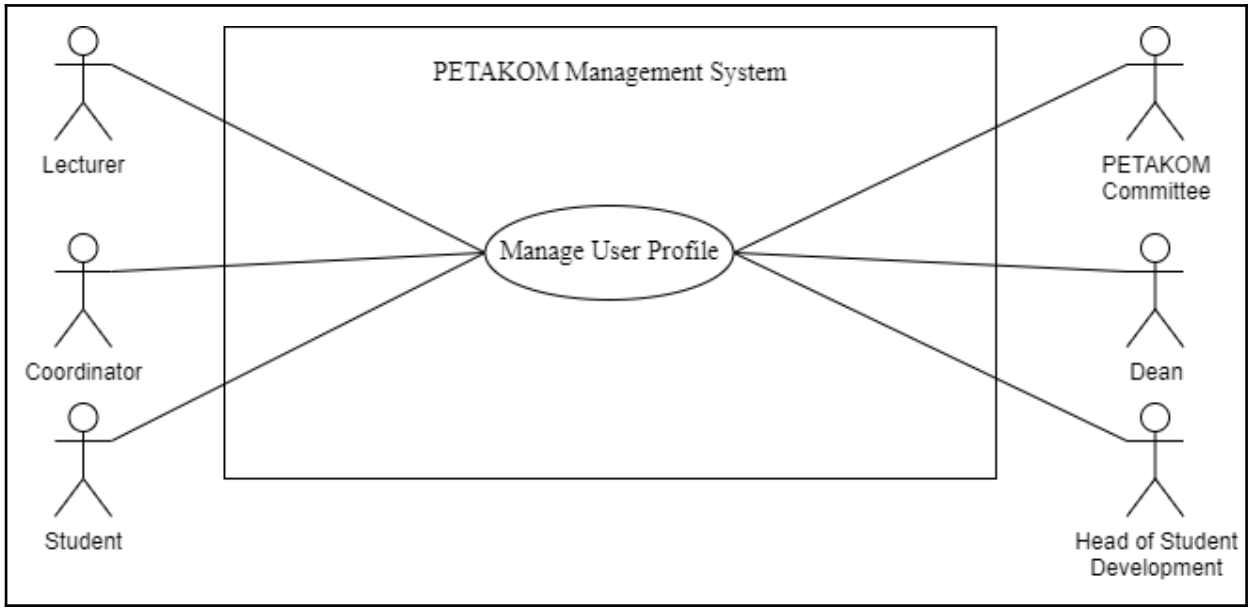


Figure 2.2 Use Case Diagram For Manage User Profile

Table 2.0 Use Case Description Manage User Profile

Use Case ID	UC-PTK-200
Brief Description	This use case is used for all user to login by enter their id and password registered. They also can manage PETAKOM activity such as read the news on bulletin, propose the activity or approve the proposal.
Actor	Lecturer, Coordinator, Student, PETAKOM Committee, Dean, and Head of Student Development.
Pre-Conditions	The system is in dashboard page.
Basic Flow	1. The use case starts when user clicks <<User>> button. **[RQ-PTK-200]** 2. The user view their profile. **[RQ-PTK-201]** 3. The user clicks <<Edit>> button. **[RQ-PTK-202]** 4. The user enter their email, name, phone number and address. **[RQ-PTK-203]** 5. The user click <<Save>> button. **[RQ-PTK-204]** 6. The system save the data entered. 7. The system display message. 8. The user click <<User>> button. **[RQ-PTK-205]** 9. The user click <<Change Password>> button.

	[RQ-PTK-206] 10. The user enter new password and confirm password. [R1: Password Requirements] **[RQ-PTK-207]** 11. The user click <<Save>> button. **[RQ-PTK-208]** 12. The system display message. 13. The use case ends.
Alternative Flow	Not applicable
Exception Flow	Not applicable
Post-Conditions	1. The profile is updated 2. Password is updated
Rules	**R1 : Password Requirements** 1. Password must at least 6 characters 2. Space is not allowed
Constraints	Not applicable
Sequence Diagram	Refer Appendix B.2.0

3.1.3 Manage PETAKOM activities (WAN MOHD IKRAM HAMDI BIN WAN MAHADI, CB19085)

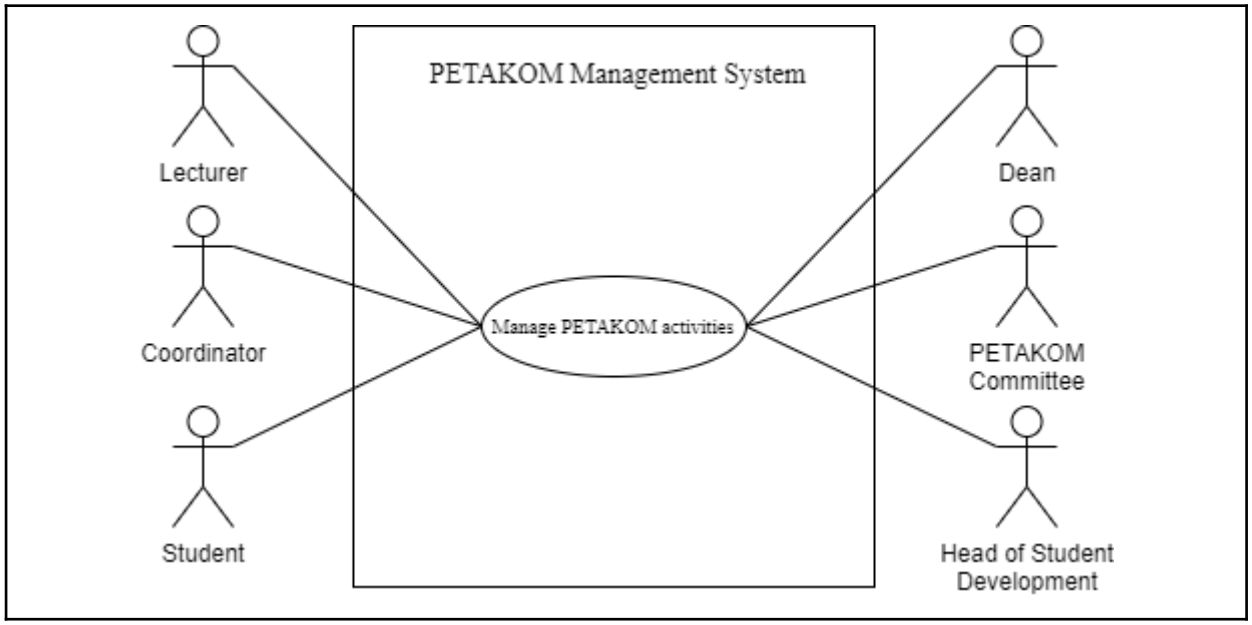


Figure 2.3 Use Case Diagram For Manage PETAKOM activities

Use Case ID	UC-PTK-300
Brief Description	This use case is initiated by the student, lecturer, coordinator, dean, PETAKOM committee, and head of student development. It provides the capability for the student, lecturer and PETAKOM committee to create the activity proposal at the Activities tab on the main page. It also provides the capability for the Dean, Coordinator and the Head of Student Development to approve or reject that proposal.
Actor	Lecturer, Coordinator, Student, PETAKOM Committee, Dean, and Head of Student Development.
Pre-Conditions	1. The student, lecturer, coordinator, dean, PETAKOM committee, and head of student development already have an account. 2. The student, lecturer, coordinator, dean, PETAKOM committee, and head of student development already login into the system.
Basic Flow	**Actors: Student, lecturer and PETAKOM Committee** 14. The use case starts when the users click <<Activities>> tab in the main page. From the Activities page, click add activity **[A1: add activity] [RQ-PTK-301]** 15. Users manage their activity proposal by clicking the <<Edit Activity form>> button. **[A2: edit activity] [RQ-PTK-305]** **Actors: Dean, coordinator and Head of Student Development** 16. For the approval, users will click <<Activity list for approval>> button. **[RQ-PTK-308]** 17. From the lists, users can approve or reject the activity from here. **[RQ-PTK-309]** 18. The approval message will be sent to the activity applicant. 19. The use case ends.
Alternative Flow	**[A1: add activity]** 20. Users enter their information in the activity form. **[C1: Word Limit Activity Form] [RQ-PTK-302]** 21. The user clicks <<Submit>> button. **[RQ-PTK-303]** 22. User successfully submitted the form.. [E1: Invalid Information Form] **[RQ-PTK-304].** 23. The use case continues from the basic flow. **[A2: edit activity]**

	24. Users enter their name, date and time, club name, advisor club,etc... **[RQ-PTK-306]** 25. User clicks <<Save>> button. **[RQ-PTK-307]** 26. The system updates the data entered. 27. The system displays update successfully. 28. The use case continues from the basic flow.
Exception Flow	**E1: Invalid information form [RQ-PTK-310]** 1. The system display error message. 2. The system clears the form. 3. The use case continues.
Post-Conditions	The activity submission is successful.
Rules	Not applicable
Constraints	**C1: Word Limit Activity Form [RQ-PTK-311]** 1. The user is allowed to enter a certain word limit for each form.
Sequence Diagram	Refer Appendix B.3.0

3.1.4 **Manage Calendar Module (WALEED AHMED SALEH AL AMRI CB16177)**

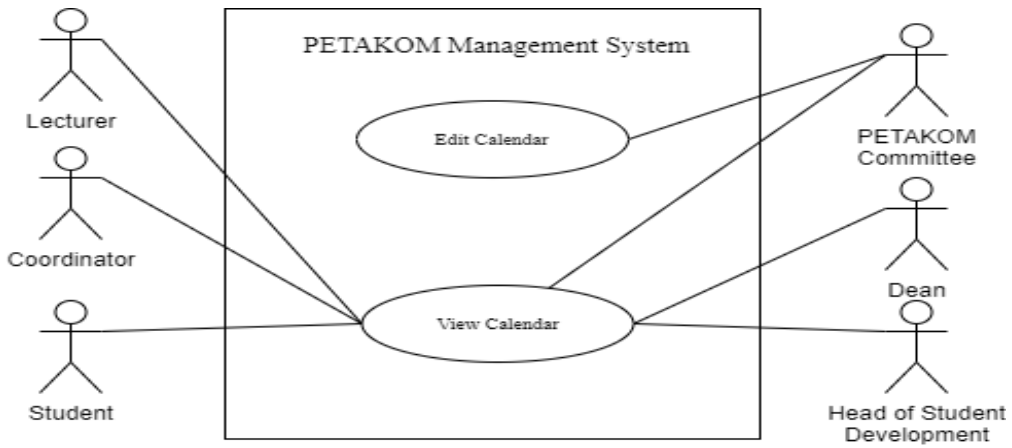


Figure 2.4 Use Case Diagram For Manage calendar

Table 2.4 Use Case Description for Manage calendar

Use Case ID	UC04
Use Case Name	Manage calendar
Brief Description	This use case allows the user to access the activity year calendar in the system to access the relevant functions according to the user's role. The different user roles are student, lecturer, petakon committee, petakon coordinator, dean, and head of student development. Only the Petakon Committee can add, delete, and modify the activities depending on the situation it deems appropriate. The rest of the users can only watch the activities on the annual calendar. To access the annual calendar of activities, users just have to click on the calendar button from the main menu on the home page.
Actors	1. Student. 2. Lecturer. 3. Petakom Committee. 4. Petakom Coordinator. 5. Dean. 6. Head of Student Development.
Pre-Condition	User must have a valid account.

Basic Flow	**All users** 1. The users click on calendar button. 2. The system displays the user's calendar page. 3. The use case ends. **[SRS-REQ-401]** **Petakom Committee** 1. The user clicks on calendar button. 2. The system displays the user's calendar page. **[SRS-REQ-402]** **3.** The user can make modification to the available activities. **[A1: Create Activity] [SRS-REQ-403]** 4. The use case ends.
Alternative Flow	**A1: Create Activity** 1. The Petakom Committee clicks the "create Activity" button. 2. The system guides the user, in order to construct an activity page. 3. System will display a form for creating an activity. **[SRS-REQ-404]** 3. User will fill in the form and click the "Save" button. 4. System will show a successful massage. **[SRS-REQ-405]** 5. system will create a color that will last throughout the activity. **[SRS-REQ-406]** 6. The user will be directed back to the calendar page by the computer. 7. The use case ends.

Exception Flow	None
Post-Condition	The annual calendar is subject to change as necessary.
Rules	The coordinator, dean, and head of student development all need to give their approval for the suggested activities.
Constraints	Only Petakom committee can create activity.

3.1.5 Generate Report and Activity Proposal (HAZIQ DANIAL BIN KHAIRUL AZIZY CB20140)

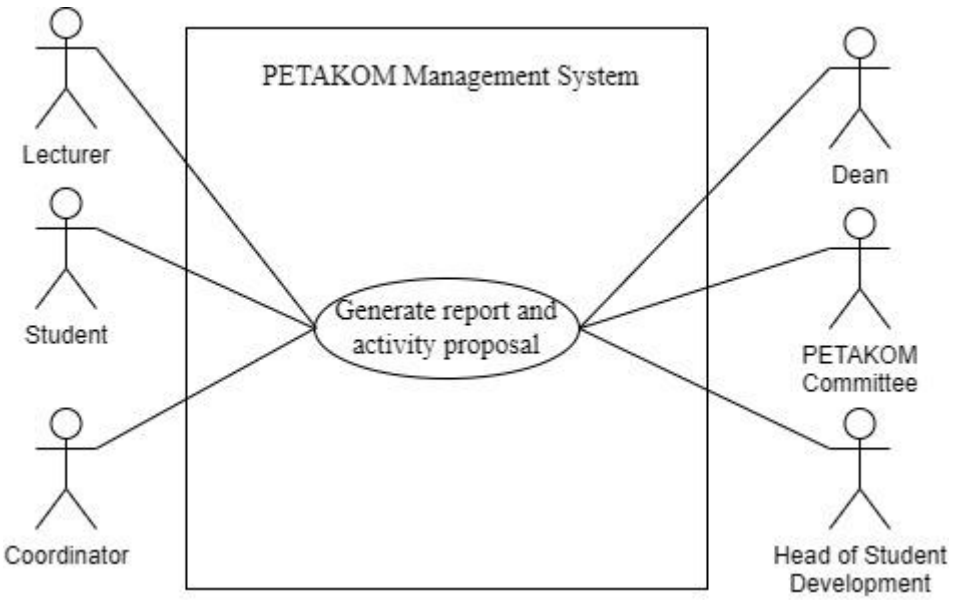


Figure 2.5 Use Case Diagram For Generate Report And Activity Proposal

Table 2.5 Use Case Description for Generate Report And Activity Proposal

Use Case ID	UC-PTK-500
Brief Description	This use case is initiated by the Student, Lecturer, and PETAKOM Committee by creating the proposal and report for the activity that is created. Then, the respected documents will then become approved by the Head of Student Development, Coordinator, and the Dean.
Actor	Student, Lecturer, Petakom Committee, Coordinator, Dean, and Head of Student Development.
Pre-Conditions	1. The Petakom Committee, Coordinator, Dean, and Head of Student Development must have already logged in to the system.
Basic Flow	1. The use case starts when users (Student, Lecturer, Petakom Committee, Coordinator, Dean, and Head of Student Development.) click the <<Proposals>> or <<Report>> tab in the main page. **Actor: Students, Lecturers, and PETAKOM Committee** 1. The system then displays the proposal page. 2. The user then clicks the <<Add Proposal>> or <<Add Report>> button. **[RQ-PTK-501]** 3. The system displays the form for the proposal which contains the title and the main form. 4. The user then clicks the <<save>> button. 5. The system then redirects the user to the proposal page 6. The user then clicks the <<Status>> button. 7. The system displays the status approval of the form. **[RQ-PTK-503]**

	8. The user also can edit the content of the form by clicking the <<Edit Proposal>> or <<Edit Report>> button. **[A1: Edit Form] [RQ-PTK-502]** 9. The use case ends. **Actor: Head of Student Development, Coordinator, and Dean** 1. The user clicks <<View proposal>> or <<View report>>**[RQ-PTK-507]** 2. The user clicks the <<View>> button. 3. The system displays the form. 4. The user then clicks the <<Approve>> or <<Reject>> button, to change the approval status. **[A2: Change Approval Status] [RQ-PTK-504] [RQ-PTK-505] [RQ-PTK-506]** 5. The use case ends
Alternative Flow	**A1: Edit Form** 1. The user clicks the <<Edit>> button. 2. The system displays the edit page. 3. The user edits the form. 4. The user clicks the <<Submit>> button. 5. The system will redirect the user to the Approval or Report main page. 6. The use case continues in step 9 in basic flow. **A2: Change Approval Status** 1. The user clicks the <<Reject>> or <<Approve>> button. 2. The system updates the status to either rejected or approved. 3. The system redirects user to the main page. 4. The use case continues in step 5 in basic flow.

Exception Flow	Not Applicable
Sequence Diagram	Refer Appendix B.5.0

3.1.6 Manage Committee Election (NABIL ABHAR BIN MOKHTAR CB20015)

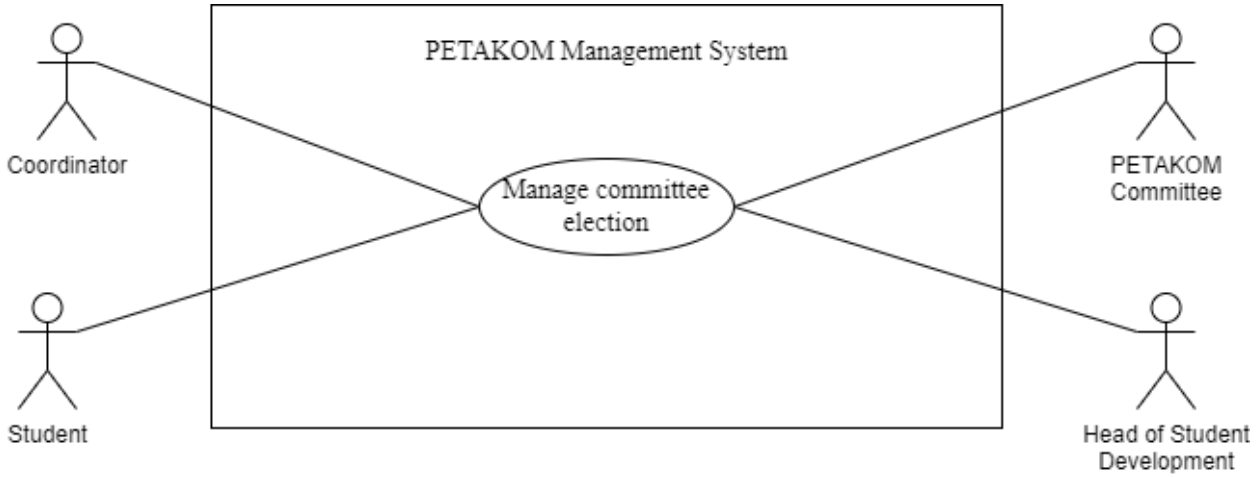


Figure 2.6 Use Case Diagram For Manage Election Committee

Table 2.6 Use Case Description for Manage PETAKOM and faculty bulletin

Use Case ID	UC-PTK-600
Brief Description	Module number 5 enables students to conduct votes and elections securely. Students are empowered to suggest who should be the representative for the Petakom committee. The voting system will protect the integrity of our votes by prohibiting voters from voting multiple times. A secure voting tool that allows the Petakom committee and Coordinator to collect input from the election results and closely examine the results in real-time. The Head of the student Development will approve the new representative after the voting session. In conclusion, students are participating in the democratic process by voting. Students elect leaders to represent them and their ideas, and the leaders advocate on their behalf.
Actor	Student, Coordinator, PETAKOM Committee, and Head of Student Development

Pre-Conditions	1. User must have a valid PETAKOM account 2. User need to be under the UMP affiliation 3. User data must exist in the PETAKOM system

Basic Flow	**Student** 1. The use case start 2. Student click the <<propose candidate>> button to propose a candidate for the election (**A1: Propose Candidate**) (**R1: Candidate must reach a certain level of requirement**) **(C1: Response time to fetch data) (RQ-PTK-600_1)** 3. System display the proposal form **(C1: Response time to display data) (RQ-PTK-600_2)** 4. Student fill out the proposal form **(RQ-PTK-600_3)** 5. System send the proposal to PETAKOM Committee and Coordinator (**E1: System Crash**) **(RQ-PTK-600_4)** 6. Student click a <<view candidates>> button to view the candidate list **(C2: Response time to fetch data) (RQ-PTK-602_1)** 7. System display the list and the information about all the approved candidates' information (**E2: Bad Request**) **(C2: Response time to display data) (RQ-PTK-602_2)** 8. Student choose a candidate (**R2: Candidate must reach a certain level of requirement**) **(RQ-PTK-602_3)** 9. System display the voting information for the student's affirmation **(RQ-PTK-602_4)** 10. The student click the <<vote>> button **(RQ-PTK-602_5)** 11. System accummulate all of the voting data and determine the most voted candidates. System then pass the data to the Head of the Student Development (**E3: System Crash**) 12. The use case end

	Coordinator and PETAKOM Committee 1. The use case start 2. Coordinator and PETAKOM Committee click the <<proposed candidates>> to view the proposed candidates' list **(C3: Response time to fetch data) (RQ-PTK-601_1)** 3. System display the proposed candidates list (**E4: Bad Request**) **(C3: Response time to display data) (RQ-PTK-601_2)** 4. Coordinator and PETAKOM Committee check for each of the candidate's qualification and decided wether to approve or reject the proposal (**R3: Candidate must reach a certain level of requirement**) **(RQ-PTK-601_3)** 5. System will save the approved candidates list into the database (**E5: System Crash**) **(RQ-PTK-601_4)** 6. The use case end **Head of the Student Development** 1. The use case start 2. Head of the Student Development click the <<voting results>> button to view the election results **(C4: Response time to fetch data) (RQ-PTK-603_1)** 3. System display the election result (**E6: Bad Request**) **(C4: Response time to display data) (RQ-PTK-603_2)**

	4. Head of the Student Development decided wether or not to approved the new PETAKOM representatives (**R4: Candidate must reach a certain level of requirement**) **(RQ-PTK-603_3)** 5. The system will save the new representatives information if it were approved. The system will then display the election results and the new board of PETAKOM committee in a some sort of notification center (**E7: System Crash**) **(RQ-PTK-603_4)** 6. The use case end
Alternative Flow	**A1: Propose Candidate** 1. Student click the <<propose candidate>> button to propose a candidate for the election 2. System display the proposal form 3. Student fill out the proposal form 4. System send the proposal to PETAKOM Committee and Coordinator

Exceptional Flow	**E1, E3, E5, and E7: System Crash** Condition: Data store failed to be updated Description: 1. System crash and data failed to be uploaded/updated 2. System display an error message and hold that data in some sort of temporary caches 3. After the system recovered, system will display a message asking the user wether they want to continue in uploading that data 4. If the user choose no, then the use case will end, but if the user choose yes, the system will proceed in uploading that data **E2, E4 and E6: Bad Request** Condition: System fail to display data Description: 1. System fail to fetch and display data 2. System display an error message stating “Error 400: Bad Request” 3. After the system recovered, user can continue to request the data 4. System display the requested data

Post-Conditions	1. An auto backup system should duplicate and backup the data to an external or backup databases to prevent any unwanted events 2. Safety and Security protocol must be adhere at all times to avoid data confidentiality breach
Rules	(**R1, R2, R3, and R4: Candidate must reach a certain level of requirement**) Description: Candidate must reach a certain level of requirement to be authorized as a legal contesting candidate. Candidate need to lead the student, hence they need some sort of skills and quality in order to achieve that.
Constrains	**[C1, C2, C3, C4: Response Time to fetch Data]** 1. Server response time to fetch data should not exceed 10 seconds. **[C1, C2, C3, C4: Response Time to Display Data]** 1. Server response time to display data should not exceed 10 seconds.
Sequence Diagram	Refer Appendix B.6.0

3.1.7 Manage PETAKOM and faculty bulletin (AMIR MUHAMMAD HAFIZ BIN OTHMAN CB20152)

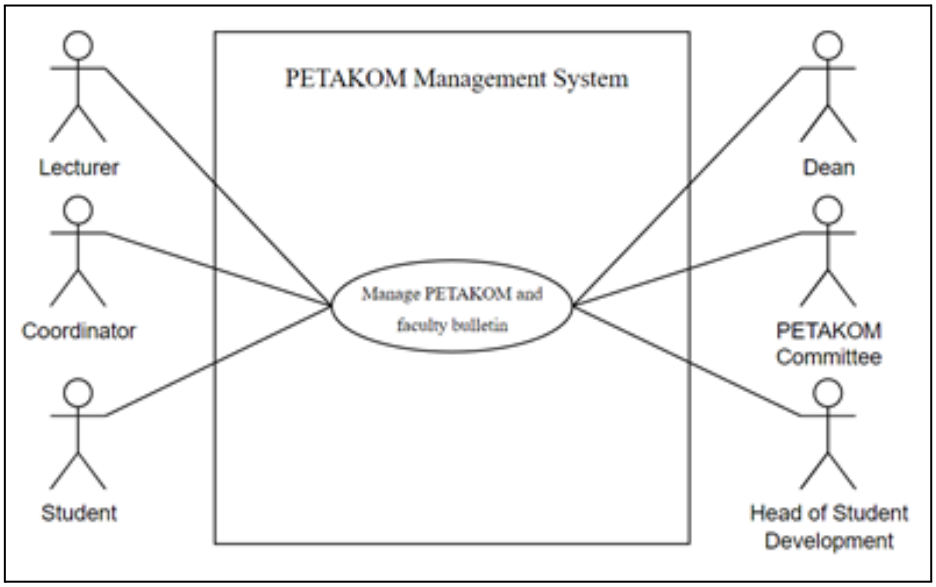


Figure 2.7 Use Case Diagram For Manage PETAKOM and faculty bulletin

Table 2.0 Use Case Description for Manage PETAKOM and faculty bulletin

Use Case ID	UC-PTK-700
Brief Description	This use case is initiates by the student, lecturer, coordinator, dean, PETAKOM committee, and head of student development. It provides the capability for the student, lecturer, coordinator, dean, and head of student development to view PETAKOM and faculty bulletin at the main page. It also provides the capability for the PETAKOM committee to create, update, delete and view the PETAKOM and faculty bulletin.
Actor	Lecturer, Coordinator, Student, PETAKOM Committee, Dean, and Head of Student Development.
Pre-Conditions	1. The student, lecturer, coordinator, dean, PETAKOM committee, and head of student development already have an account. 2. The student, lecturer, coordinator, dean, PETAKOM committee, and head of student development already login into the system.

