
Software Requirements Specification

for

PETAKOM Mart Management System

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

Purpose of Document

The purpose behind doing this Software Requirement Specification (SRS) is used to gather and analyze all assorted ideas that have come up to develop the PETAKOM Mart Management System (PMMS). This document defines the project scope and what the PMMS is intended to do, thus establishing a clear understanding of what features and functionalities the PMMS should have. This document also provides a detailed description of the PMMS requirements, including the functional requirements, non-functional requirements, and external interfaces requirements. Besides, this document is likewise used to establish the basis of the details for an agreement among clients, software development team and project stakeholders on how the PMMS should work. It serves as a foundation for the project planning and development process, ensuring that the PMMS is developed according to the client's requirements and expectations.

System Identification

This Software Requirements Specification (SRS) belongs to the "PETAKOM Mart Management System" (PMMS).

System title	: PETAKOM Mart Management System
System abbreviation	: PMMS
System identification number	: PMMS-SRS-2023-V1
System version number	: 1.0
System release number	: 1.0

For the system identification number, the SRS refers to the Software Requirement Specification, followed by PMMS as the abbreviation name of the system, 2023 refers to the published year of the system and V1 stands for version 1 of the software documented in the document. The system version number is written as 1.0 whereas the number 1 refers to the major version while number 0 refers to the minor version. The system release number is the same as the system version number since the system release the system version of 1.0.

For the use case ID, it follows the format of 'PMMS-SRS-REQ-X00' in which PMMS is the system abbreviation, SRS stands for Software Requirement Specification, and REQ stands for requirement. 'X' is the numerical variable referring to the sequence of use cases. The number starts with 1 which is for the first use case, then the number will be increased by 1 for every next use case. For example, 'PMMS-SRS-REQ-100' represents the first use case, 'PMMS-SRS-REQ-200' represents the second use case and it continues for the following use case.

For requirement ID in a use case, it follows the format of 'PMMS-SRS-REQ-YXX' in which Y will represent the use case ID and the XX will represent the requirement ID in that use case. The XX will start from 01, 02, and it continues for each requirement in that use case. For example, for the first requirement in the first use case, the requirement ID will be 'PMMS-SRS-REQ-101'.

System Overview

This system was created for managing inventory of PETAKOM's mart in computing faculty. As students in computing faculty will buy accessories or foods frequently in PETAKOM's mart, it needs a management system for convenient management. This system will have the main function of inventory management, where the inventory in the mart is recorded in the system, and perform auto-increment or auto-decrement when the staff restock the items or sell the items. The system will also notify admins or person-in-charge when the stocks of some items are low.

Furthermore, another requirement is the system should be able to allow admin to create and update staff duty roster. PETAKOM committee will be able to chose the available time slot to take the responsibility as cashier in PETAKOM mart. Other than that, payment made will be recorded into the system's database for record purpose when a payment is made by the customer.. The system is also able to generate weekly, monthly, and yearly sales/inventory reports. Lastly, the system shall allow admin to manage user registration for PETAKOM Committee members and PETAKOM Secretariat and Coordinator.

References

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2. Overall Description

2.1 Product Functions (Use case diagram)

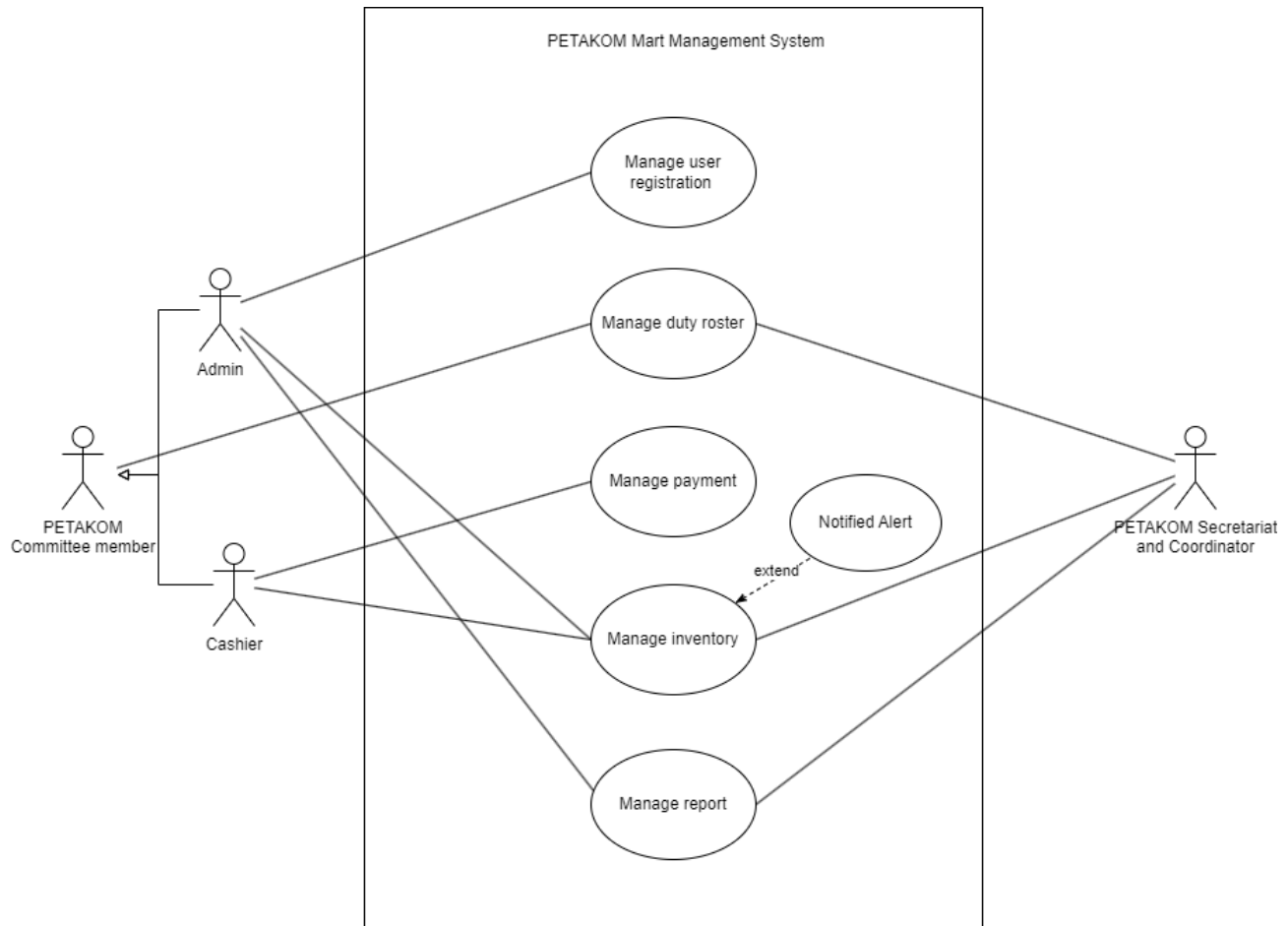


Figure 2.1 Use case diagram

PETAKOM Mart Management System will have main functions like below : -

1. The system shall allow admin to manage user registration for PETAKOM Committee members and PETAKOM Secretariat and Coordinator.
2. The system shall be able to manage inventory information.
3. The system shall send an alert when the inventory stock is low.
4. The system shall be able to perform payment action.
5. The system shall allow admin to manage staff duty roster.
6. The system shall be able to generate sales reports.

Context Diagram