Basic Flow	Student 1. The use case begins when the student clicks bulletin menu. 2. The system will display PETAKOM and faculty bulletin list. 3. The student chose and click the bulletin details from the list that they want to view. 4. The system displays information from the selected bulletin details. 5. The user view information from the selected bulletin details. **[RQ-PTK-701]** 6. The use case end. Lecturer 1. The use case begins when the lecturer clicks bulletin menu. 2. The system will display PETAKOM and faculty bulletin list. 3. The lecturer chose and click the bulletin details from the list that they want to view. 4. The system displays information from the selected bulletin details. 5. The user view information from the selected bulletin details. **[RQ-PTK-701]** 6. The use case end. Coordinator 1. The use case begins when the coordinator clicks bulletin menu. 2. The system will display PETAKOM and faculty bulletin list. 3. The coordinator chose and click the bulletin details from the list that they want to view. 4. The system displays information from the selected bulletin details. 5. The user view information from the selected bulletin details. **[RQ-PTK-701]** 6. The use case end. Dean 1. The use case begins when the dean clicks bulletin

	menu. 2. The system will display PETAKOM and faculty bulletin list. 3. The dean chose and click the bulletin details from the list that they want to view. 4. The system displays information from the selected bulletin details. 5. The user view information from the selected bulletin details. **[RQ-PTK-701]** 6. The use case end. Head of student development 1. The use case begins when the head of student development clicks bulletin menu. 2. The system will display PETAKOM and faculty bulletin list. 3. The head of student development chose and click the bulletin details from the list that they want to view. 4. The system displays information from the selected bulletin details. 5. The user view information from the selected bulletin details. **[RQ-PTK-701]** 6. The use case end. PETAKOM committee 1. The use case begins when the PETAKOM committee clicks bulletin menu. 2. The system will display PETAKOM and faculty bulletin menu. 3. The PETAKOM committee can do following option: [A1] View bulletin [A2] Add bulletin [A3] Edit bulletin [A4] Delete bulletin [A5] Search bulletin 4. The use case end.
Alternative Flow	**[A1] View bulletin [RQ-PTK-702]** 1. The user chose and click <<View>> link at the bulletin list that they want to view. 2. The system display information from the selected bulletin details. 3. The user view information from the selected bulletin

	details. 4. The use case continue to step 4 in PETAKOM committee basic flow. **[A2] Add bulletin [RQ-PTK-703]** 1. The user clicks <<Add>> button to add the new bulletin. 2. The system display add bulletin form. 3. The user inserts all the details information which are category, title, message, and URL reference. 4. If all required information is inserted [E1: Add bulletin form wrong input], the user needs to click <<Save>> button. 5. The system will display add bulletin form confirmation. 6. The user view all input in the add bulletin form. 7. The user clicks <<Confirm>> button. 8. The system display add bulletin page success. 9. The user clicks <<Confirm>> button. 10. The use case continue to step 4 in PETAKOM committee basic flow. **[A3] Edit bulletin [RQ-PTK-704]** 1. The user choose and clicks <<edit>> button to edit the chosen bulletin. 2. The system display the selected bulletin information in a form. 3. The user inserts all the details information which are category, title, message, and URL reference. 4. If all required information is inserted [E2: Edit bulletin form wrong input], the user needs to click <<Save>> button. 5. The system will display add bulletin form confirmation. 6. The user view all input in the edit bulletin form. 7. The user clicks <<Confirm>> button. 8. The system display edit bulletin page success. 9. The user clicks <<Confirm>> button. 10. The use case continue to step 4 in PETAKOM committee basic flow. **[A4] Delete bulletin [RQ-PTK-705]** 1. The user chose and click <<Delete>> link the at the

	bulletin list that they want to delete. 2. The system displays delete confirmation pop up. 3. The user clicks <<Confirm>> button. 4. The system display deletion success message. 5. The use case continue to step 4 in PETAKOM committee basic flow. **[A5] Search bulletin [RQ-PTK-706]** 1. The user fills the search bar and click <<search>> button. 2. The system displays list of bulletins that relate with the search input from the user. 3. The use case continue to step 4 in PETAKOM committee basic flow.
Exception Flow	**[E1] Add bulletin form wrong input [RQ-PTK-707]** 1. The system display input error message. 2. The use case continue to step 3 in alternative flow A2. **[E2] Edit bulletin form wrong input [RQ-PTK-708]** 1. The system display input error message. 2. The use case continue to step 3 in alternative flow A3. **1.**
Post-Conditions	1. Successfully add new bulletin. 2. Successfully edit bulletin. 3. Bulletin successfully displayed. 4. Successfully delete bulletin. 5. Successfully search bulletin.
Rules	Not available
Constraints	Not available
Sequence Diagram	Refer Appendix B.7.0

3.2 GUI/ Wireframe

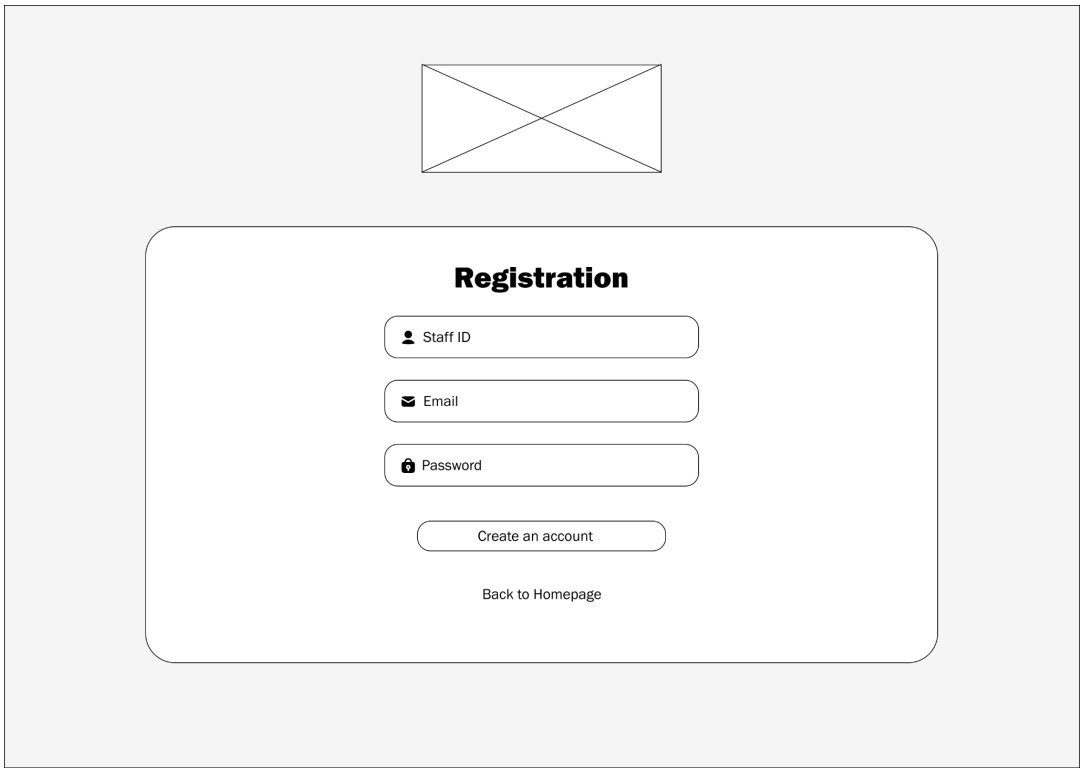


Figure 3.1 Registration Page

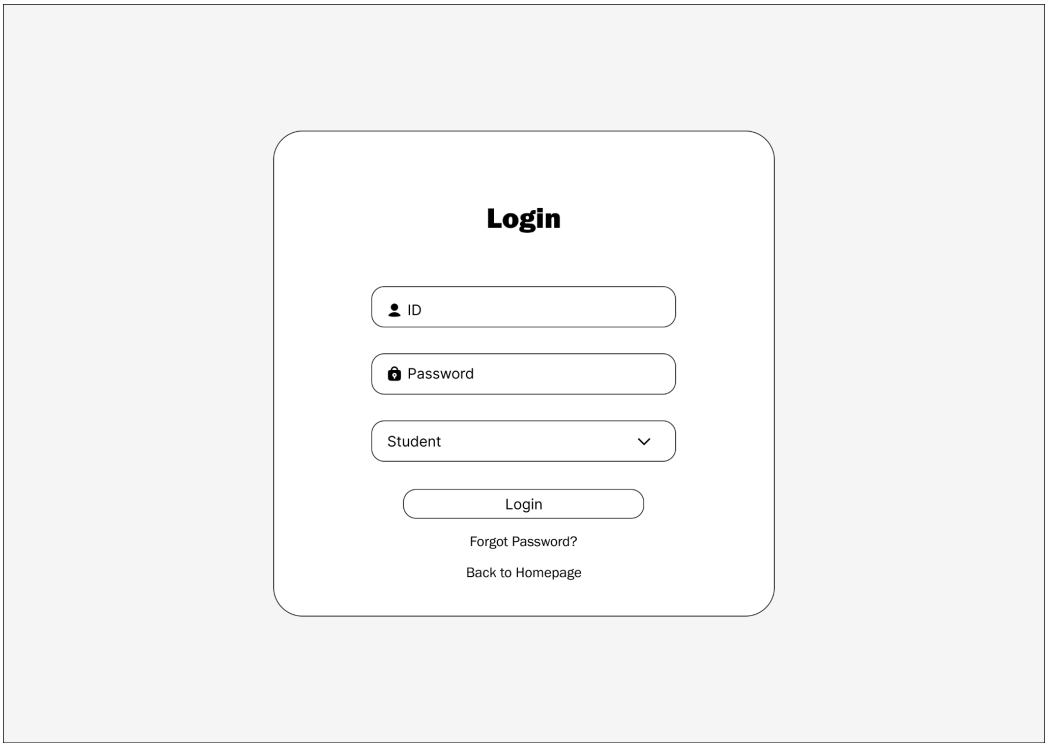


Figure 3.2 Login Page

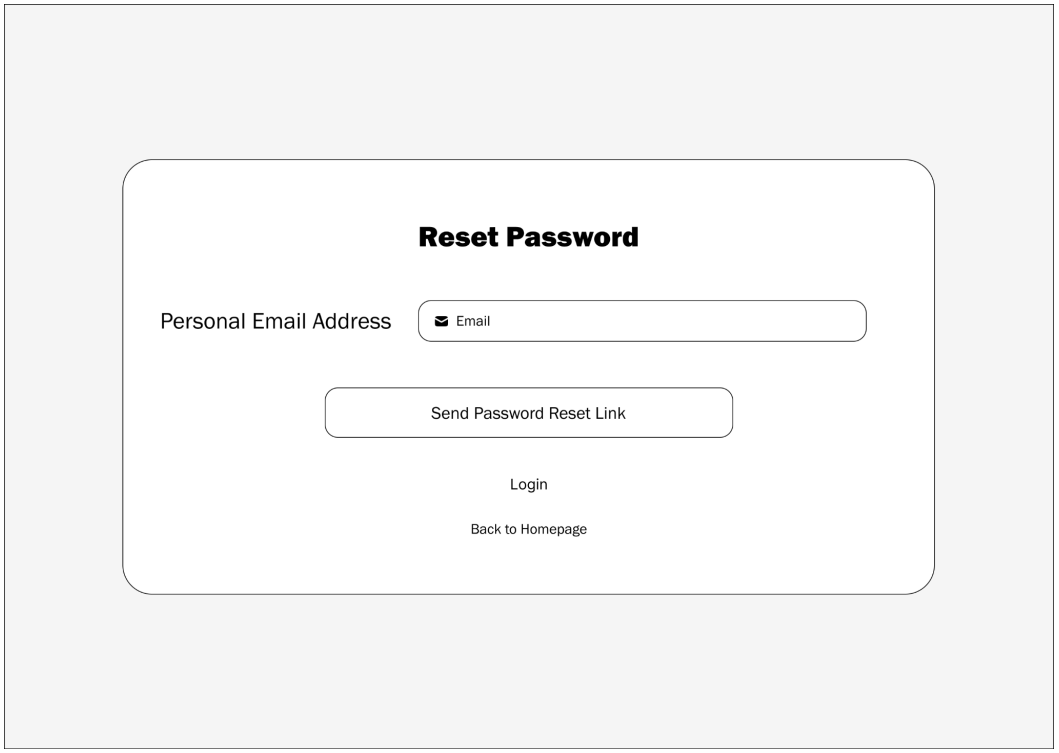


Figure 3.3 Reset Password Page

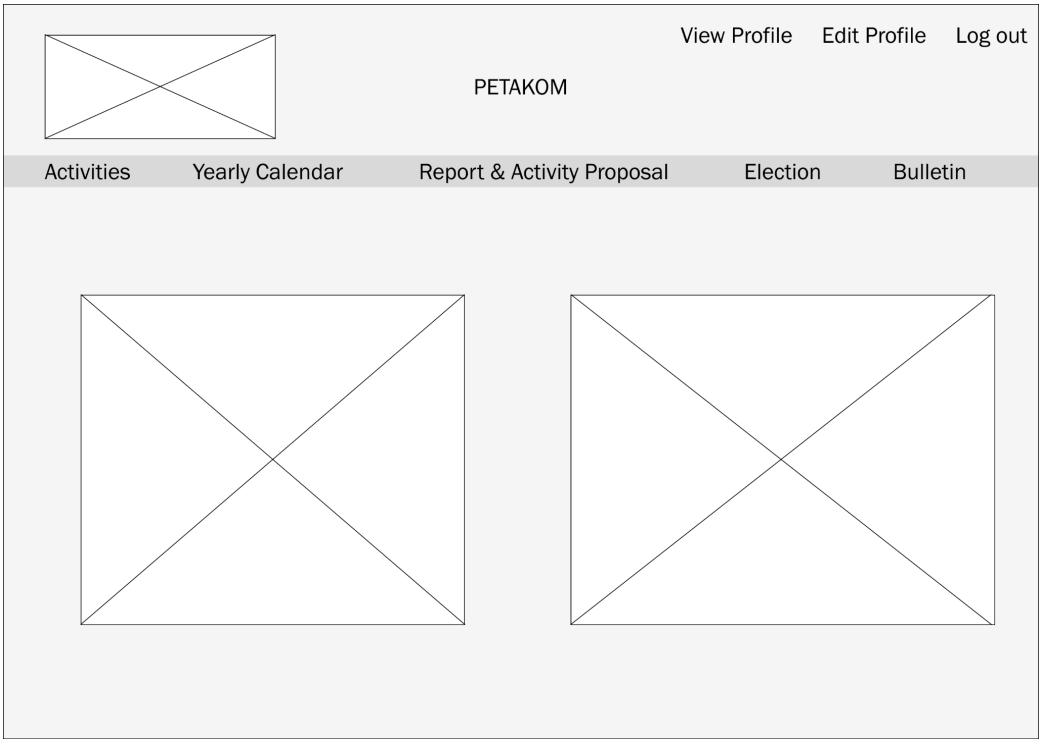


Figure 3.4 Landing Page

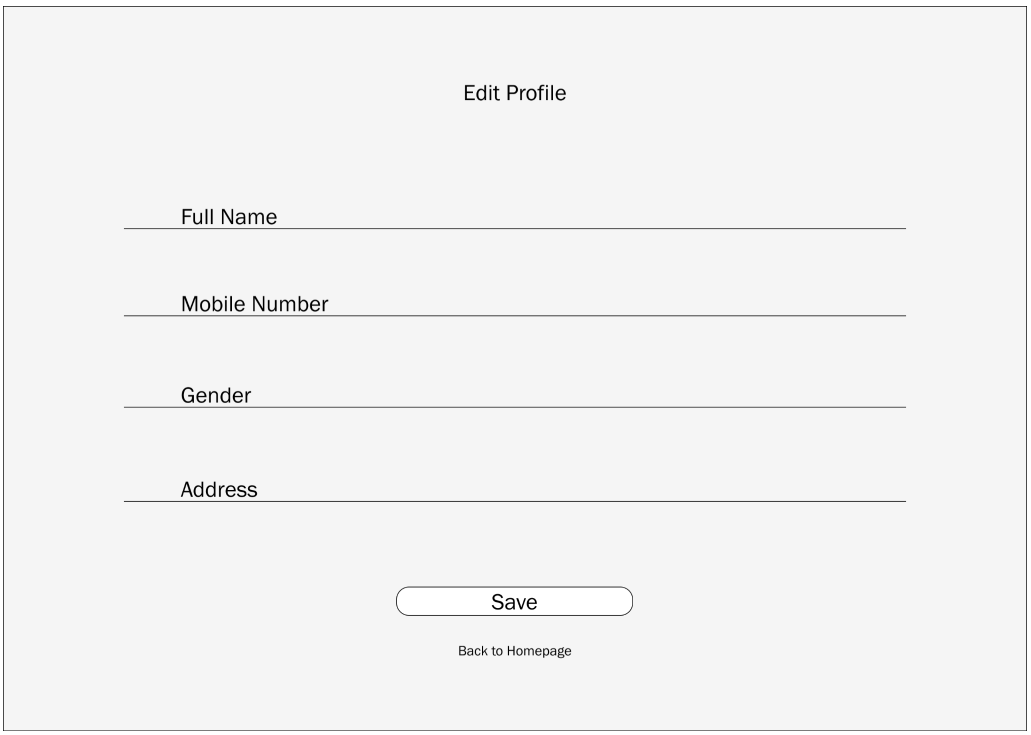


Figure 3.5 Edit User Profile Page

Figure 3.6 View User Profile Page

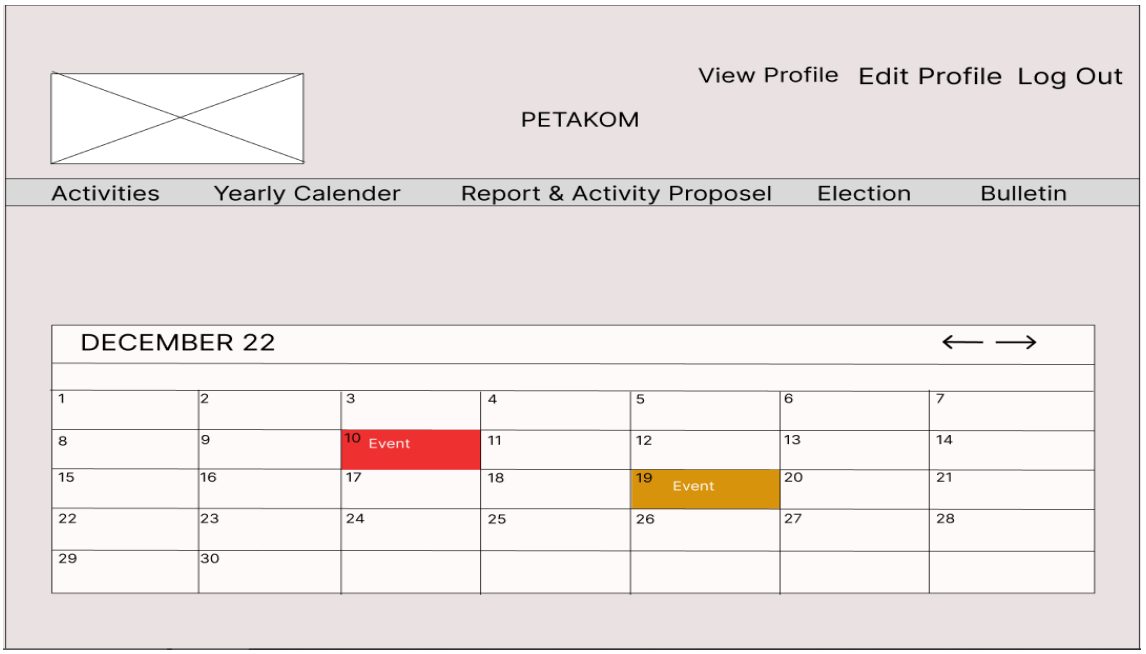


Figure 3.7 View Users Calender Page

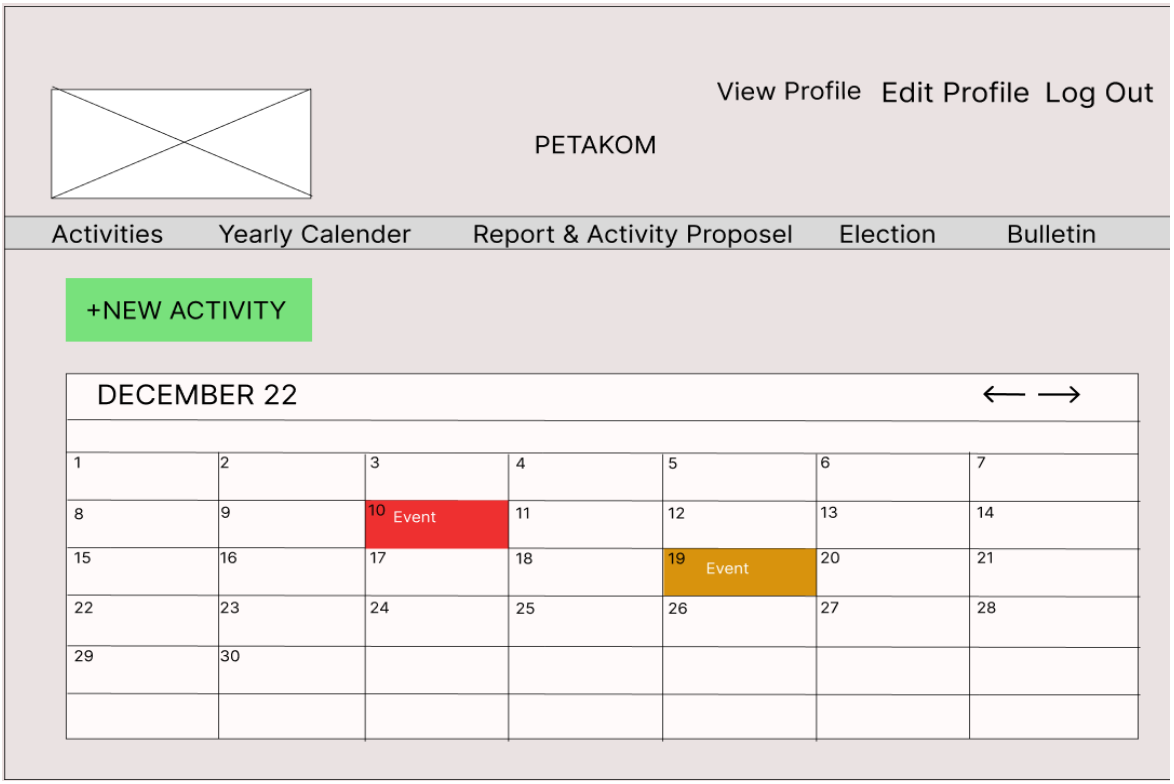


Figure 3.8 View Petakom committee Calender Page

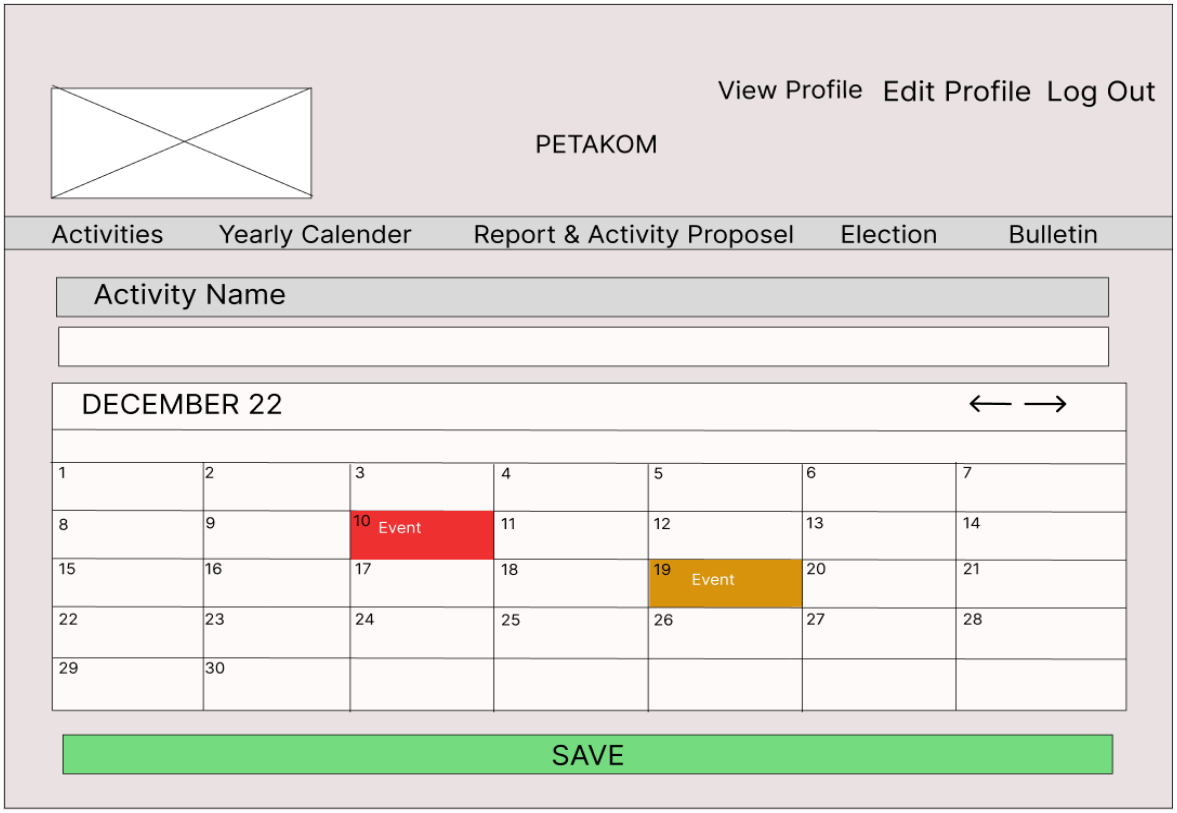


Figure 3.9 View Modifications Petakom committee Calender Page

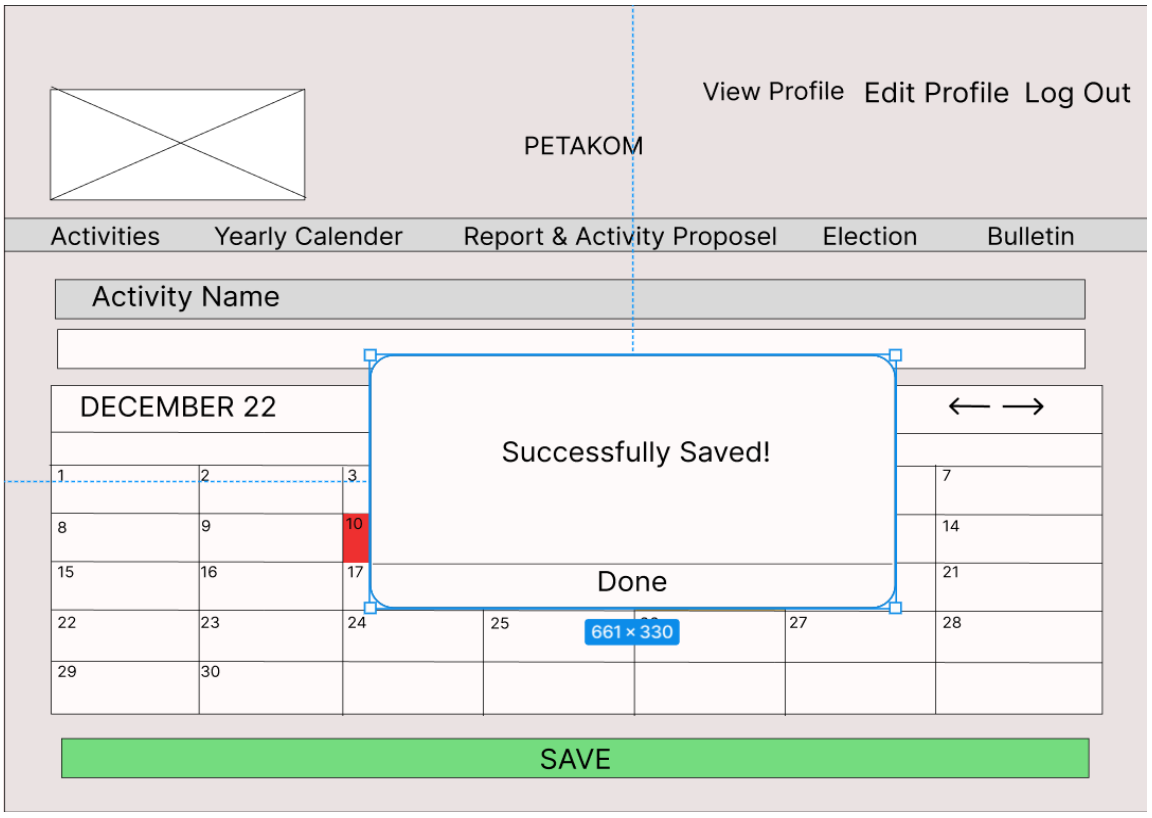


Figure 3.10 View Modifications Petakom committee successfully massage

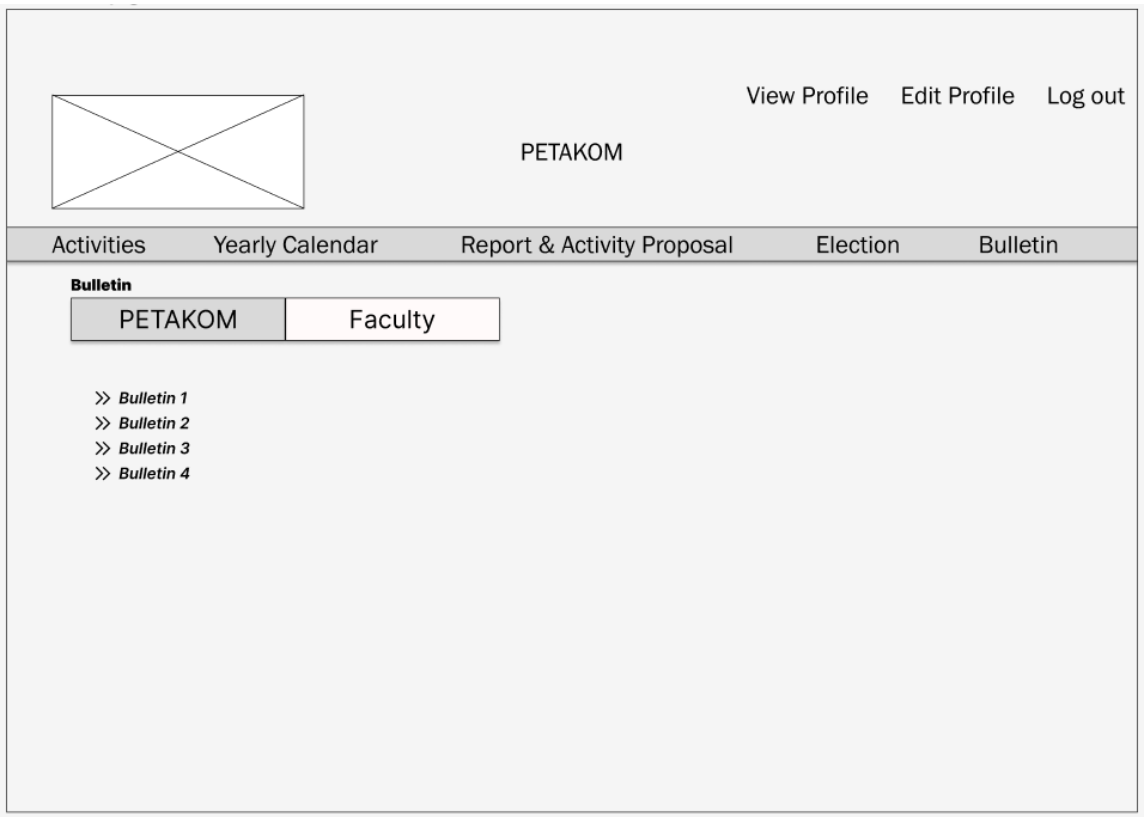


Figure 3.11 Bulletin menu page for student, lecturer, dean, head of student development, and coordinator

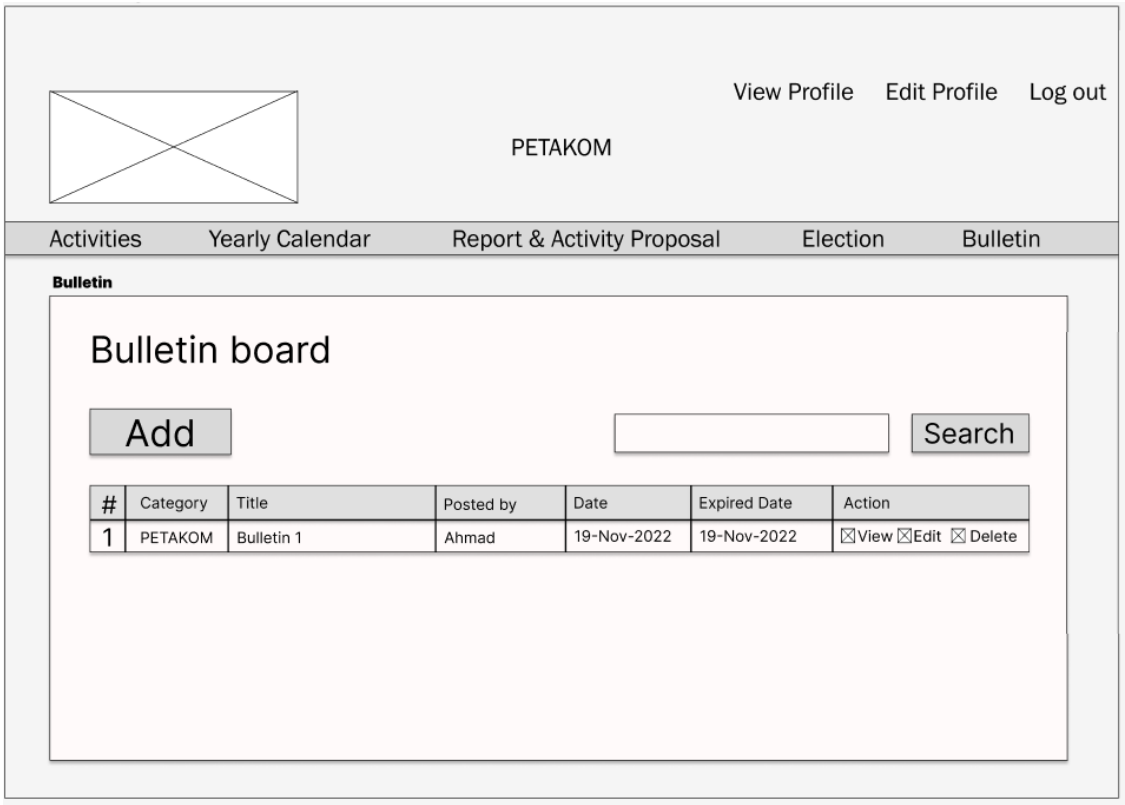


Figure 3.12 Bulletin menu page for PETAKOM committee

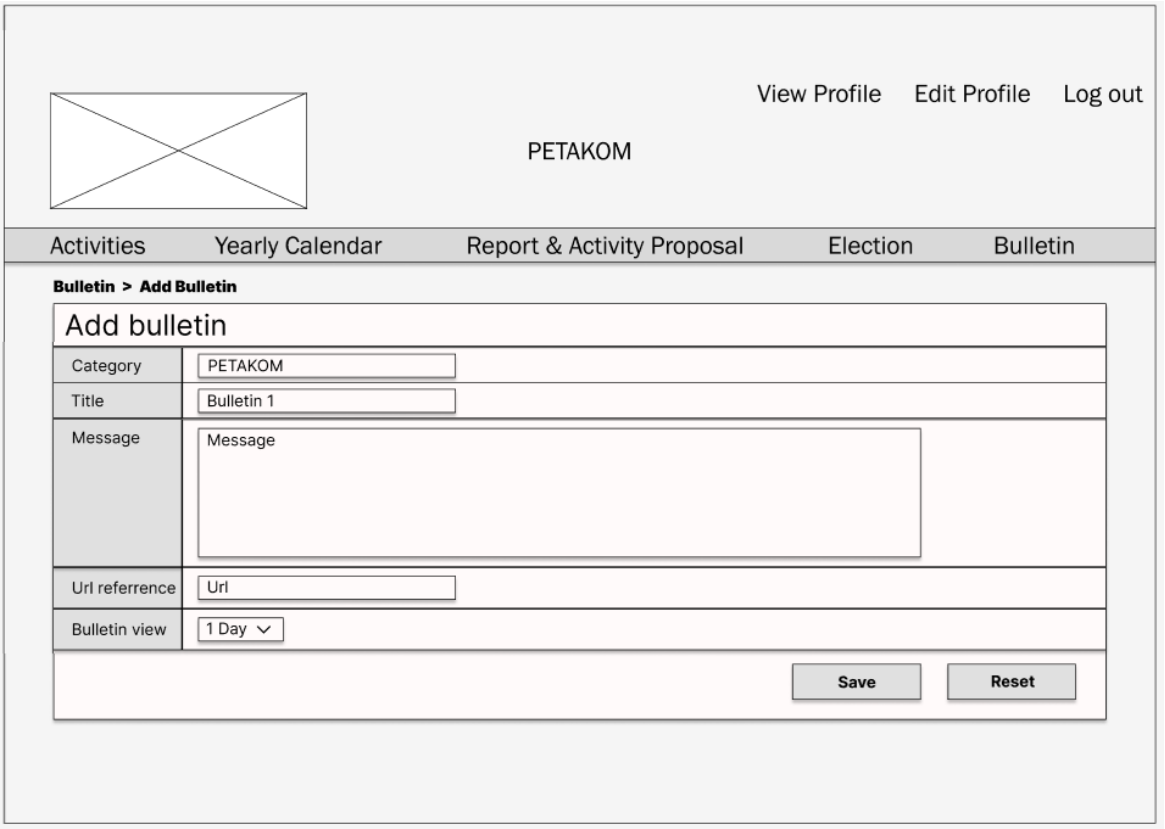


Figure 3.13 Add bulletin menu page for PETAKOM committee

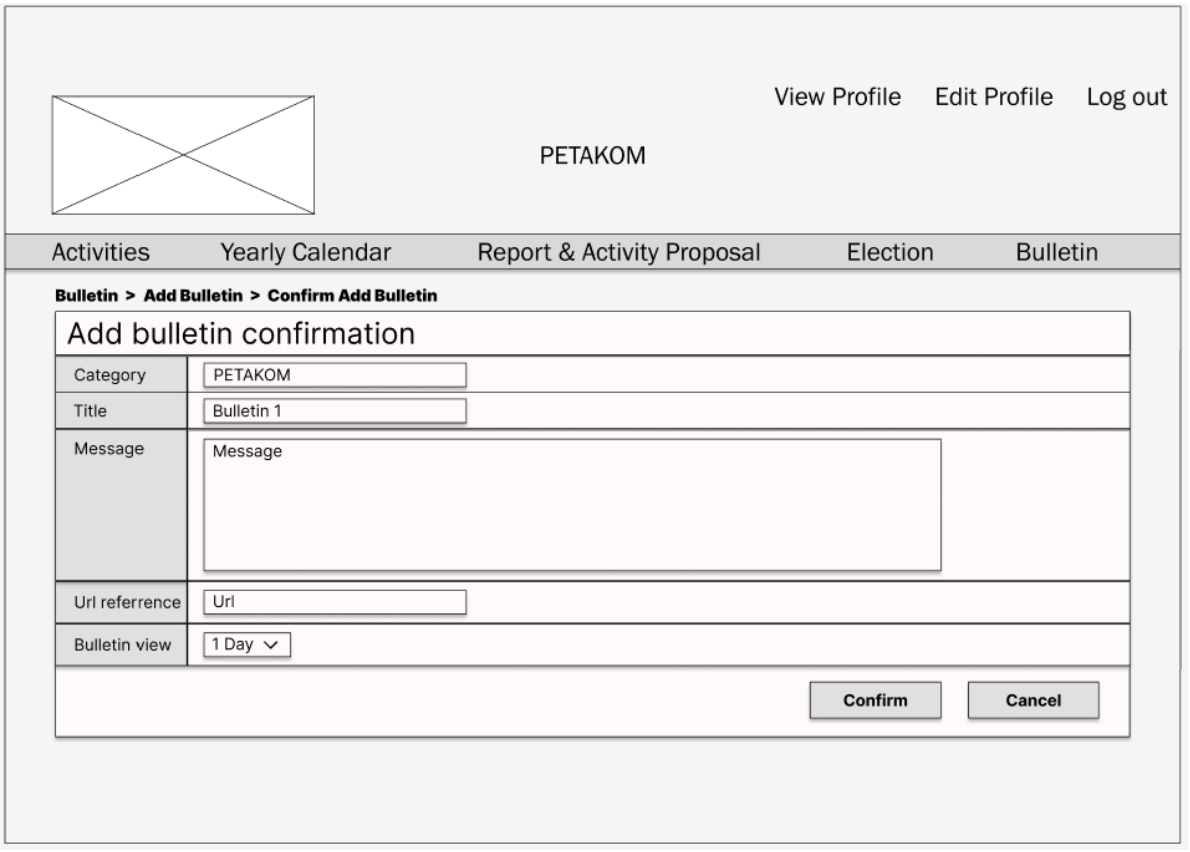


Figure 3.14 Add bulletin confirmation menu page for PETAKOM committee

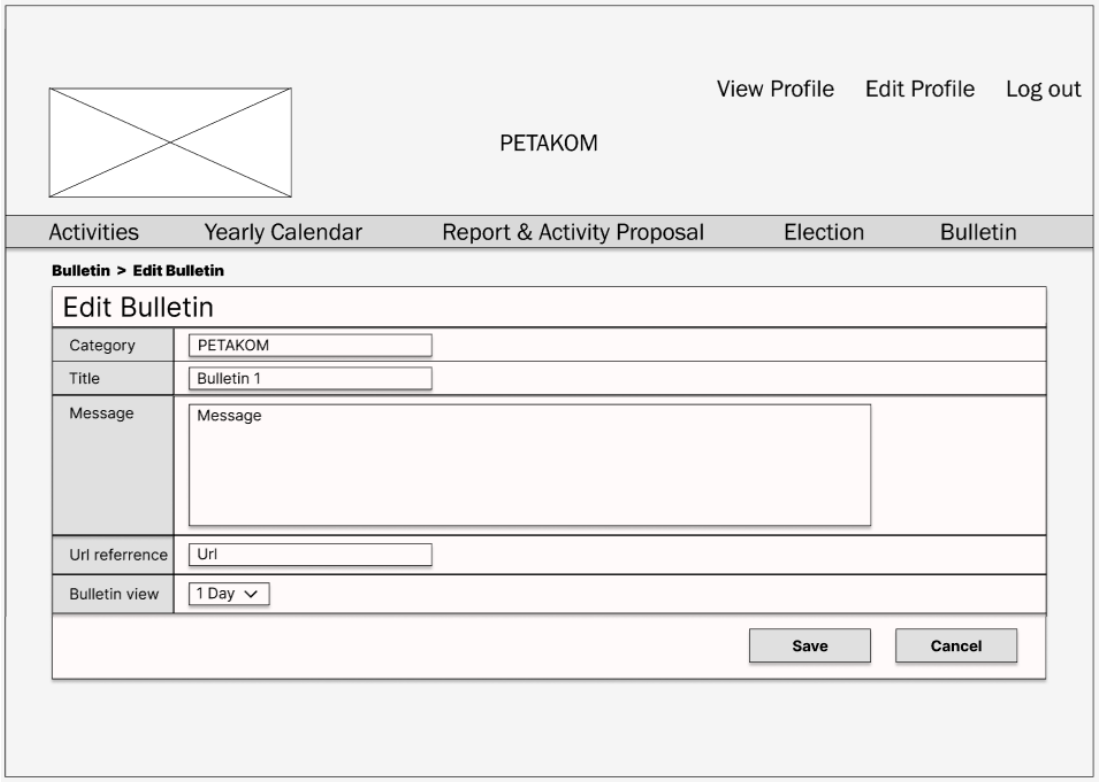


Figure 3.15 Edit bulletin menu page for PETAKOM committee

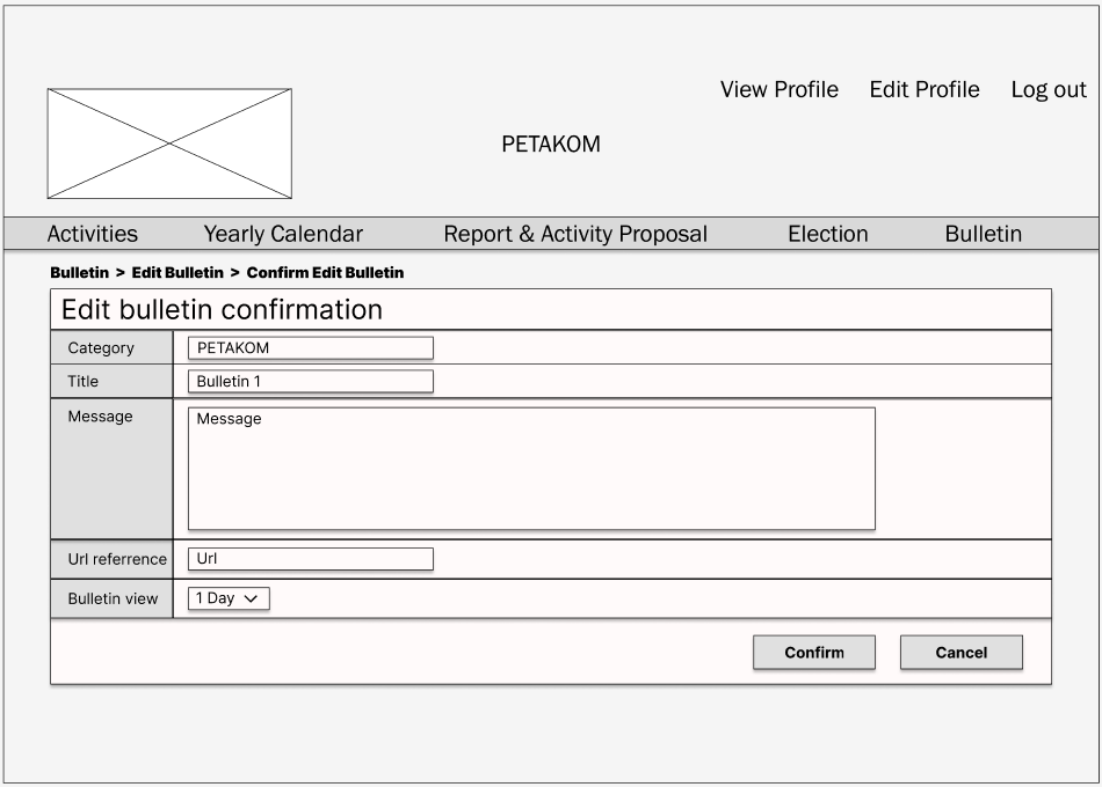


Figure 3.16 Edit bulletin confirmation menu page for PETAKOM committee

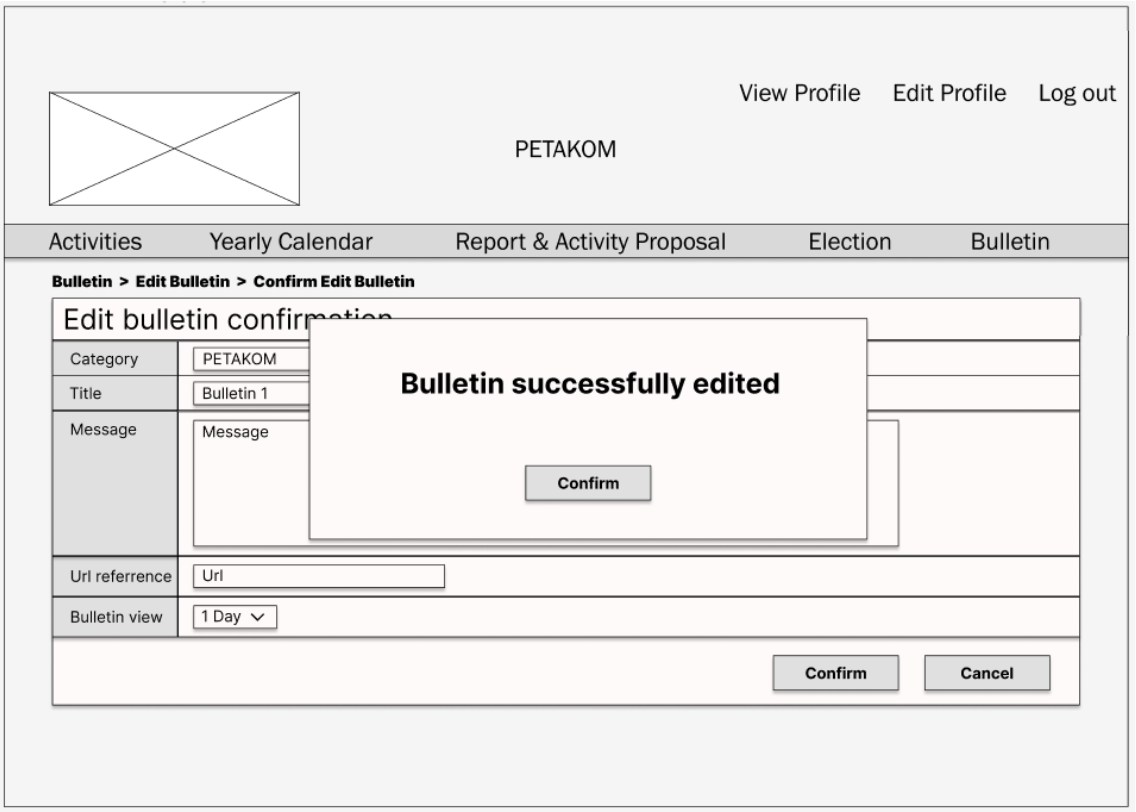


Figure 3.17 Bulletin successfully edited message

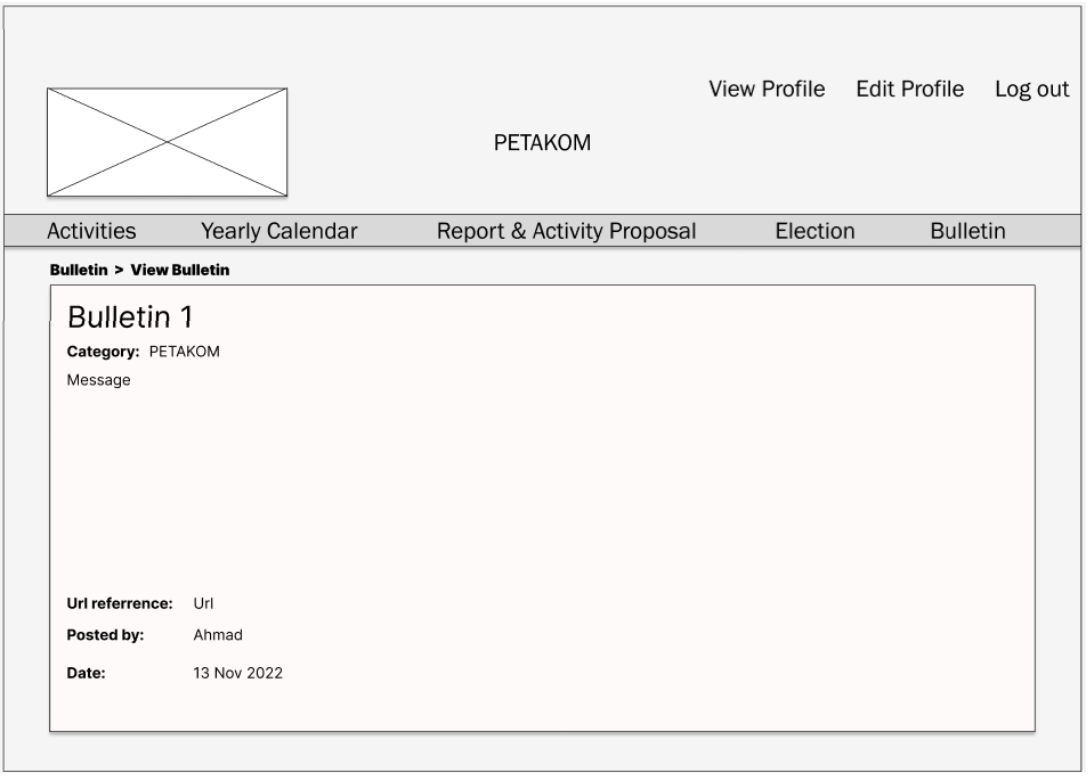


Figure 3.18 Bulletin details

Manage Committee Election

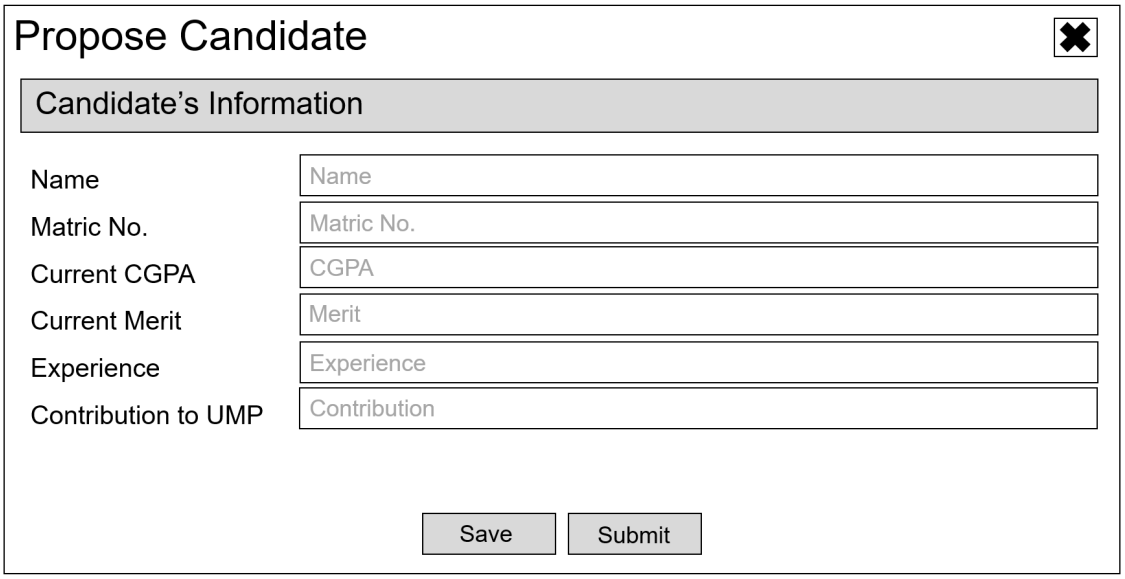


Figure 3.19 Proposal form for proposing candidates interface

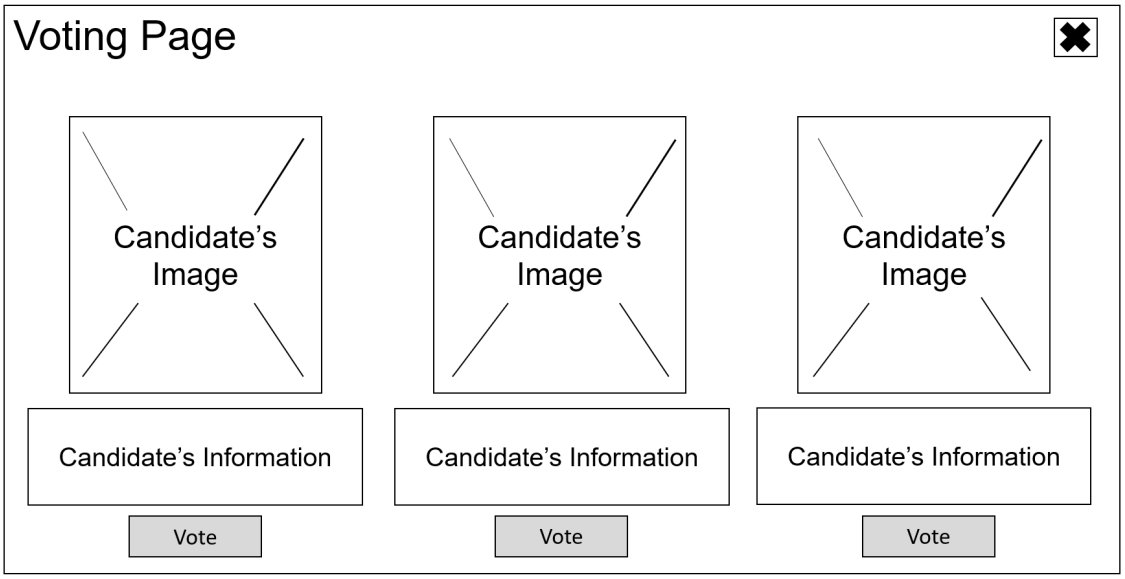


Figure 3.20 Voting Interface

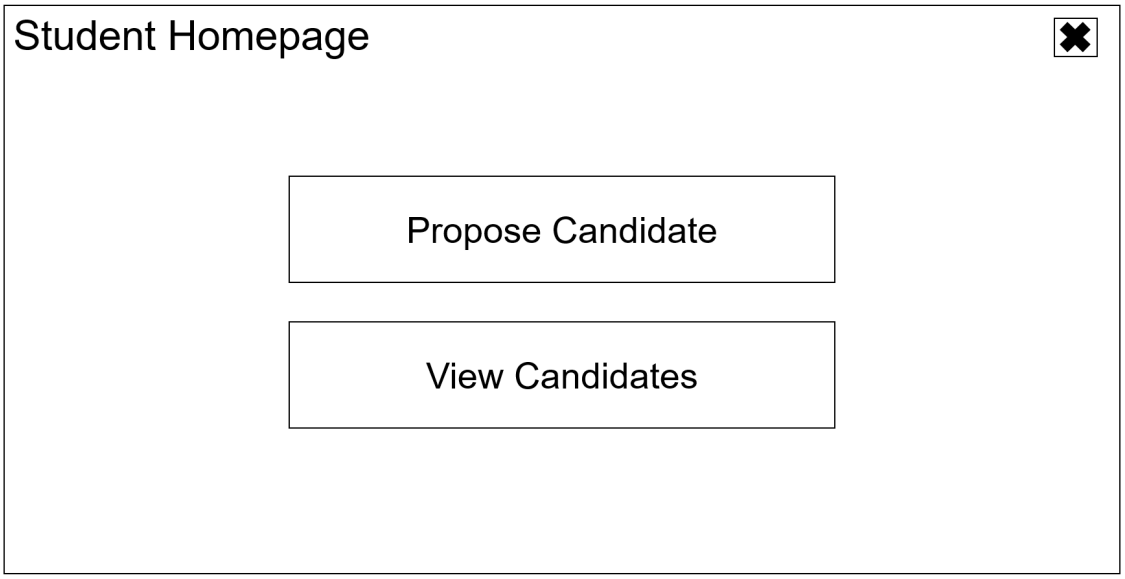


Figure 3.21 Student homepage

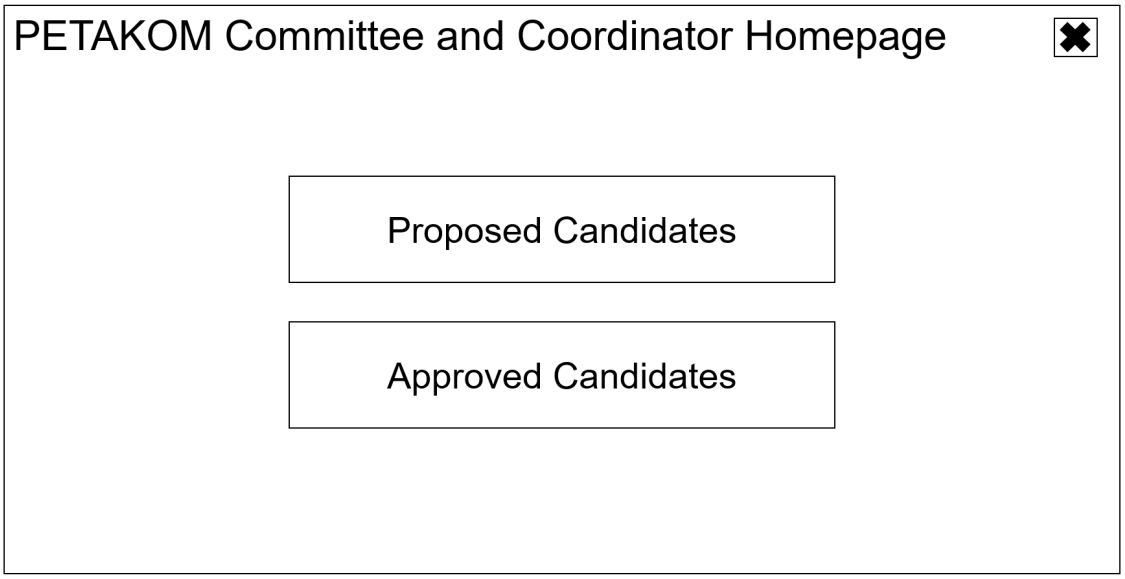


Figure 3.22 PETAKOM Committee and Coordinator homepage

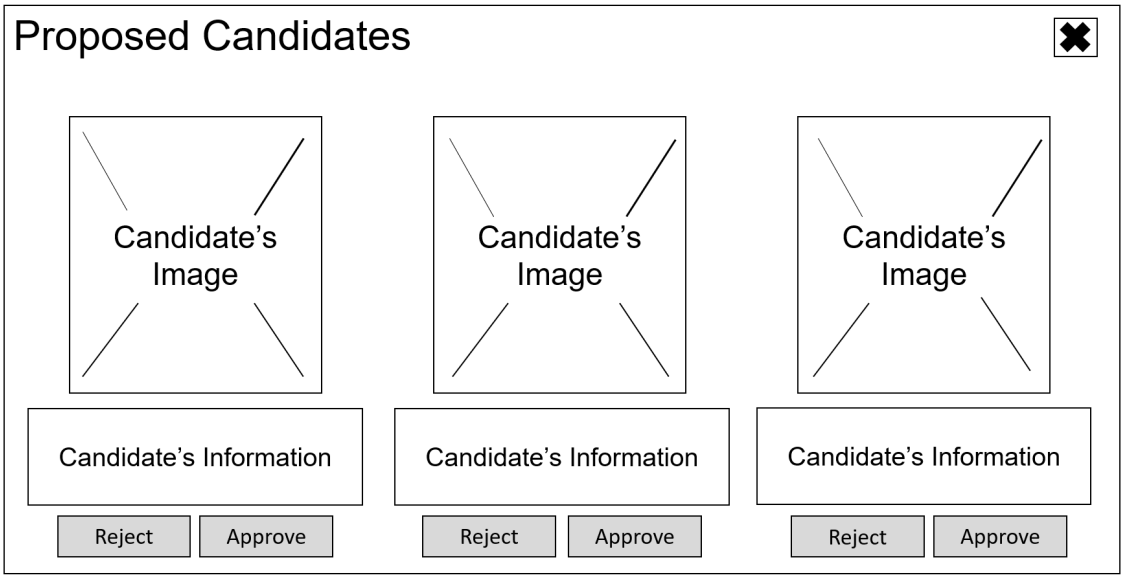


Figure 3.23 Proposed candidates interface

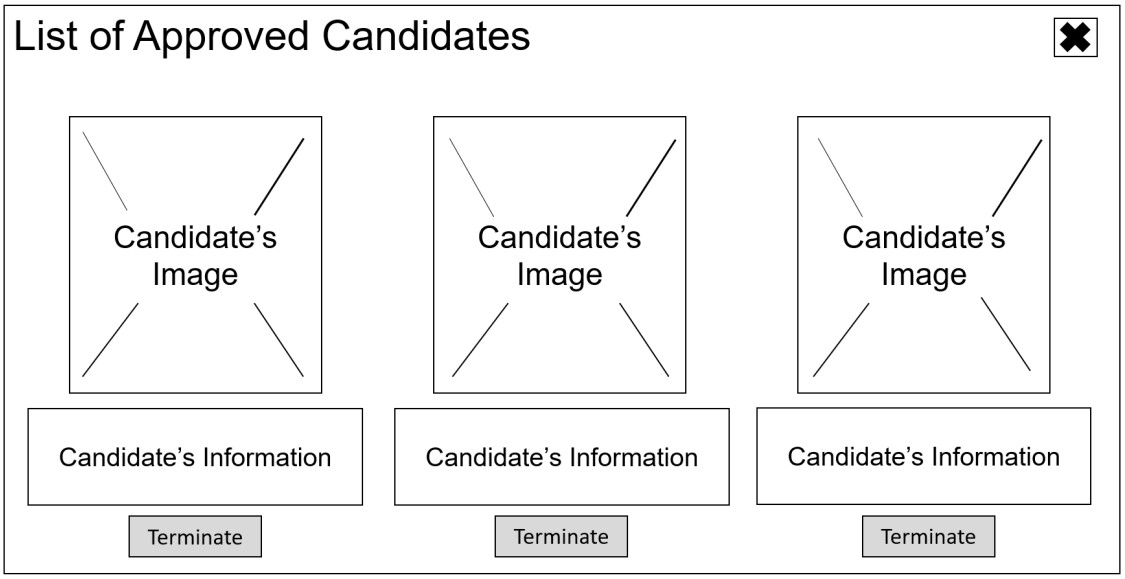


Figure 3.24 List of approved candidates interface

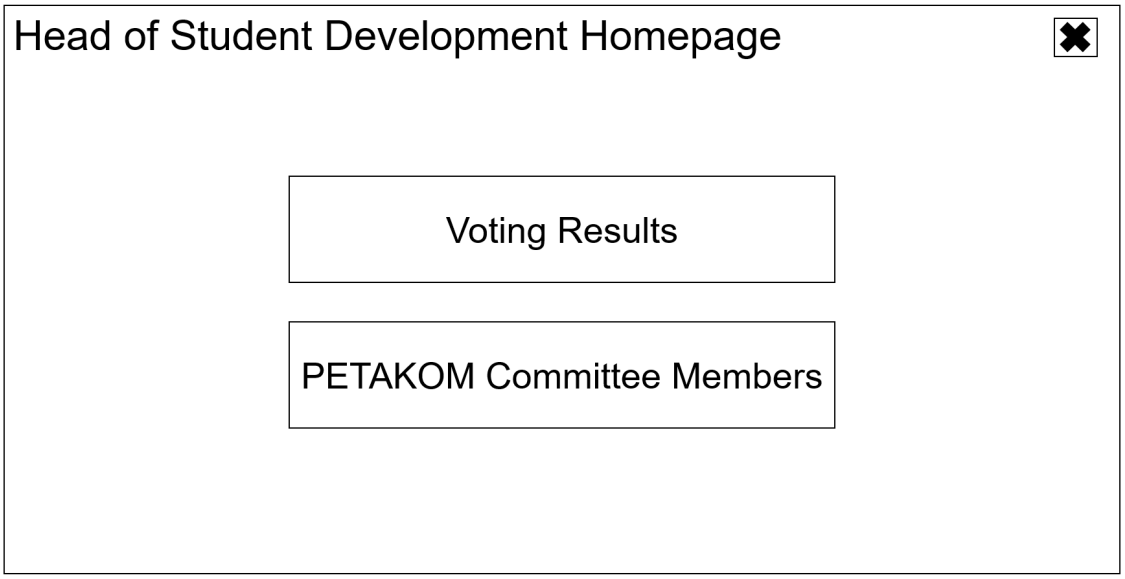


Figure 3.25 Head of Student Development homepage

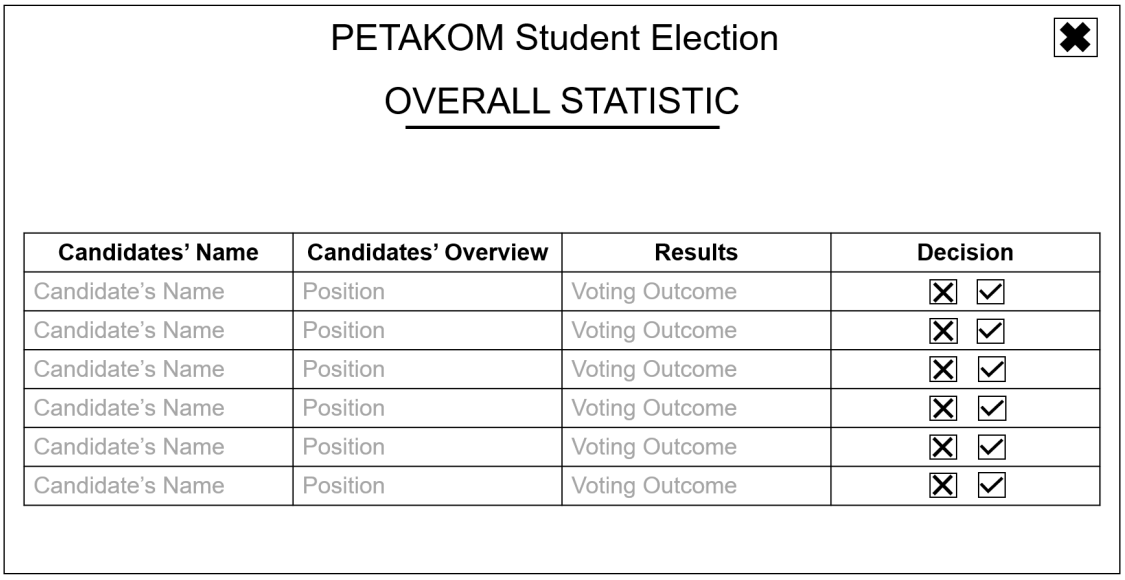


Figure 3.26 Voting results interface

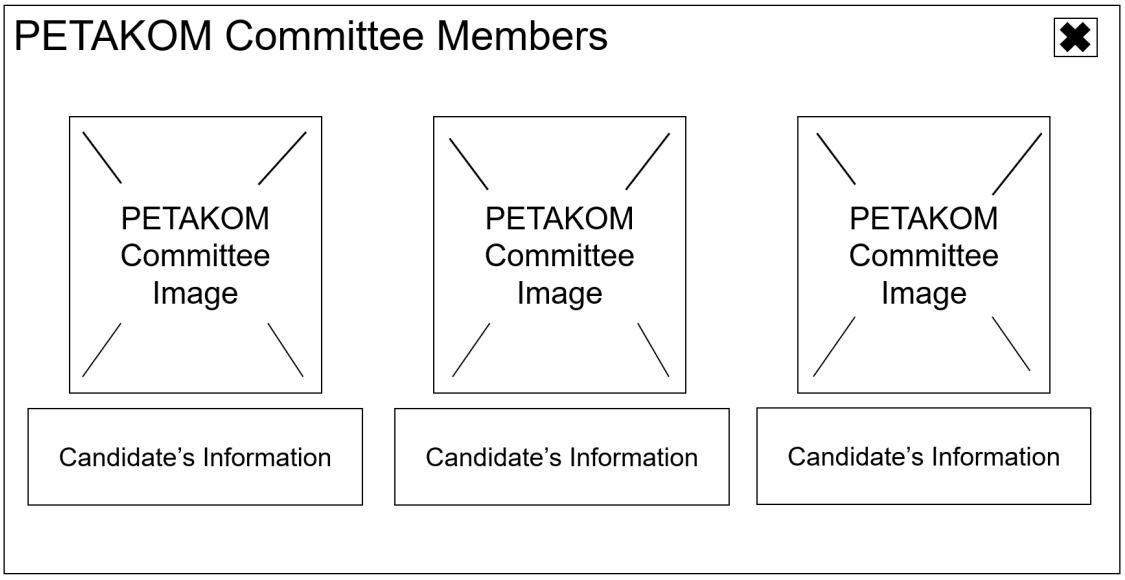


Figure 3.27 PETAKOM Committee member interface

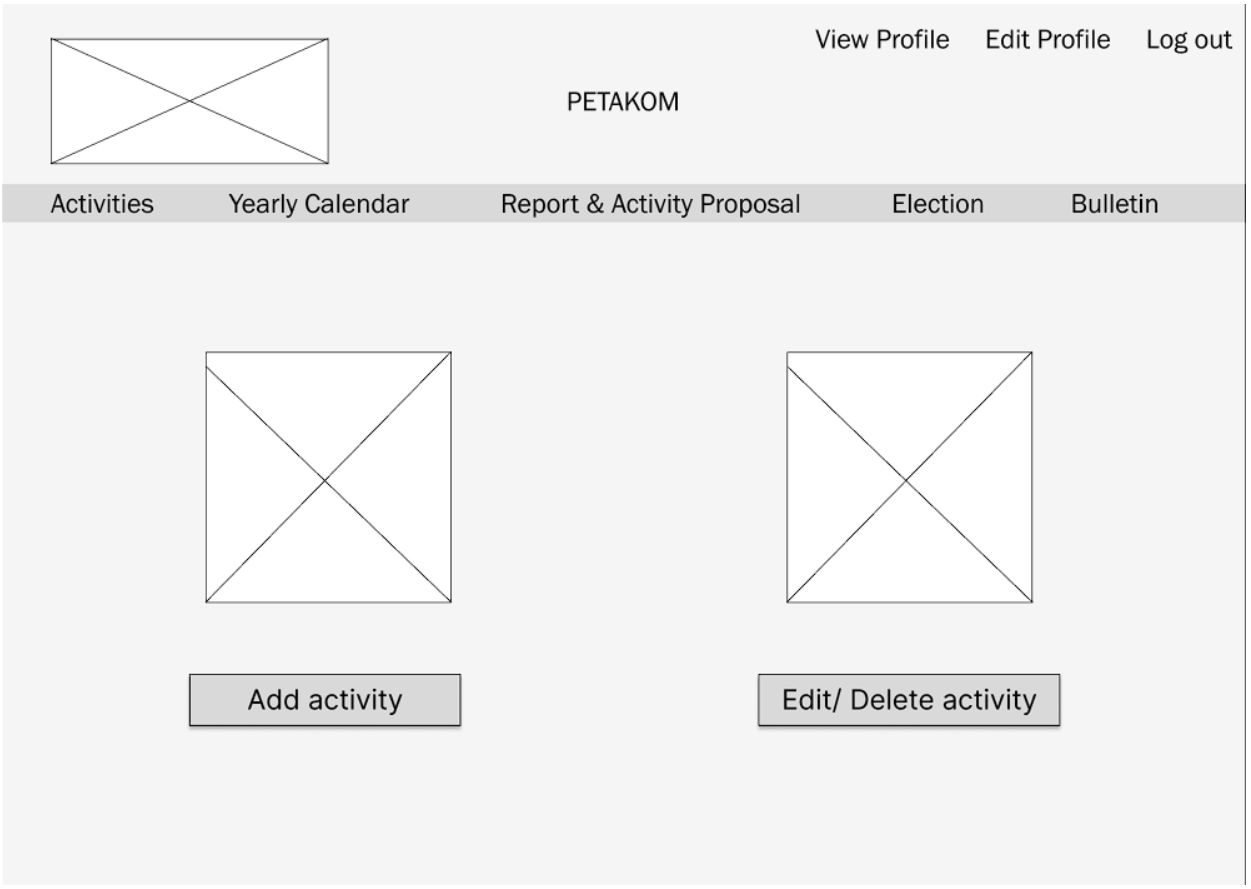


Figure 3.28 PETAKOM manage activities menu interface

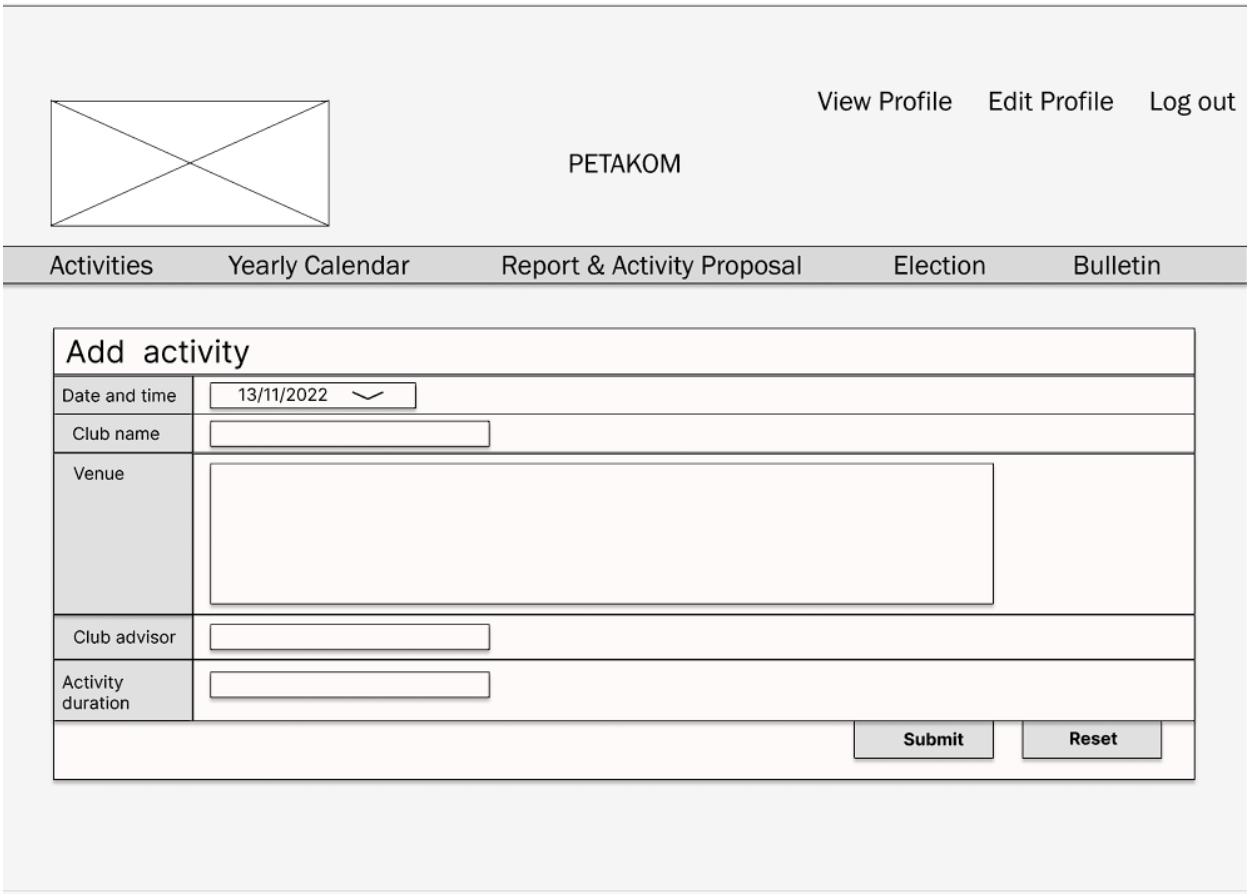


Figure 3.29 PETAKOM add activity interface

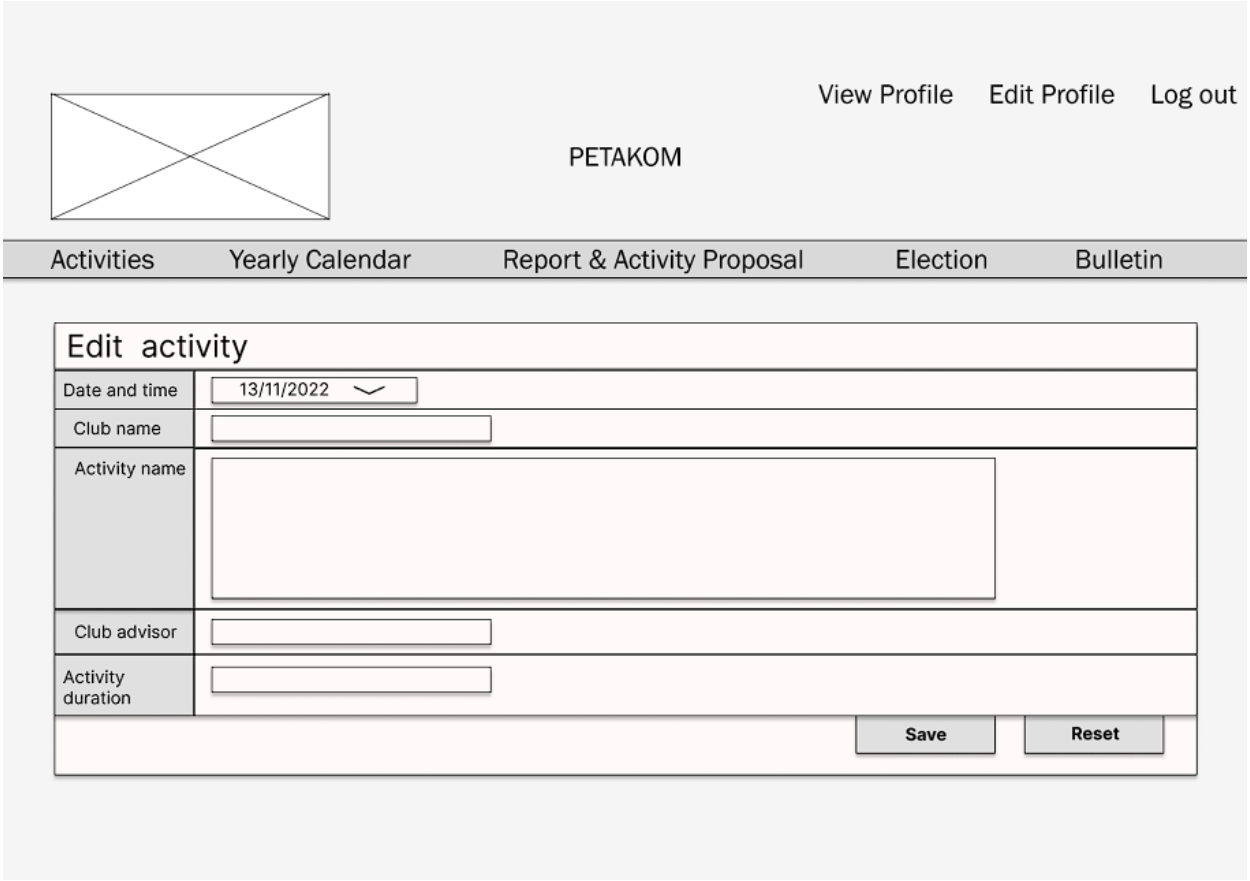


Figure 3.30 PETAKOM edit activity interface

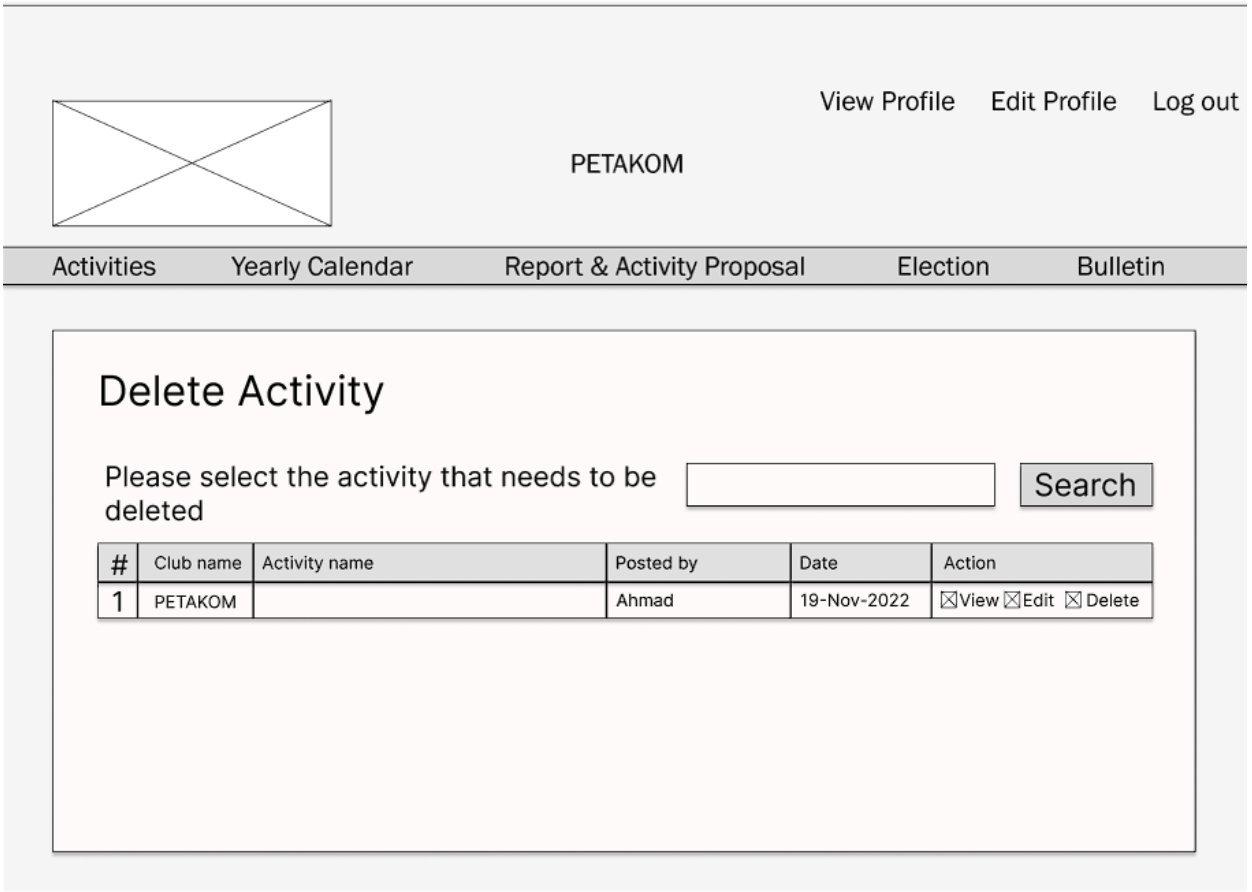


Figure 3.31 PETAKOM delete activity interface

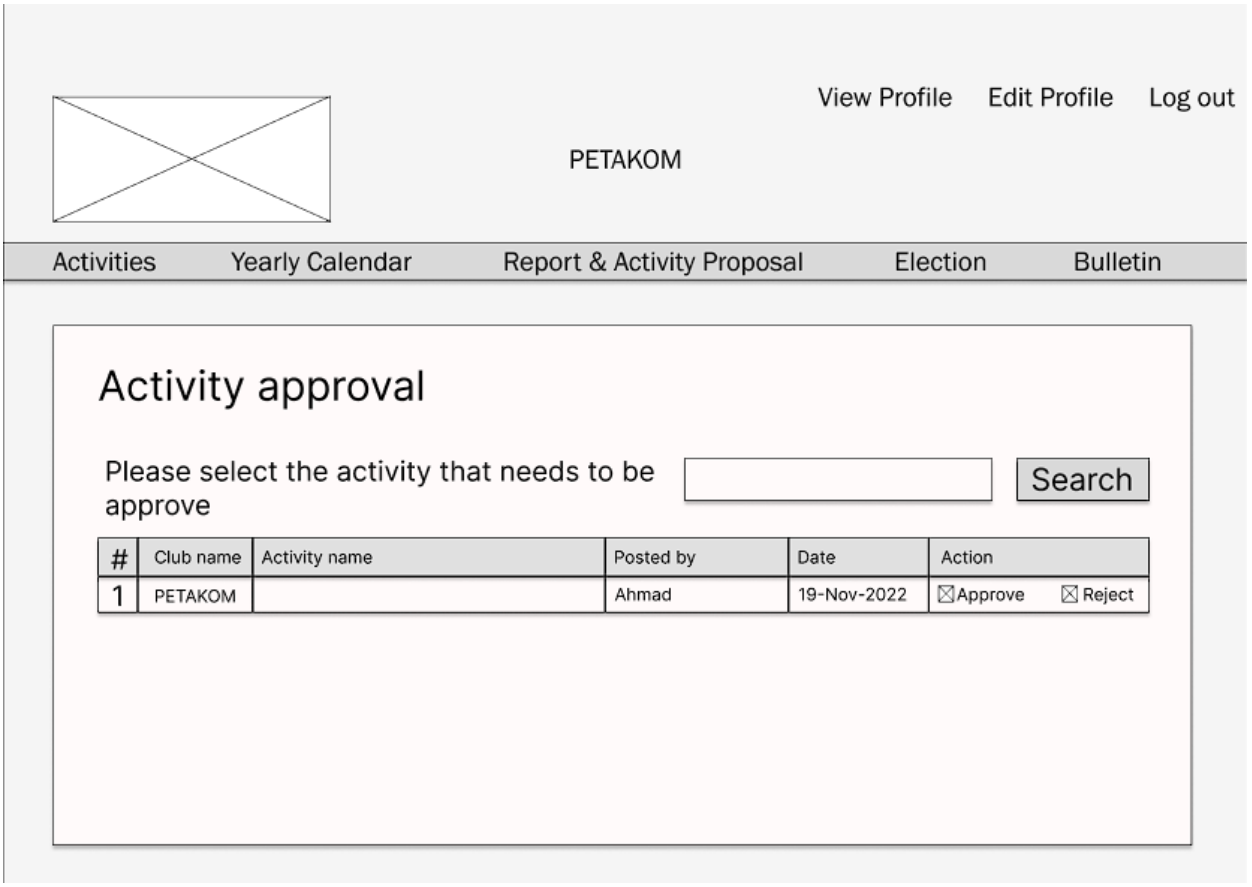


Figure 3.32 PETAKOM activity approval interface

Generate Report and Activity Proposal

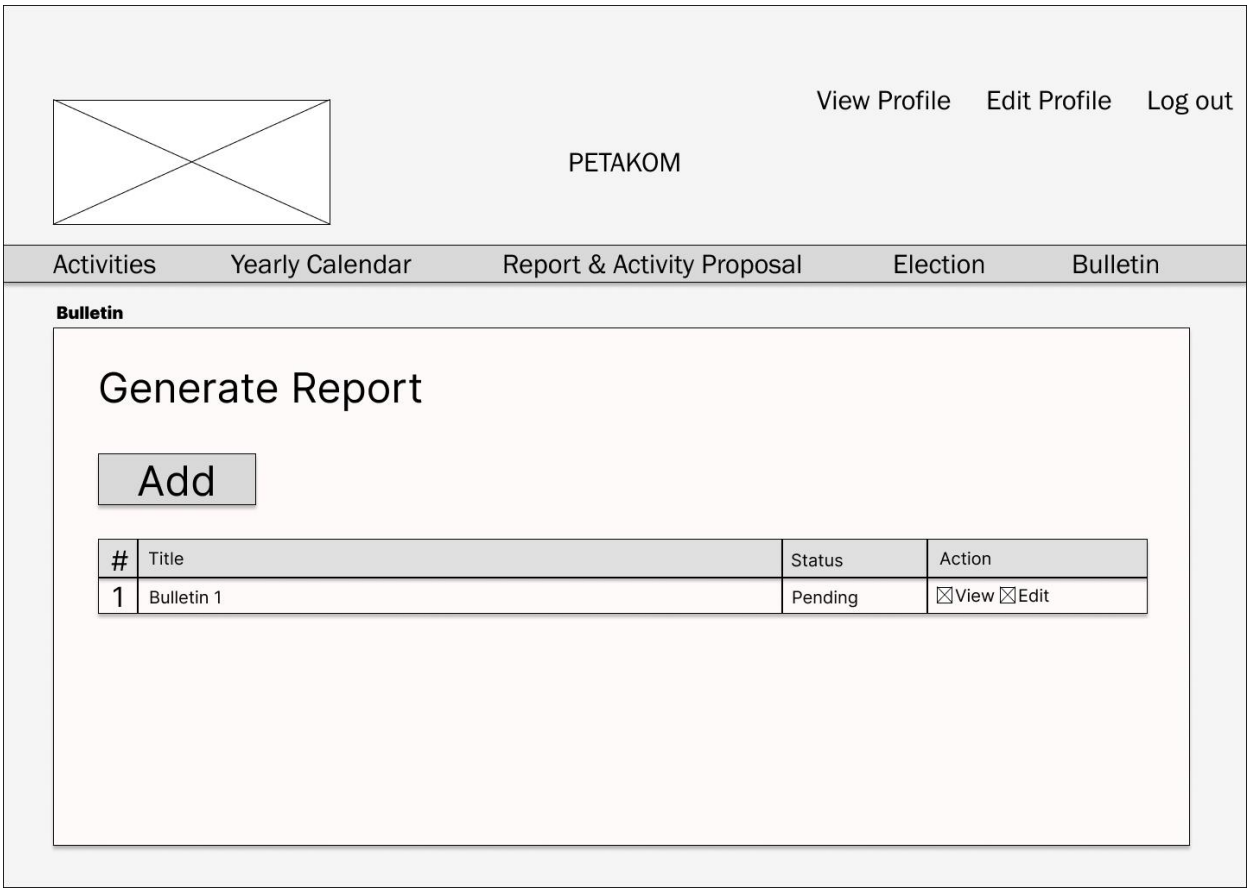


Figure 3.33 Generate Report main page

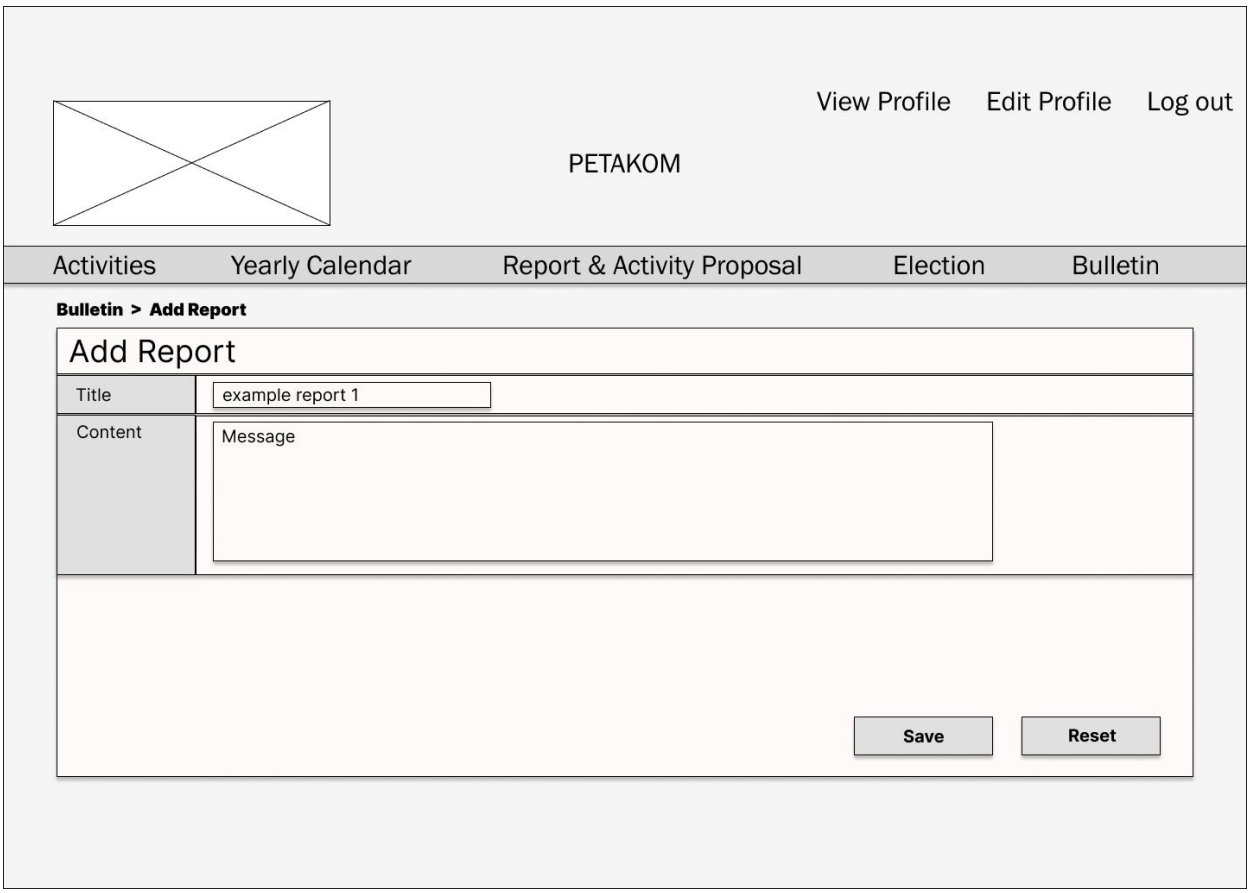


Figure 3.34 Create report page

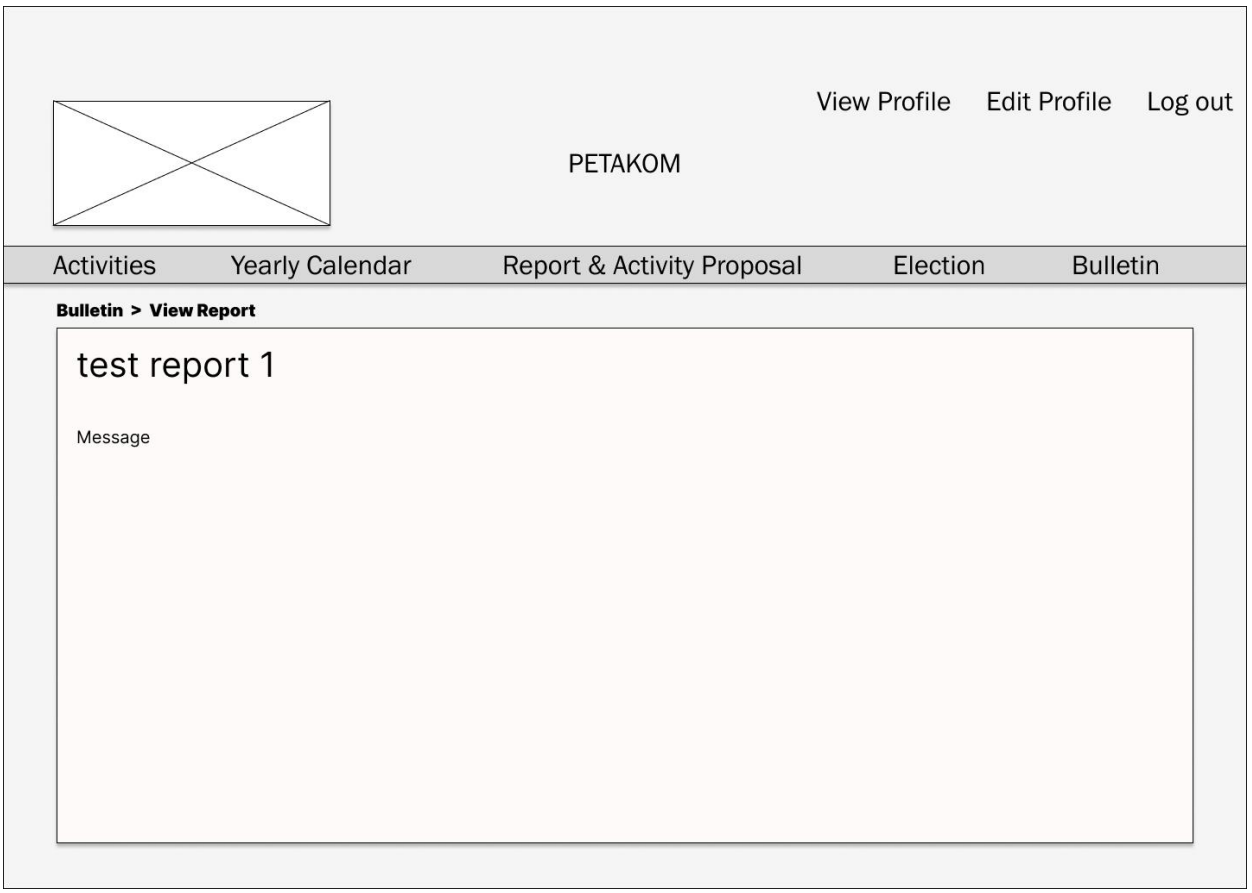


Figure 3.35 View report Page

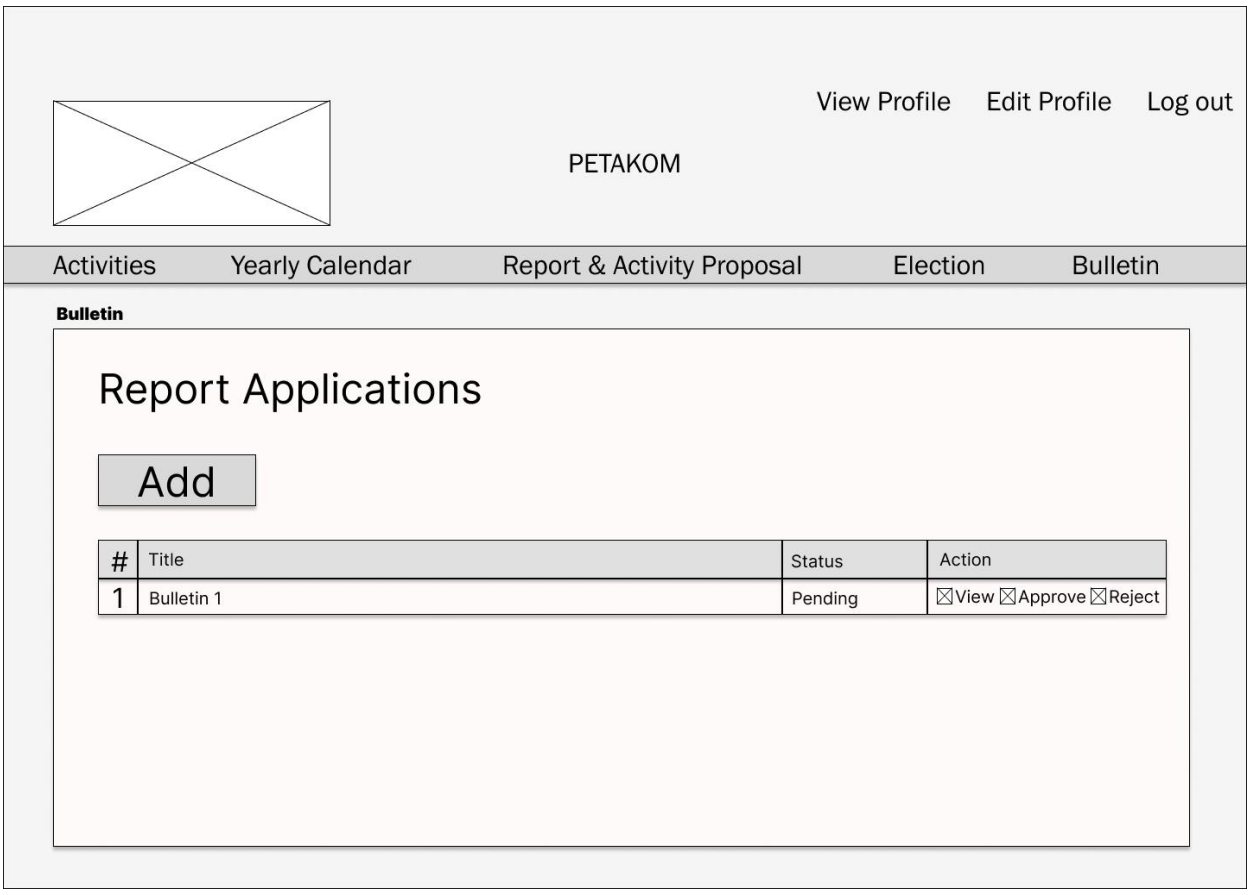


Figure 3.36 Report application main page

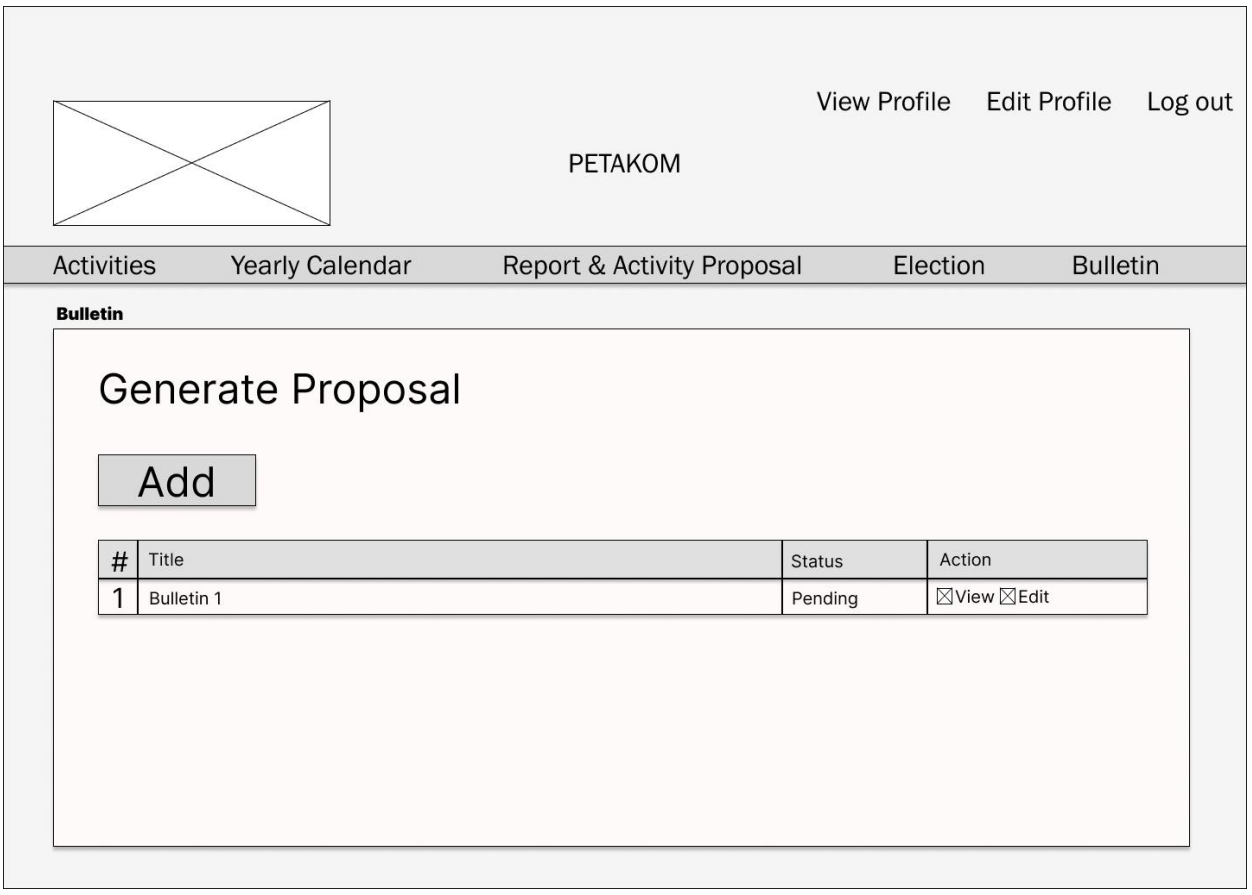


Figure 3.37 Generate proposal main page

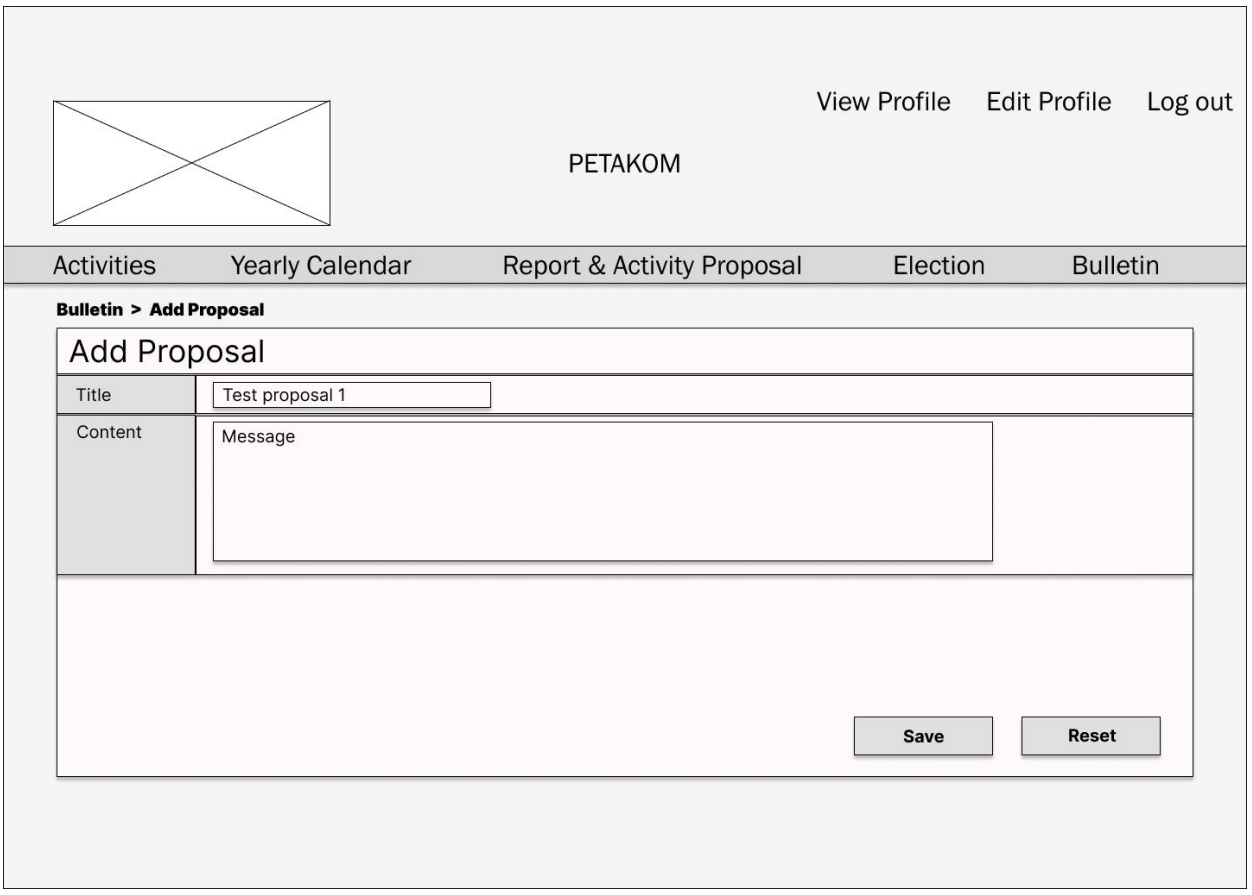


Figure 3.38 Add proposal page

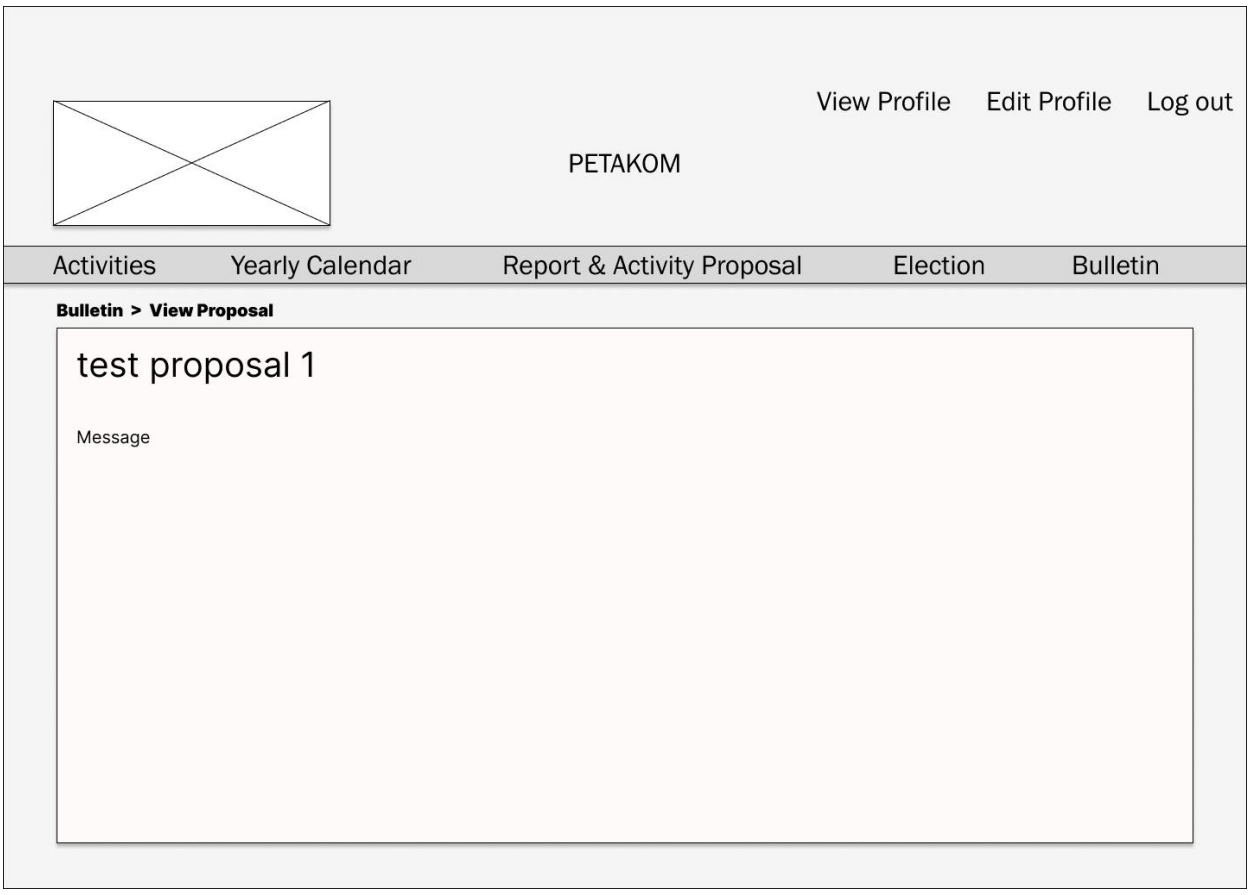


Figure 3.39 View proposal page

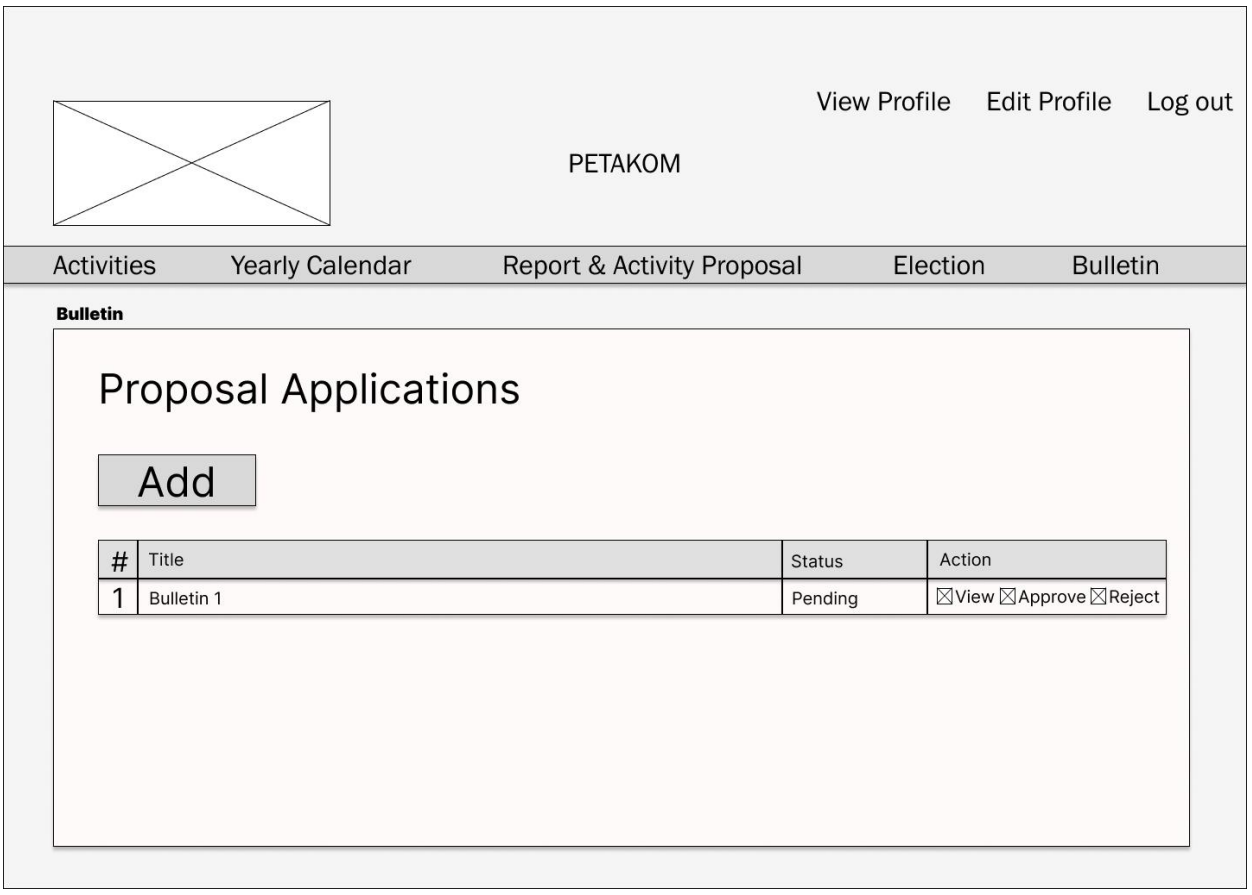


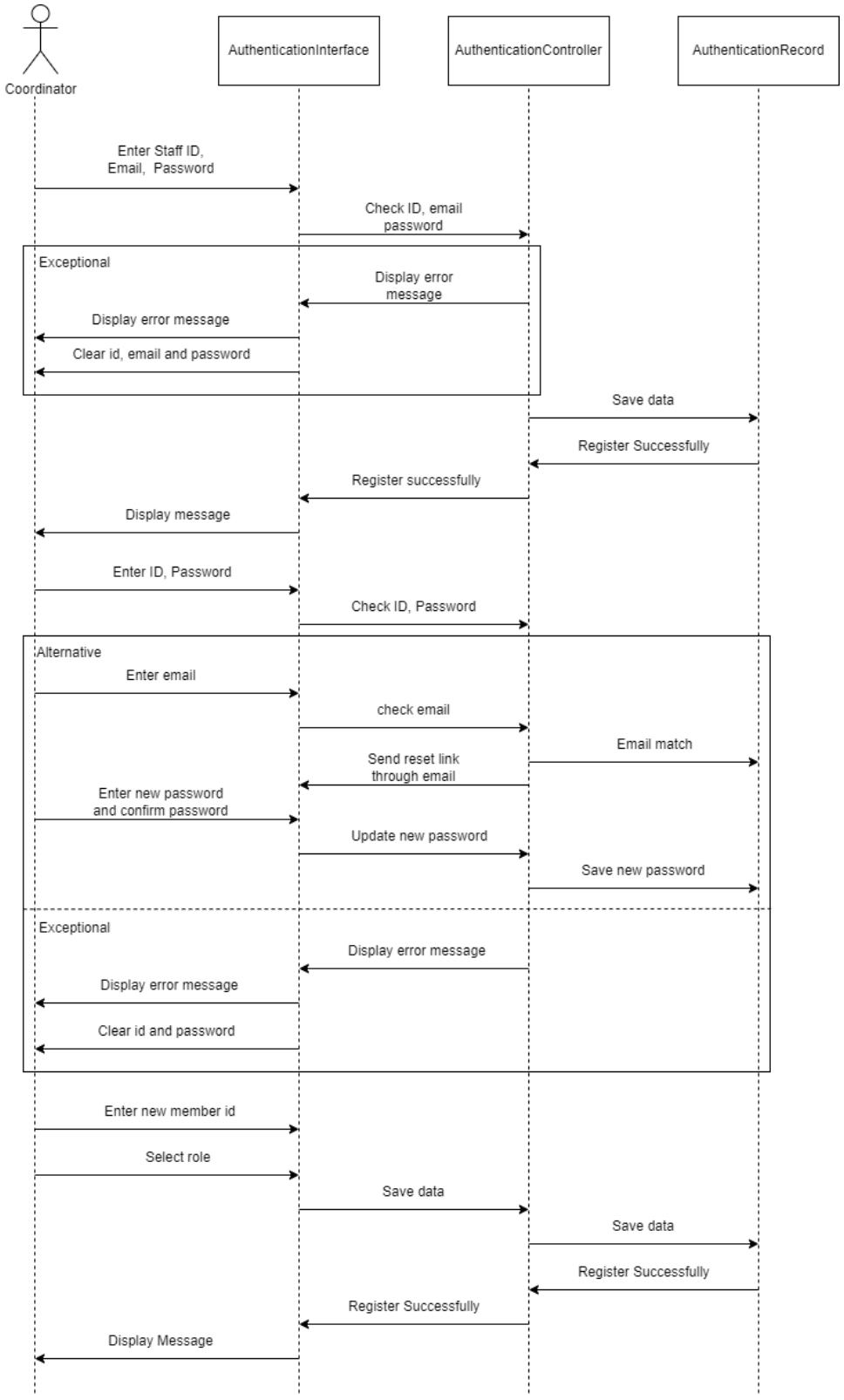
Figure 3.40 Proposal application main page

Appendix A: Acronyms and Abbreviation

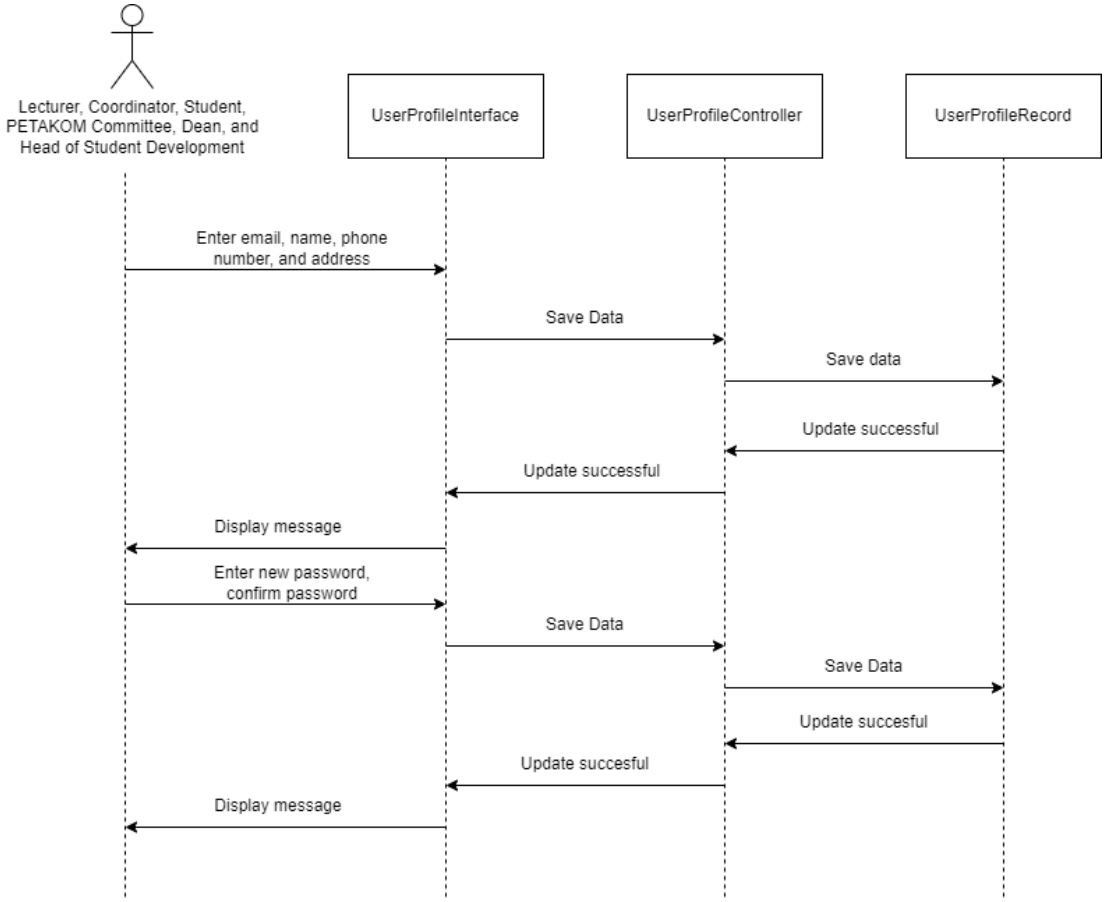
NO.	ABBREVIATION	DESCRIPTION
1.	SRS	Software Requirement Specification
2.	PETAKOM	Persatuan Teknologi Komputer
3.	PTK	Persatuan Teknologi Komputer
4.	RQ	Requirement
5.	UC	Use Case
6.	ID	Identification
7.	UMP	University Malaysia Pahang

Appendix B: Sequence Diagram

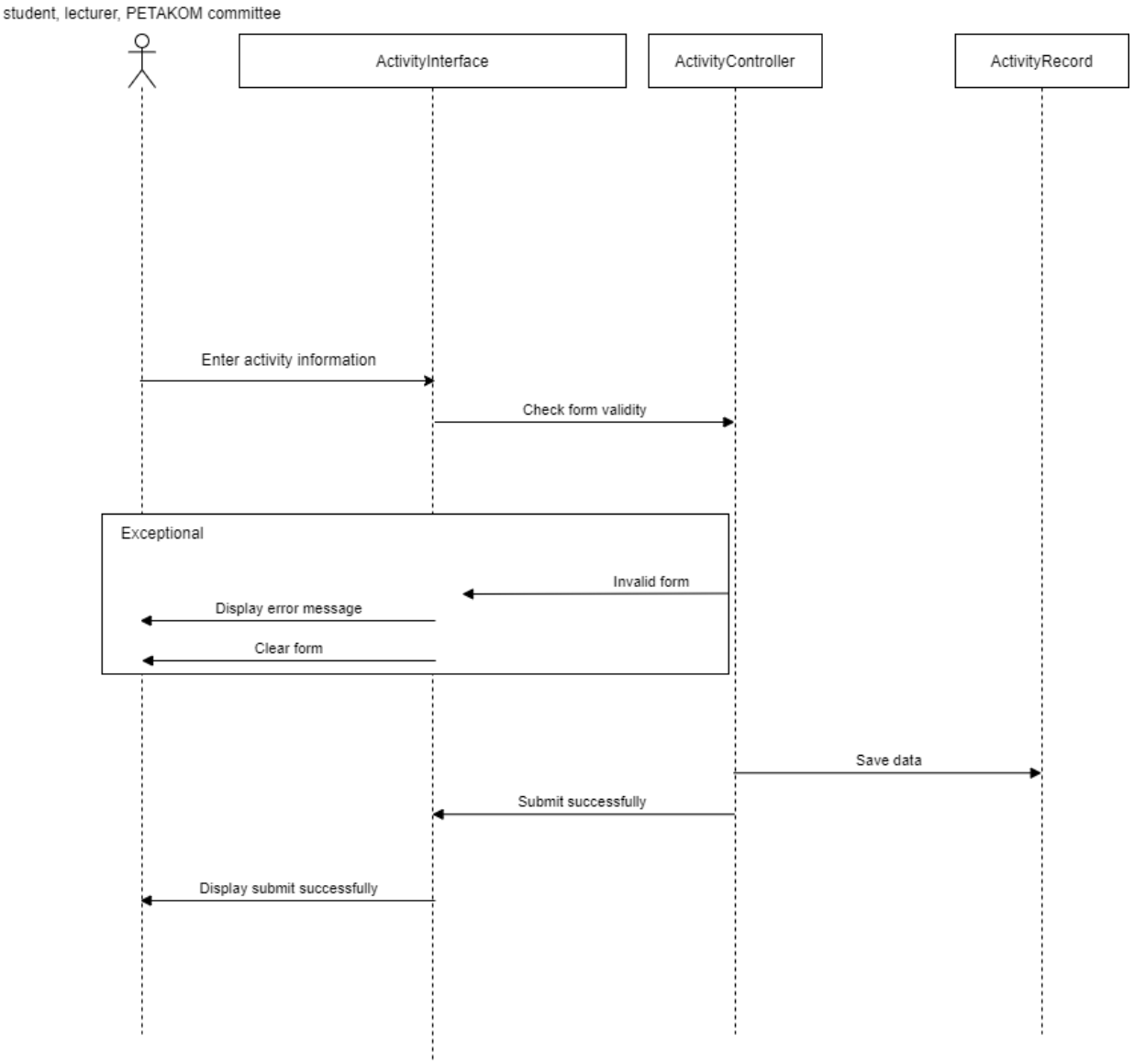
B.1.0 Authentication

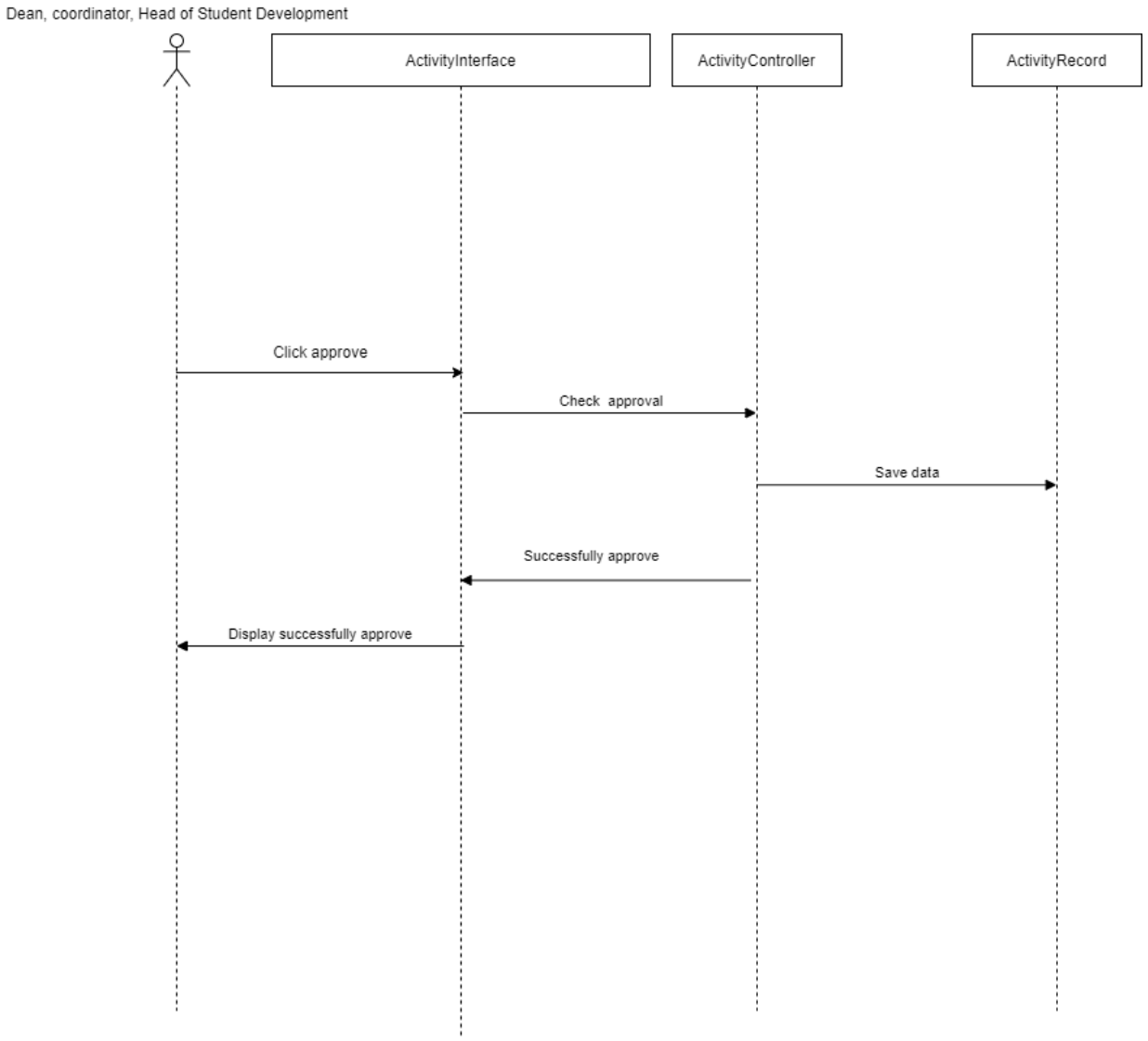


B.2.0 Manage User Profile

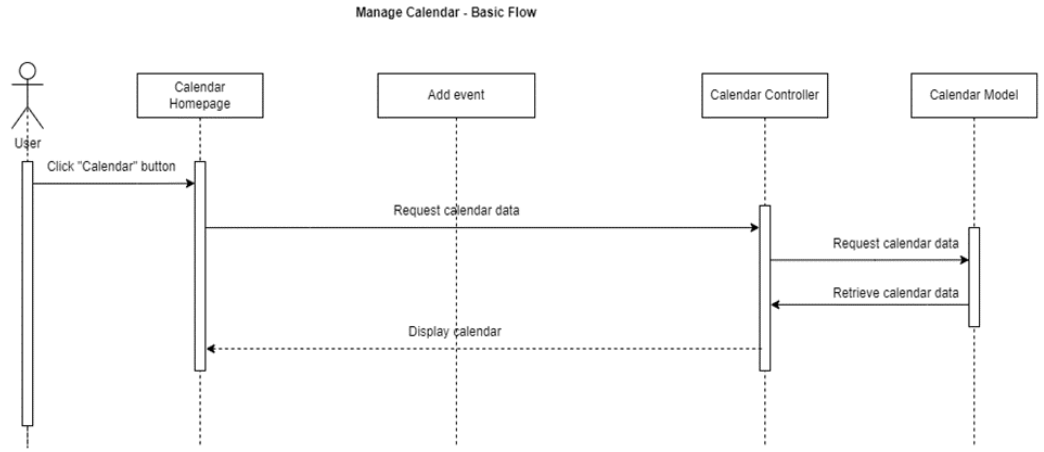


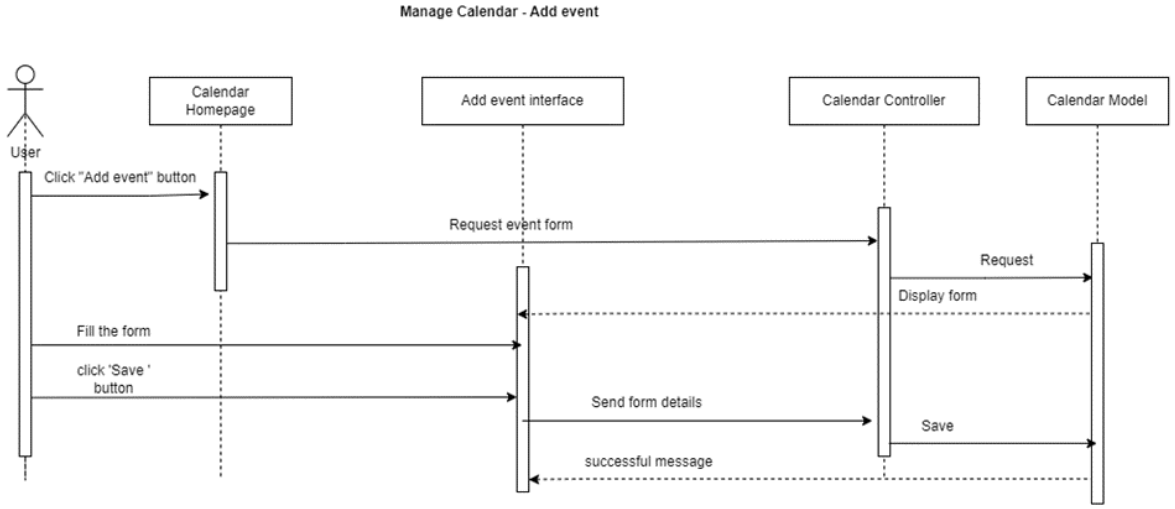
B.2.0 Manage PETAKOM activities



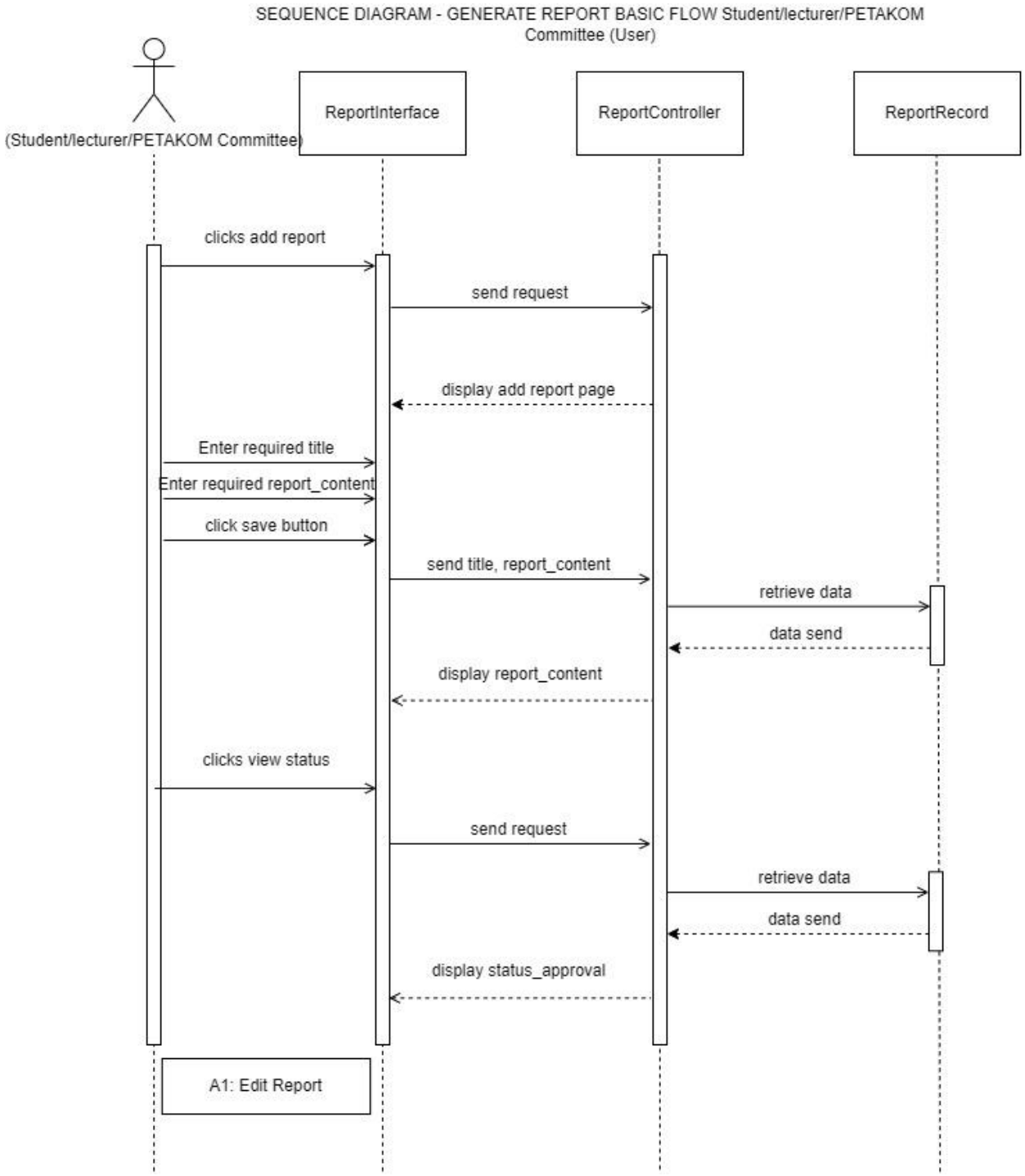

Dean, coordinator, Head of Student Development
ActivityInterface
ActivityController
ActivityRecord
Click approve
Check approval
Save data
Successfully approve
Display successfully approve

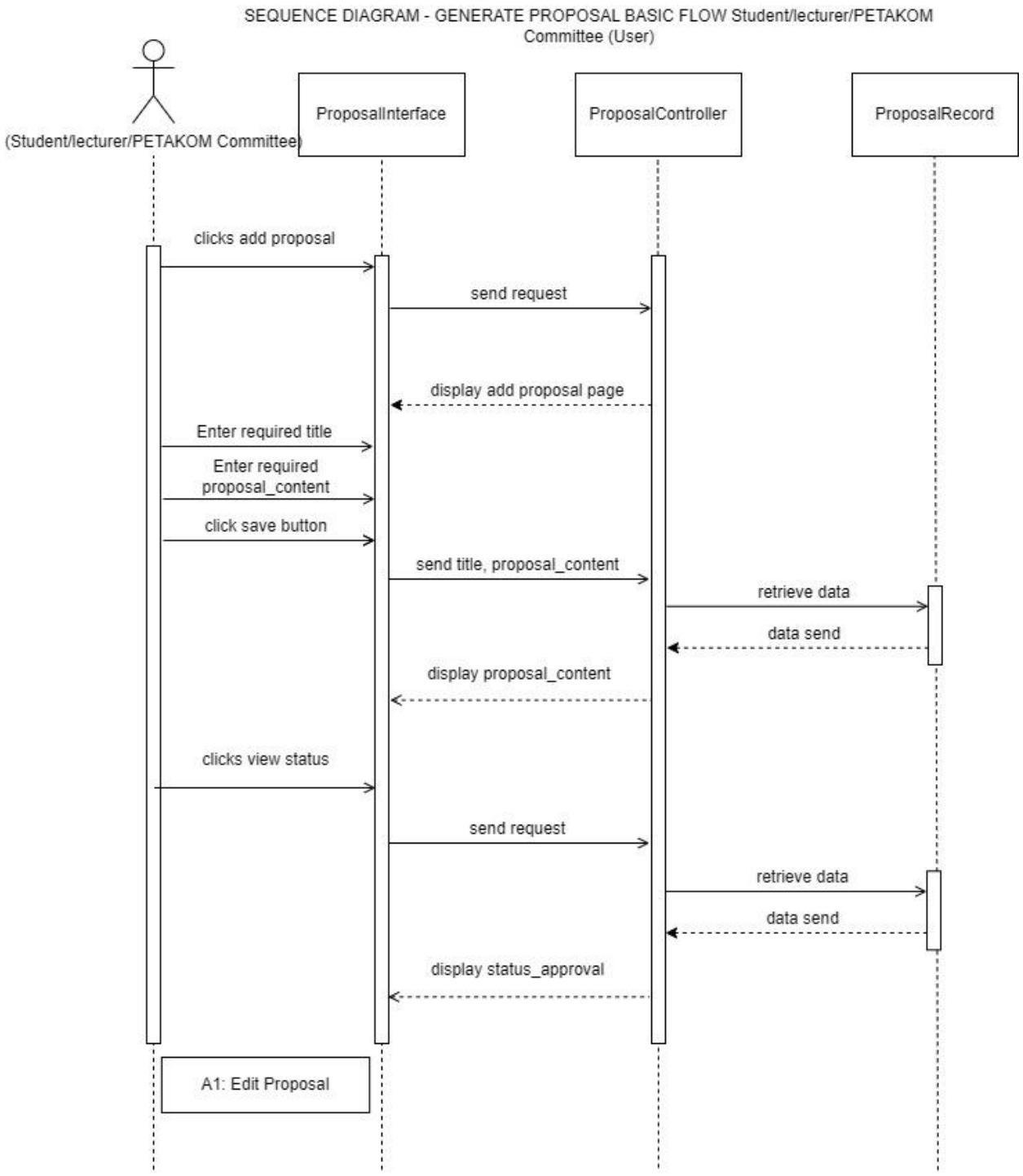
B.4.0 Sequence Diagram Manage Calendar Module

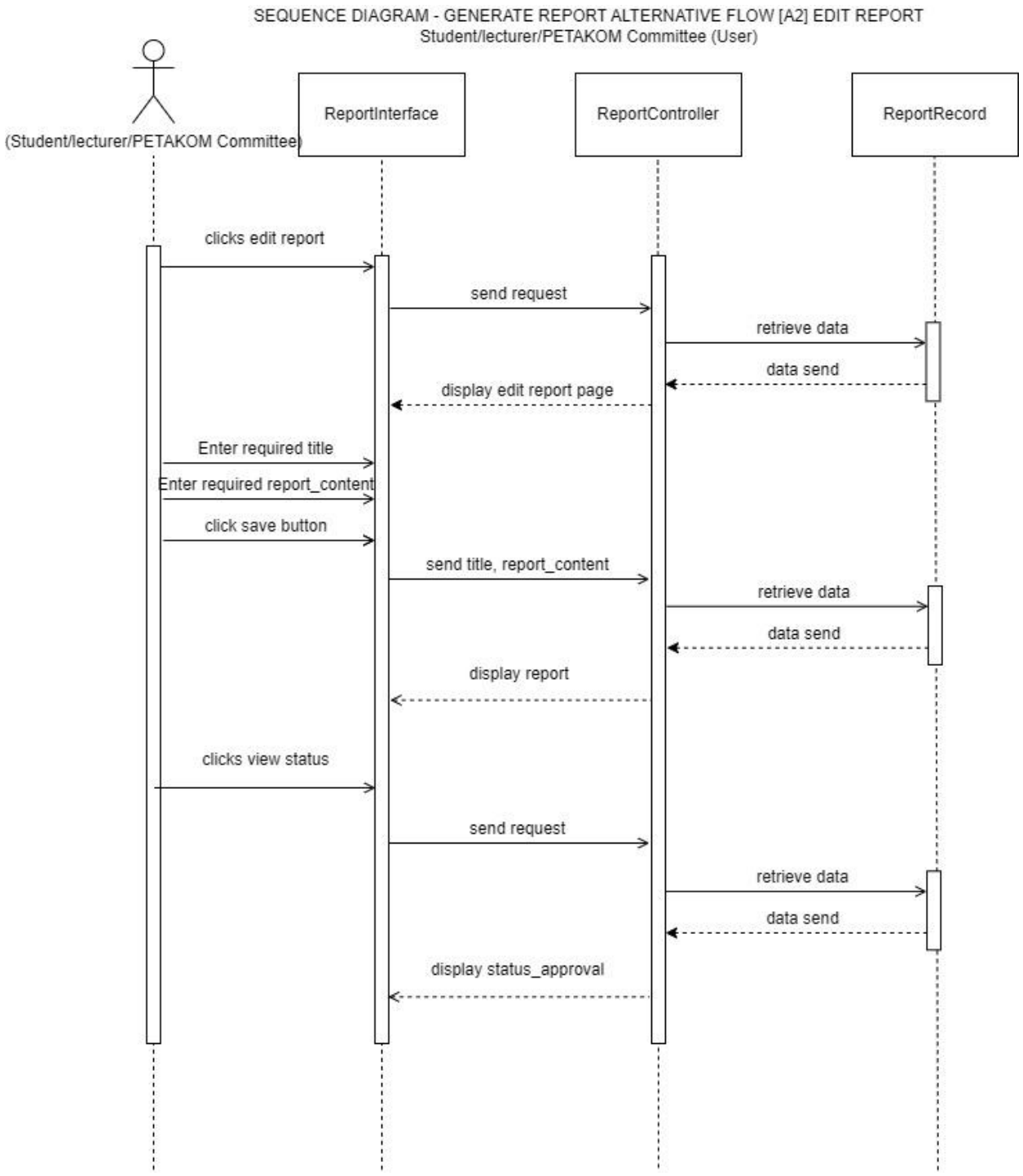


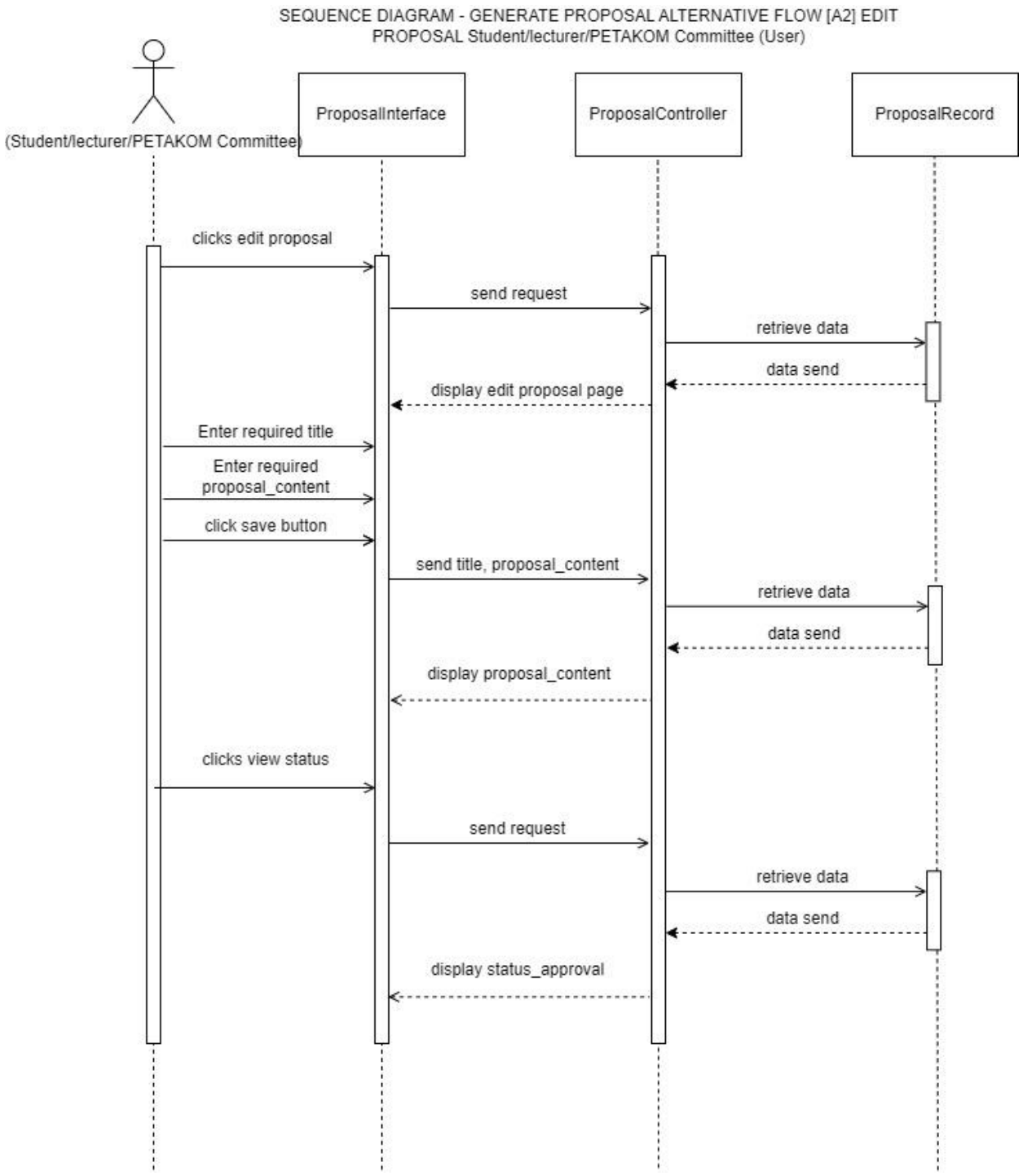


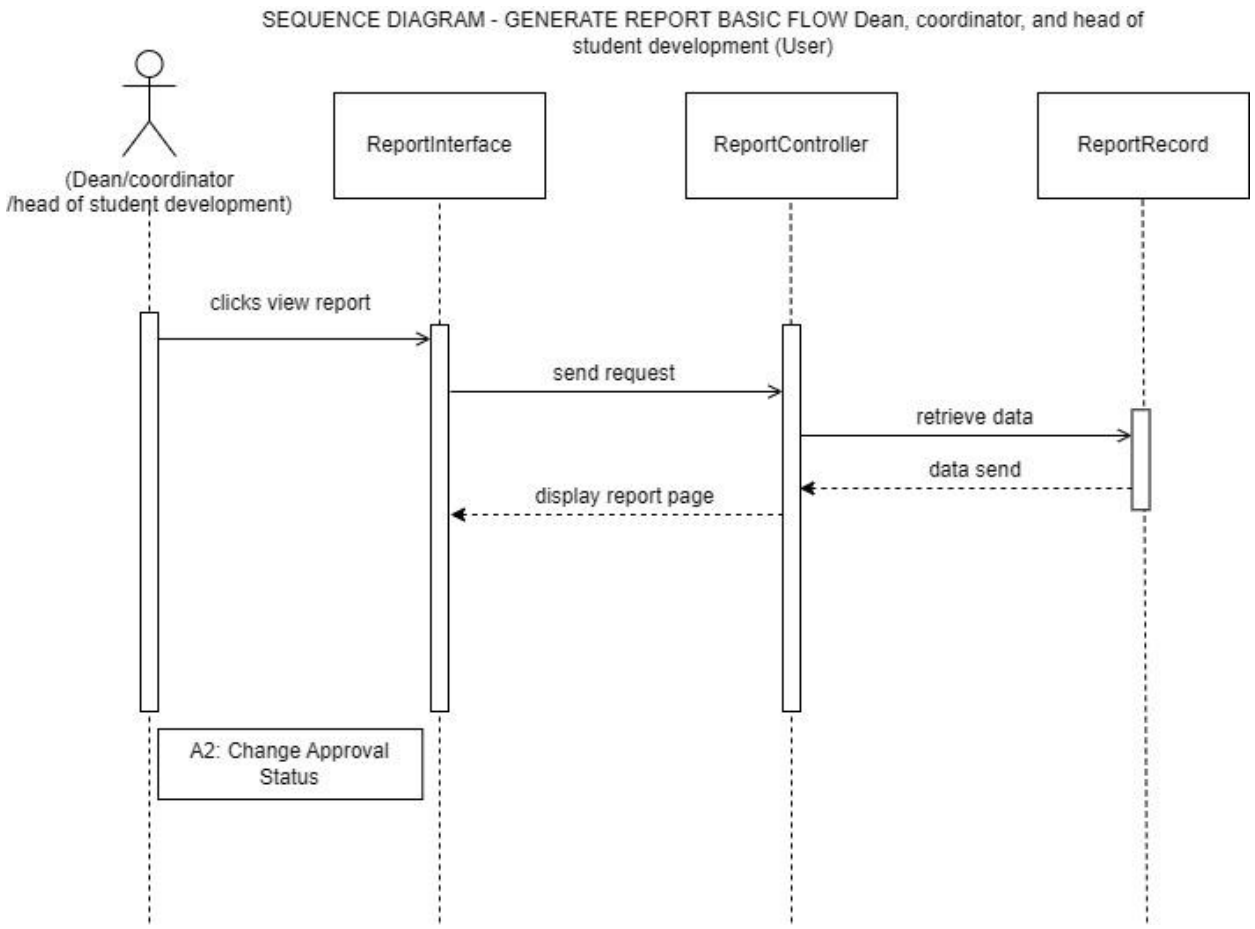
B.5.0 Generate Report and Activity Proposal

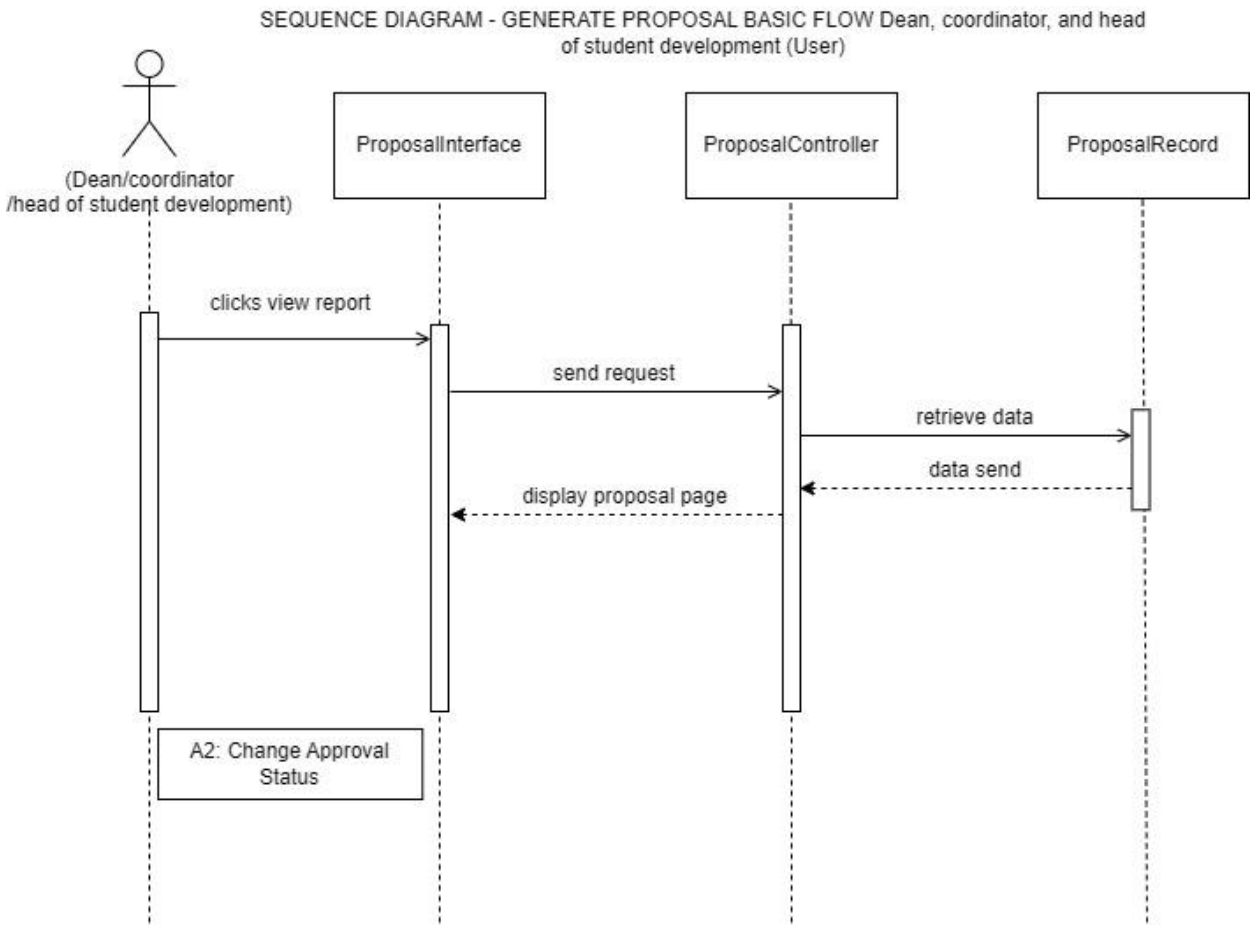


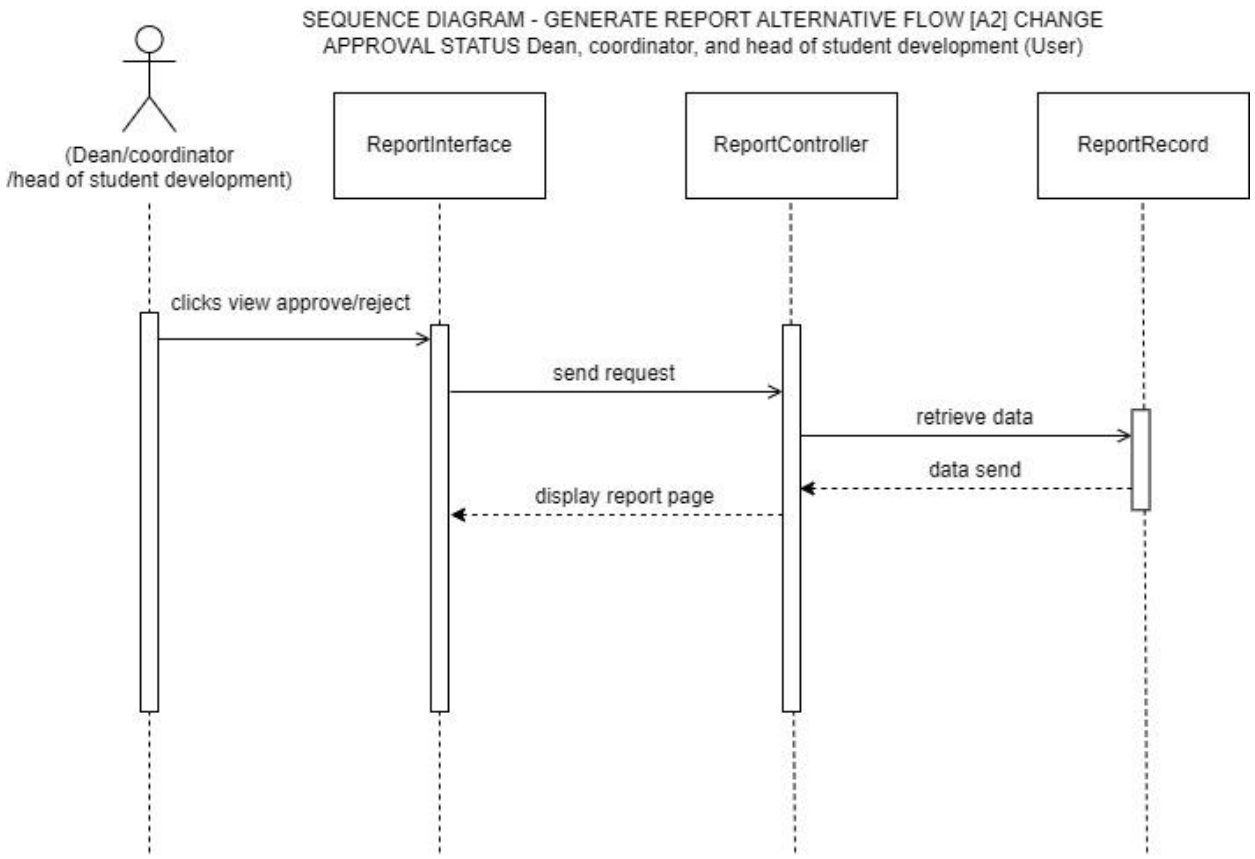

SEQUENCE DIAGRAM - GENERATE PROPOSAL BASIC FLOW Student/lecturer/PETAKOM Committee (User)
(Student/lecturer/PETAKOM Committee)
ProposalInterface
ProposalController
ProposalRecord
clicks add proposal
send request
display add proposal page
Enter required title
Enter required proposal_content
click save button
send title, proposal_content
retrieve data
data send
display proposal_content
clicks view status
send request
retrieve data
data send
display status_approval
A1: Edit Proposal

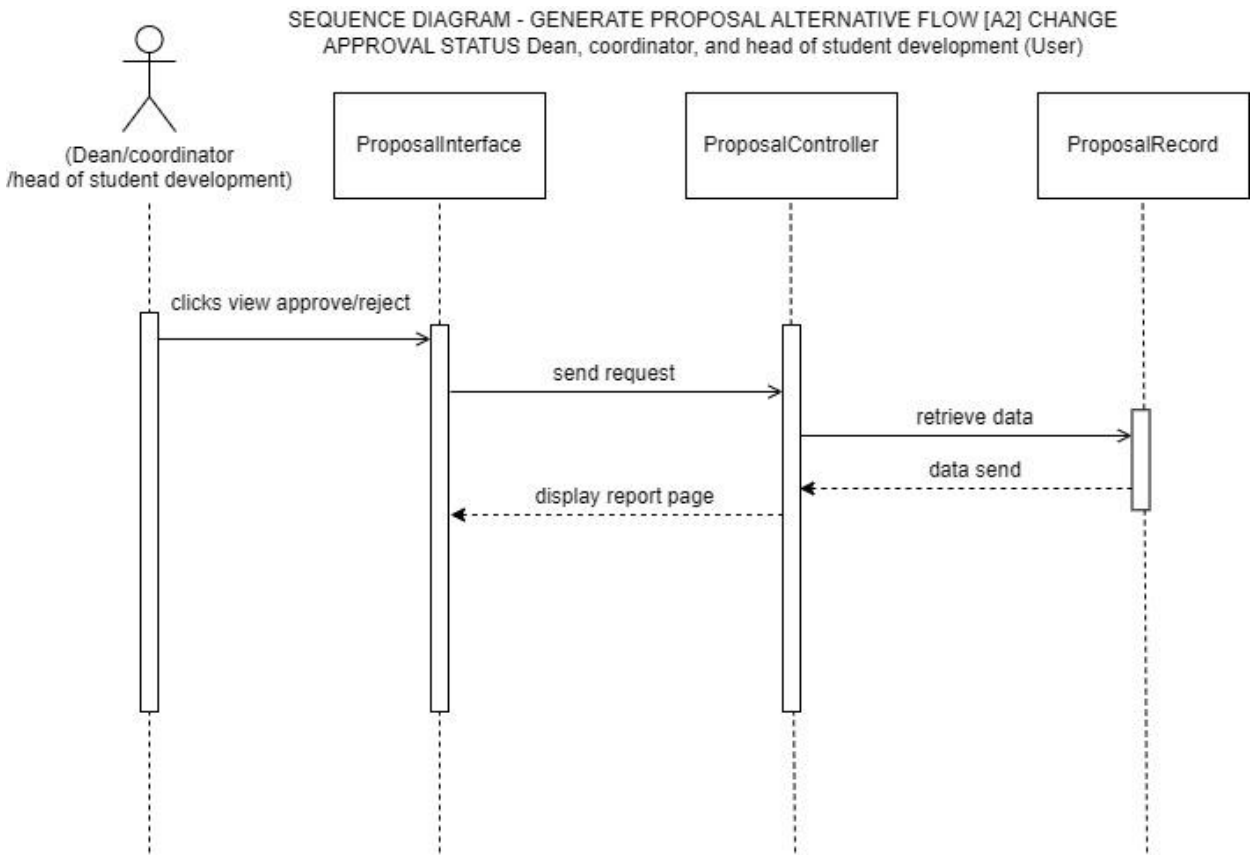

SEQUENCE DIAGRAM - GENERATE REPORT ALTERNATIVE FLOW [A2] EDIT REPORT
Student/lecturer/PETAKOM Committee (User)
(Student/lecturer/PETAKOM Committee)
ReportInterface
ReportController
ReportRecord
clicks edit report
send request
retrieve data
data send
display edit report page
Enter required title
Enter required report_content
click save button
send title, report_content
retrieve data
data send
display report
clicks view status
send request
retrieve data
data send
display status_approval


SEQUENCE DIAGRAM - GENERATE PROPOSAL ALTERNATIVE FLOW [A2] EDIT PROPOSAL Student/lecturer/PETAKOM Committee (User)
(Student/lecturer/PETAKOM Committee)
ProposalInterface
ProposalController
ProposalRecord
clicks edit proposal
send request
retrieve data
data send
display edit proposal page
Enter required title
Enter required proposal_content
click save button
send title, proposal_content
retrieve data
data send
display proposal_content
clicks view status
send request
retrieve data
data send
display status_approval

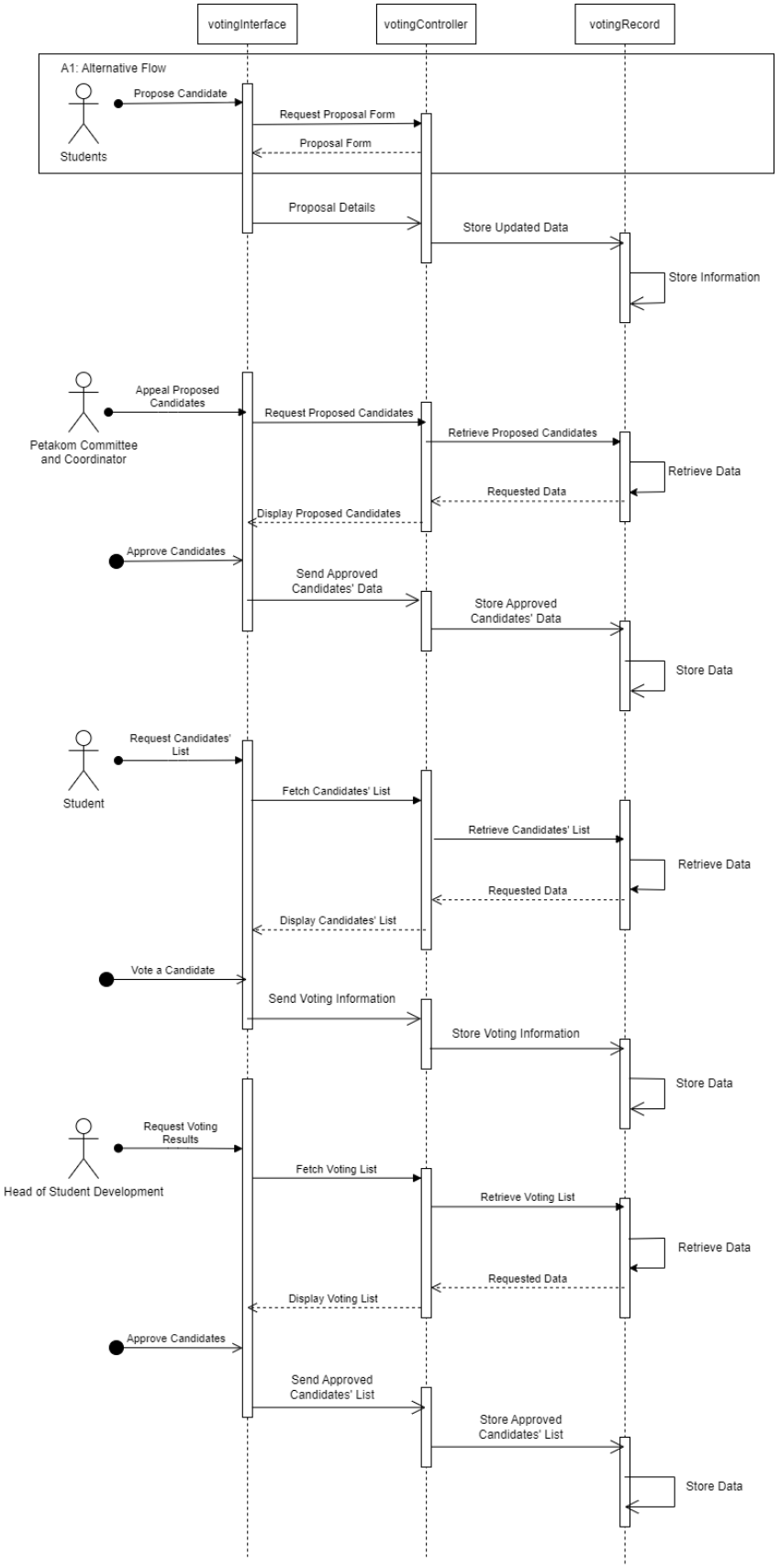

SEQUENCE DIAGRAM - GENERATE REPORT BASIC FLOW Dean, coordinator, and head of student development (User)
(Dean/coordinator /head of student development)
ReportInterface
ReportController
ReportRecord
clicks view report
send request
retrieve data
data send
display report page
A2: Change Approval Status

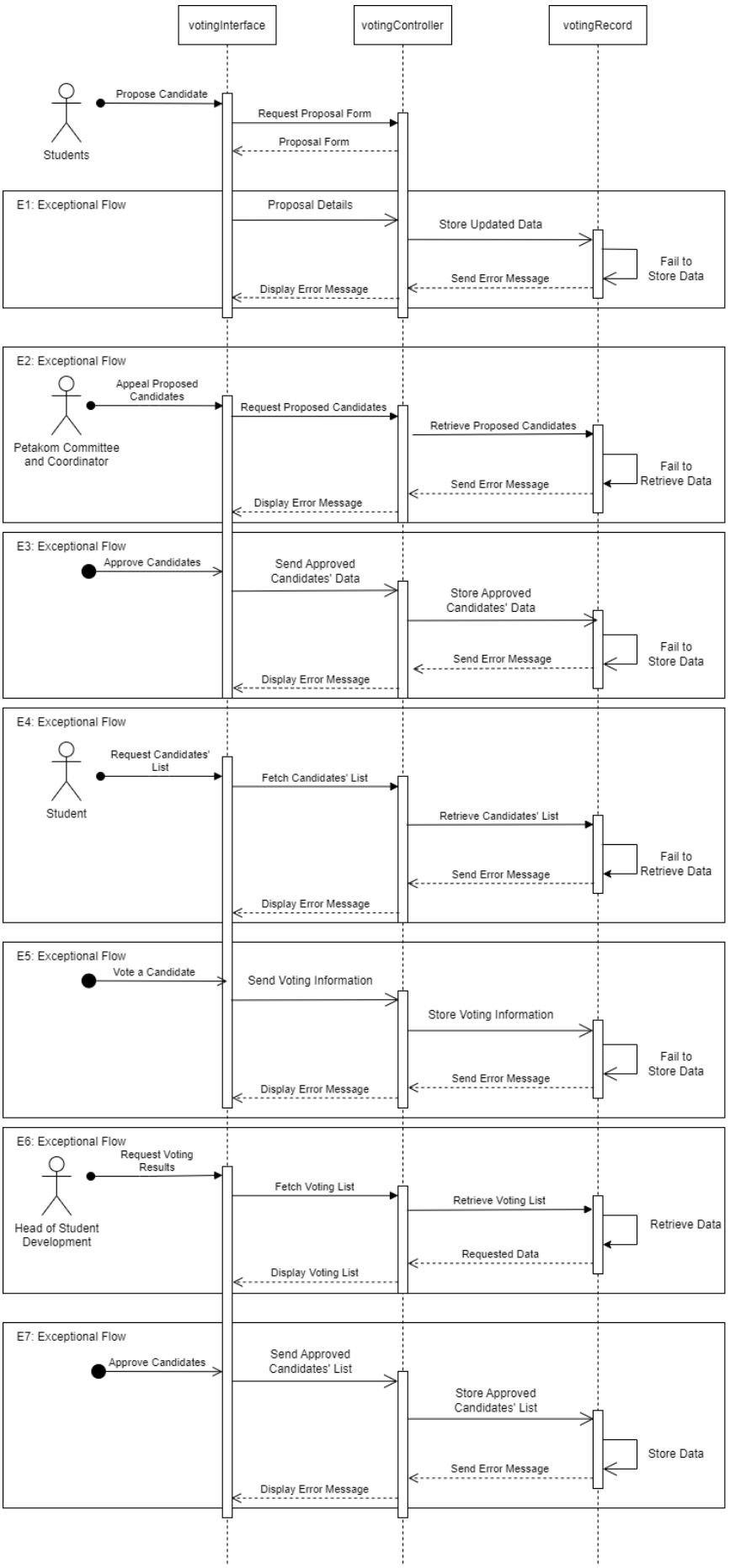

SEQUENCE DIAGRAM - GENERATE PROPOSAL BASIC FLOW Dean, coordinator, and head of student development (User)
(Dean/coordinator /head of student development)
ProposalInterface
ProposalController
ProposalRecord
clicks view report
send request
retrieve data
data send
display proposal page
A2: Change Approval Status


SEQUENCE DIAGRAM - GENERATE REPORT ALTERNATIVE FLOW [A2] CHANGE APPROVAL STATUS Dean, coordinator, and head of student development (User)
(Dean/coordinator /head of student development)
ReportInterface
ReportController
ReportRecord
clicks view approve/reject
send request
retrieve data
data send
display report page

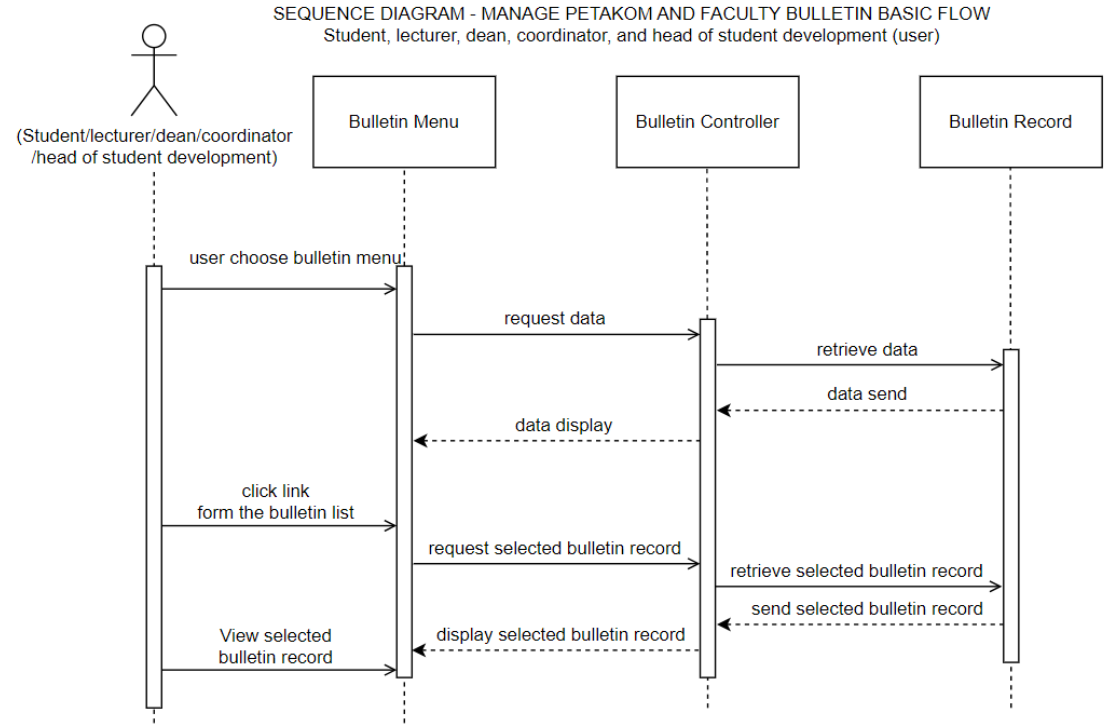

SEQUENCE DIAGRAM - GENERATE PROPOSAL ALTERNATIVE FLOW [A2] CHANGE APPROVAL STATUS Dean, coordinator, and head of student development (User)
(Dean/coordinator /head of student development)
ProposalInterface
ProposalController
ProposalRecord
clicks view approve/reject
send request
retrieve data
data send
display report page

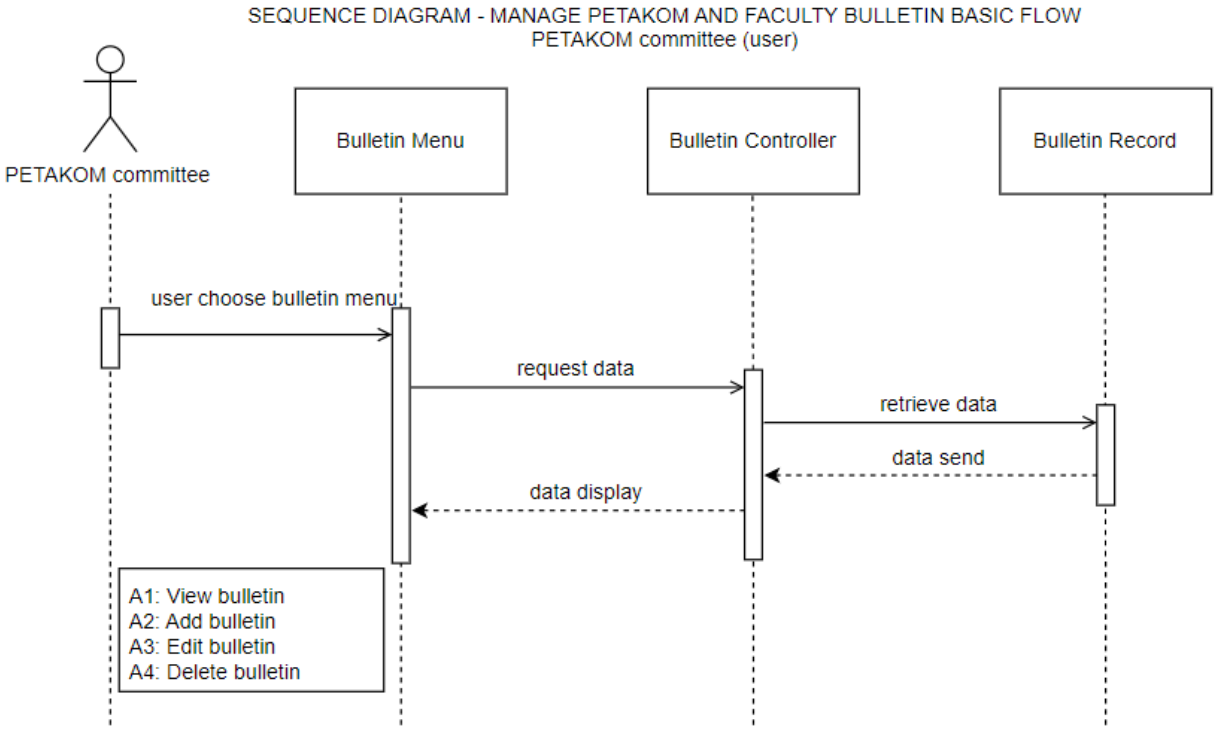
B.6.0 Manage Committee Election



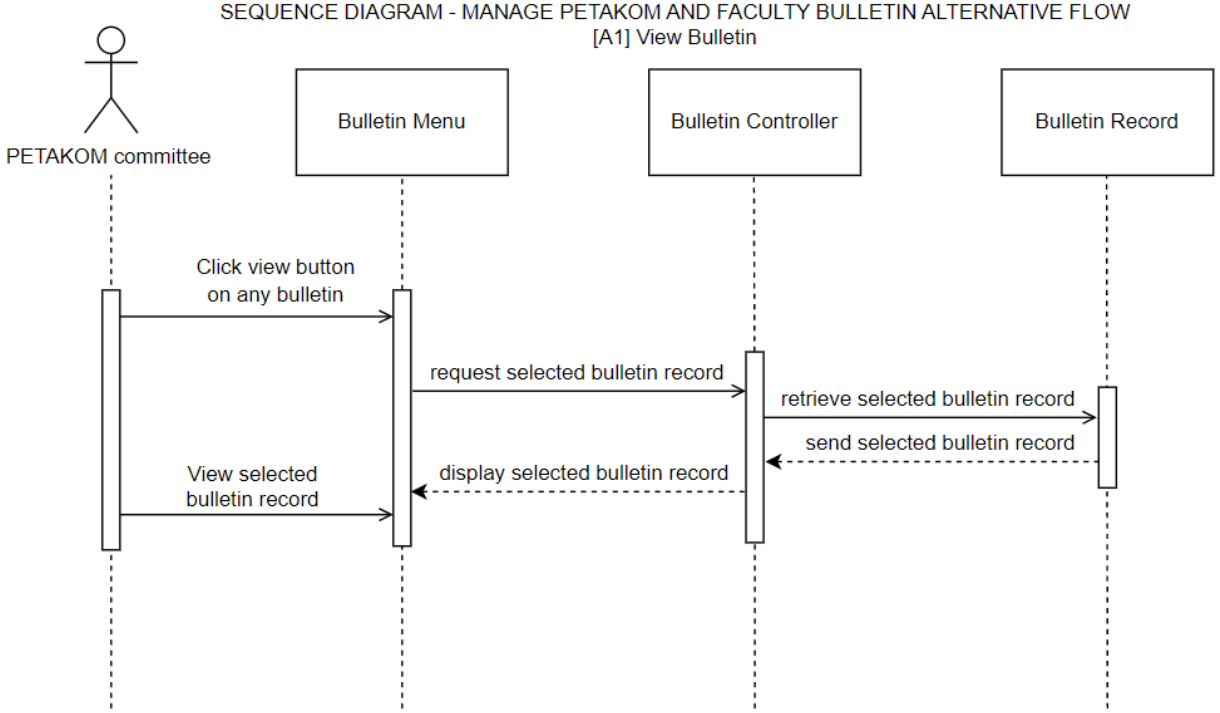

votingInterface
votingController
votingRecord
Students
Propose Candidate
Request Proposal Form
Proposal Form
E1: Exceptional Flow
Proposal Details
Store Updated Data
Fail to Store Data
Send Error Message
Display Error Message
E2: Exceptional Flow
Petakom Committee and Coordinator
Appeal Proposed Candidates
Request Proposed Candidates
Retrieve Proposed Candidates
Fail to Retrieve Data
Send Error Message
Display Error Message
E3: Exceptional Flow
Approve Candidates
Send Approved Candidates' Data
Store Approved Candidates' Data
Fail to Store Data
Send Error Message
Display Error Message
E4: Exceptional Flow
Student
Request Candidates' List
Fetch Candidates' List
Retrieve Candidates' List
Fail to Retrieve Data
Send Error Message
Display Error Message
E5: Exceptional Flow
Vote a Candidate
Send Voting Information
Store Voting Information
Fail to Store Data
Send Error Message
Display Error Message
E6: Exceptional Flow
Head of Student Development
Request Voting Results
Fetch Voting List
Retrieve Voting List
Retrieve Data
Requested Data
Display Voting List
E7: Exceptional Flow
Approve Candidates
Send Approved Candidates' List
Store Approved Candidates' List
Store Data
Send Error Message
Display Error Message

B.7.0 Manage PETAKOM and faculty bulletin

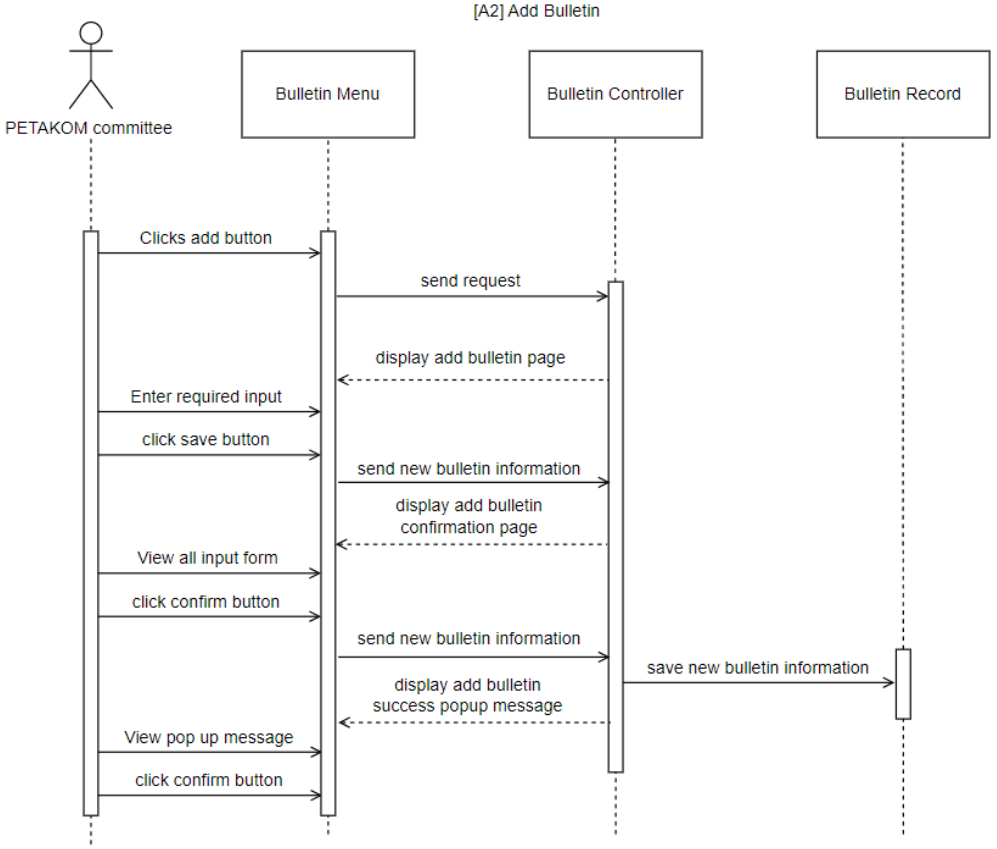




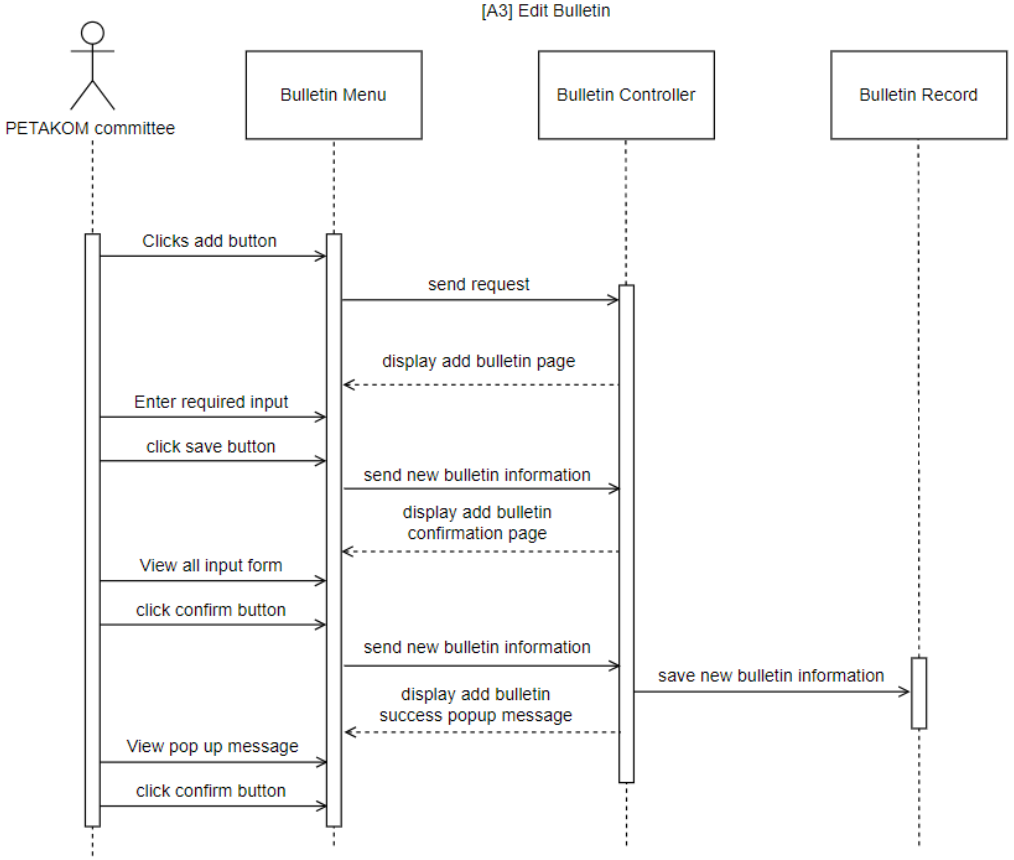
SEQUENCE DIAGRAM - MANAGE PETAKOM AND FACULTY BULLETIN ALTERNATIVE FLOW
[A1] View Bulletin



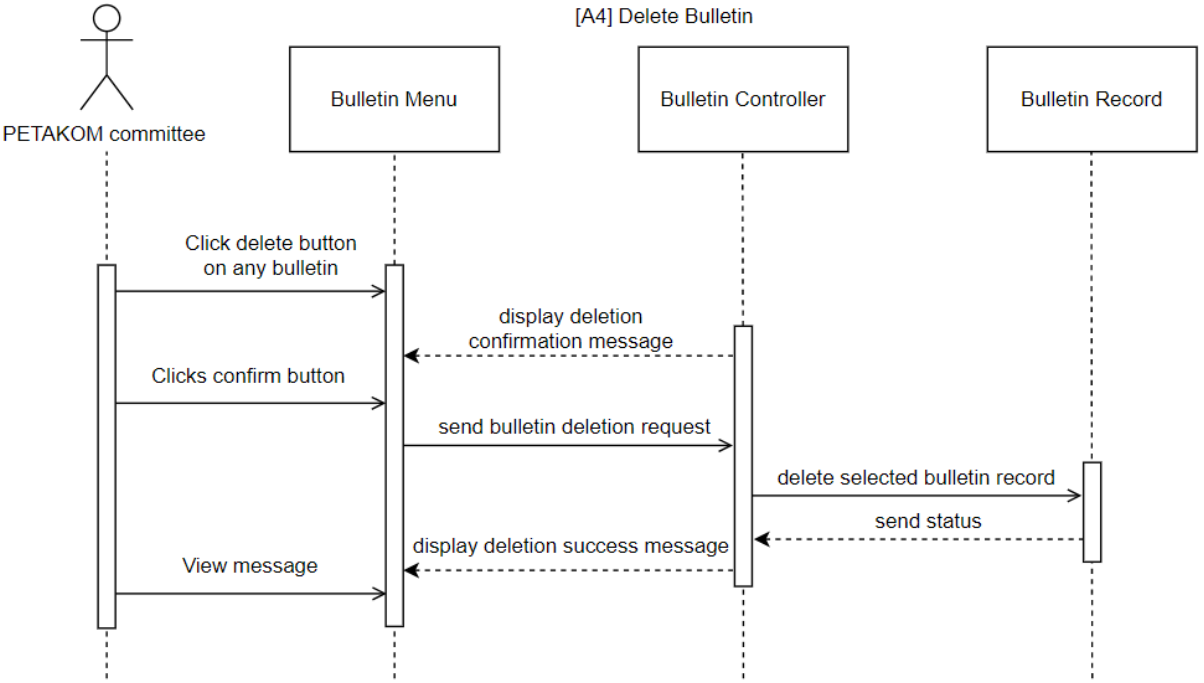
SEQUENCE DIAGRAM - MANAGE PETAKOM AND FACULTY BULLETIN ALTERNATIVE FLOW
[A2] Add Bulletin



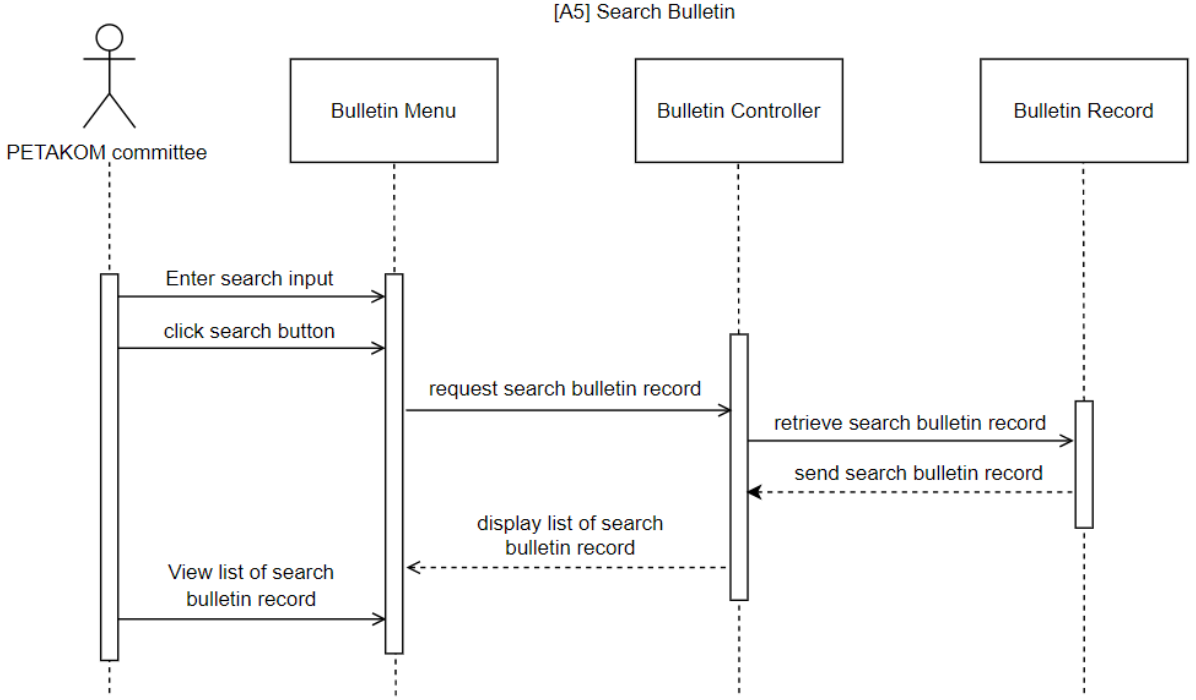
SEQUENCE DIAGRAM - MANAGE PETAKOM AND FACULTY BULLETIN ALTERNATIVE FLOW
[A3] Edit Bulletin



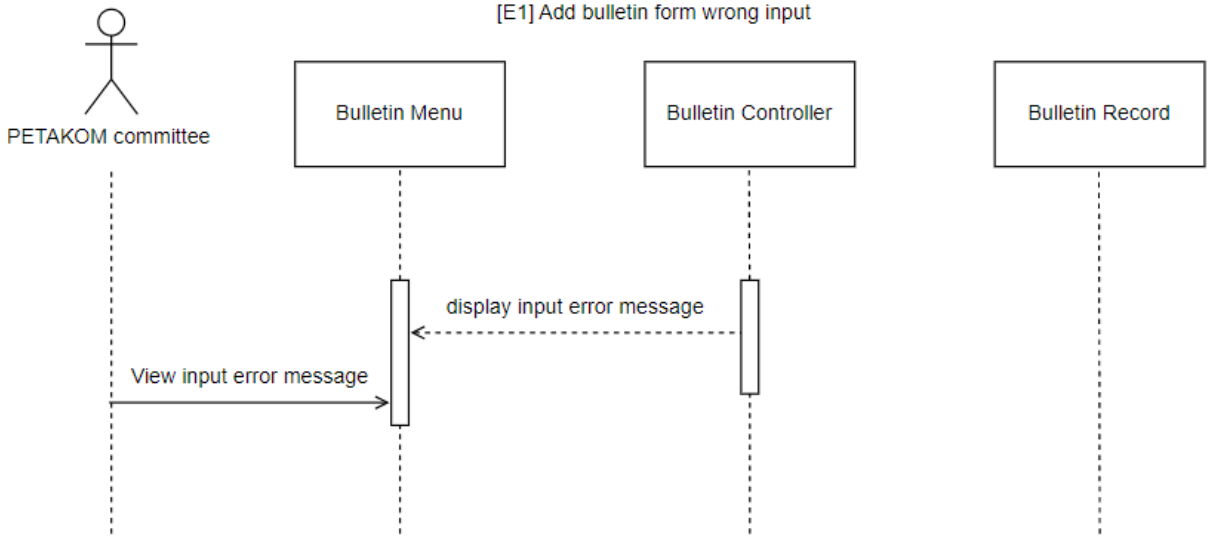
SEQUENCE DIAGRAM - MANAGE PETAKOM AND FACULTY BULLETIN ALTERNATIVE FLOW
[A4] Delete Bulletin

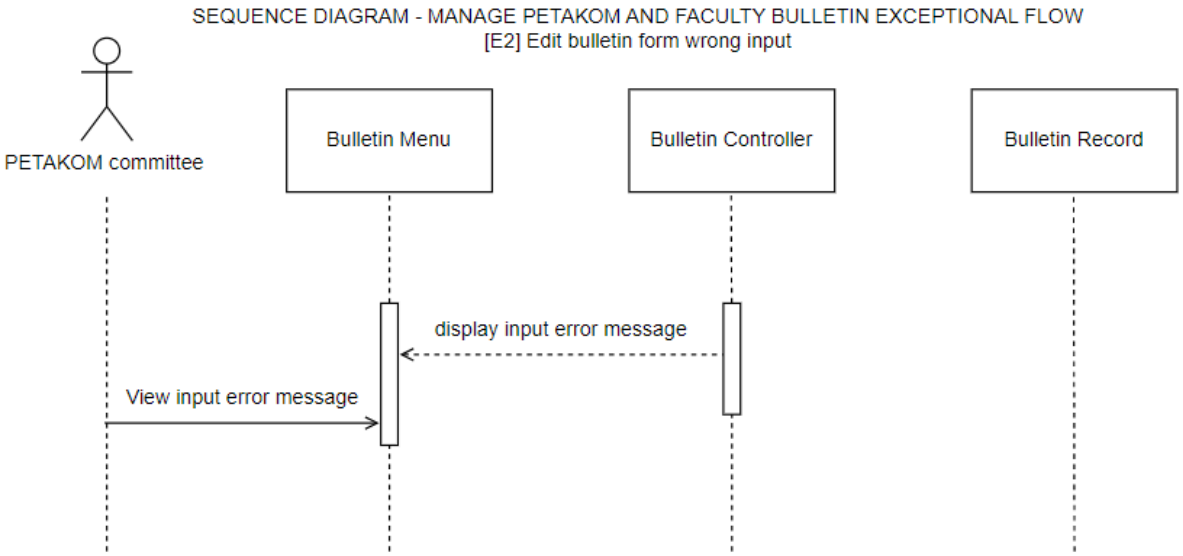


SEQUENCE DIAGRAM - MANAGE PETAKOM AND FACULTY BULLETIN ALTERNATIVE FLOW
[A5] Search Bulletin



SEQUENCE DIAGRAM - MANAGE PETAKOM AND FACULTY BULLETIN EXCEPTIONAL FLOW
[E1] Add bulletin form wrong input




SEQUENCE DIAGRAM - MANAGE PETAKOM AND FACULTY BULLETIN EXCEPTIONAL FLOW
[E2] Edit bulletin form wrong input
PETAKOM committee
Bulletin Menu
Bulletin Controller
Bulletin Record
display input error message
View input error message

Appendix C: Traceability Matrix

Table 8.1 Requirement Traceability for Use Case 100

Requirement No.	**Description**
RQ-PTK-101	Users should be able to enter their id, email and password.
RQ-PTK-102	Users should be able to click <<Register>>button.
RQ-PTK-103	User should be able to click <<Login>> button.
RQ-PTK-104	User should be able to enter id and password.
RQ-PTK-105	User should be able to click <<Login>> button.
RQ-PTK-106	User should be able to click <<Register Member>> button.
RQ-PTK-107	User should be able to enter id to register member of PETAKOM.
RQ-PTK-108	User should be able to select role of new member.
RQ-PTK-109	User should be able to click <<Save>> button.
RQ-PTK-110	User should be able to reset their password by click <<Forgot Password>> button and should be able to enter email for reset link.

Table 8.2 Requirement Traceability for Use Case 200

Requirement No.	**Description**
RQ-PTK-201	Users should be able to view their profile.
RQ-PTK-202	User should be able to click <<Edit>> button.
RQ-PTK-203	User should be able to enter email, name, phone number and address.
RQ-PTK-204	User should be able to click <<Save>> button.
RQ-PTK-205	User should be to click <<User>> button.
RQ-PTK-206	Users should be able to clicks <<Change Password>> button.
RQ-PTK-207	User should be able to enter new password and confirm password.
RQ-PTK-208	User should be able to click <<Save>> button.
RQ-PTK-209	User must be follow password rule where password must at least 6 characters and space is not allowed.

Table 8.3 Requirement Traceability for Use Case 300

Requirement No.	**Description**
RQ-PTK-301	Users (student, lecturer, PETAKOM committee) click <<Activities>> tab in the main page
RQ-PTK-302	User enters their information in the activity form.
RQ-PTK-303	The users clicks <<Submit>> button.
RQ-PTK-304	User successfully submitted the form.
RQ-PTK-305	Users manage their activity proposal by clicking the <<Edit Activity form>> button.
RQ-PTK-306	User enters their name, date and time, club name, advisor club,etc...
RQ-PTK-307	User clicks <<Save>> button.
RQ-PTK-308	For the approval, users (Dean, coordinator and Head of Student Development) will click <<Activity list for approval>> button.
RQ-PTK-309	From the lists, users can approve or reject the activity from here.
RQ-PTK-310	Invalid information form
RQ-PTK-311	The user is allowed to enter a certain word limit for each form.

Table 8.4 Requirement Traceability for Use Case 400

Requirement No.	**Description**
RQ-PTK-401	Users can view the calendar.
RQ-PTK--402	Petakom Committee can view the calendar.
RQ-PTK--403	The Petakom Committee can come up with an activity for any day.
RQ-PTK--404	System will display a form for creating an activity.
RQ-PTK--405	System should make a different color for each activity.
RQ-PTK--406	The system should display a successful message after modifying an activity.

Table 8.5 Requirement Traceability For Use Case 500

Requirement No.	**Description**
RQ-PTK-501	Students, Lecturers, and PETAKOM Committee can create the form.
RQ-PTK-502	Students, Lecturers, and PETAKOM Committee can update the form.
RQ-PTK-503	Students, Lecturers, and PETAKOM Committee can see the final approval status result of the form.
RQ-PTK-504	Petakom Coordinator can change the approval status of the form.
RQ-PTK-505	Dean can change the approval status of the form.
RQ-PTK-506	Head of Student Development can change the approval status of the form.
RQ-PTK-507	Head of Student Development, Dean, Petakom Coordinator can see the list of the applied forms.

Table 8.6 Requirement Traceability for Use Case 600

RQ-PTK-600	**Propose a Candidate**
RQ-PTK-600_1	Student click the <<propose a candidate>> button to propose a candidate for the election
RQ-PTK-600_2	System display the proposal form
RQ-PTK-600_3	Student fill out the proposal form
RQ-PTK-600_4	System send the proposal to PETAKOM Committee and Coordinator
RQ-PTK-601	**Manage Candidates' List**
RQ-PTK-601_1	Coordinator and PETAKOM Committee click a <<proposed candidates>> to view the proposed candidates' list
RQ-PTK-601_2	System display the proposed candidates list
RQ-PTK-601_3	Coordinator and PETAKOM Committee check for each of the candidate's qualification and decided whether to approve or reject the proposal
RQ-PTK-601_4	System will save the approved candidates list

RQ-PTK-602	**Manage Voting Session**
RQ-PTK-602_1	Student click a <<view candidates>> button to view the candidate list
RQ-PTK-602_2	System display the list and the information about all the approved candidates' information
RQ-PTK-602_3	Student choose a candidate
RQ-PTK-602_4	System display the voting information for the student's affirmation
RQ-PTK-602_5	The student click the <<vote>> button
RQ-PTK-603	**Manage Voting Results**
RQ-PTK-603_1	Head of the Student Development click a <<button>> to view the election results
RQ-PTK-603_2	System display the election result
RQ-PTK-603_3	Head of the Student Development decided wether or not to approved the new PETAKOM representatives

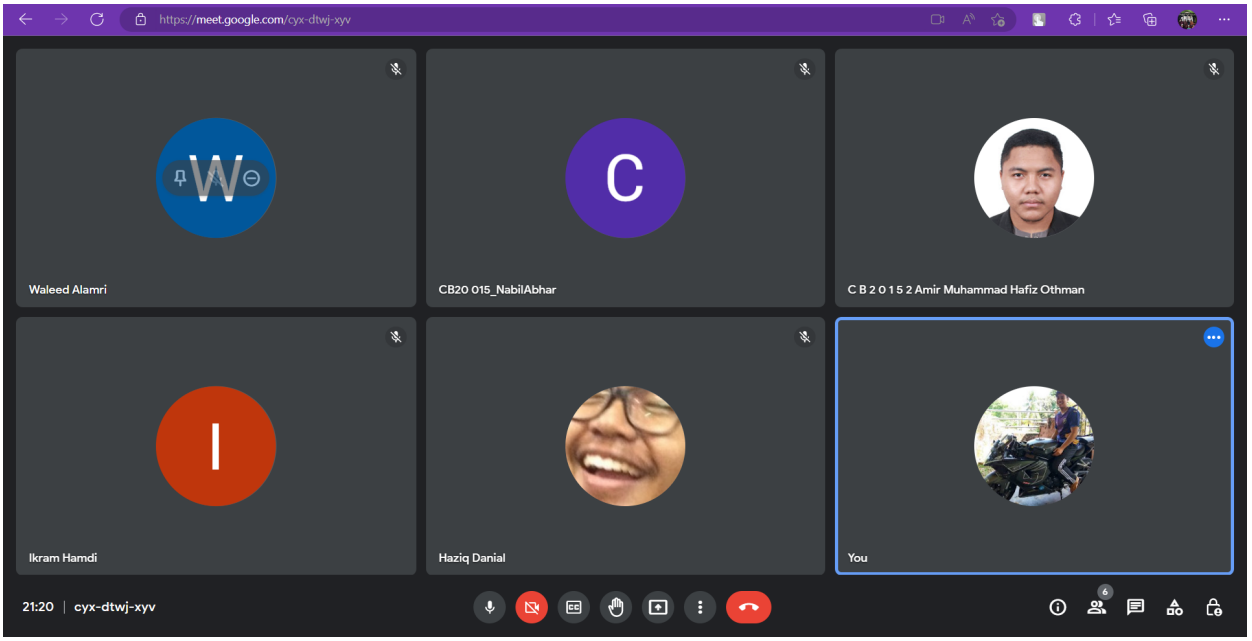
RQ-PTK-603_4	The system will save the new representatives information if it were approved. The system will then display the election results and the new board of PETAKOM committee in a some sort of notification center

Table 8.7 Requirement Traceability for Use Case 700

Requirement No.	**Description**
RQ-PTK-701	View bulletin details The user clicks any bulletin from the bulletin list and the system will display the selected bulletin details. The user views the selected bulletin details.
RQ-PTK-702	View bulletin The PETAKOM committee user choose and click <<View>> button at the bulletin list that they want to view. The system will display the selected bulletin information. The user views the selected bulletin information.
RQ-PTK-703	Add bulletin The user shall click <<add>> button and the system will display add bulletin form. The user shall insert all the input form and click <<Save>> button. The user shall view all the inserted input and click <<Confirm>> button. The system displays page success. Then, the user views the page success.
RQ-PTK-704	Edit bulletin The user shall click <<edit>> button on the selected bulletin and the system will display edit bulletin form for the selected bulletin. The user shall insert all the input form and click <<Save>> button. Next, the user shall view all the inserted input and click <<Confirm>> button. The system displays page success message. Then, the user views the page success message.
RQ-PTK-705	Delete bulletin The user need to choose and click <<Delete>> button on one bulletin from the list. The system will display delete confirmation pop up and the user shall clicks <<Confirm>> button. The system will display a deletion success message.

RQ-PTK-706	Search bulletin The user insert key word on the search bar and clicks <<Search>> button. Then, the system will display a list of bulletins that relate with the inserted input search.
RQ-PTK-707	Add bulletin form wrong input The system display input error message for the add bulletin form.
RQ-PTK-708	Edit bulletin form wrong input The system display input error message for the edit bulletin form.

Appendix D: Meeting Notes



Title	Meeting for SRS document
Date	13 November 2022
Platform	Google Meet
Group Member	1. Haziq Danial Bin Khairul Azizy 2. Hazmi Hazim Bin Zairul Fuaad

	3. Nabil Abhar bin Mokhtar 4. Amir Muhammad Hafiz Bin Othman 5. Waleed Ahmed Alamri 6. Wan Mohd Ikram Hamdi Bin Wan Mahadi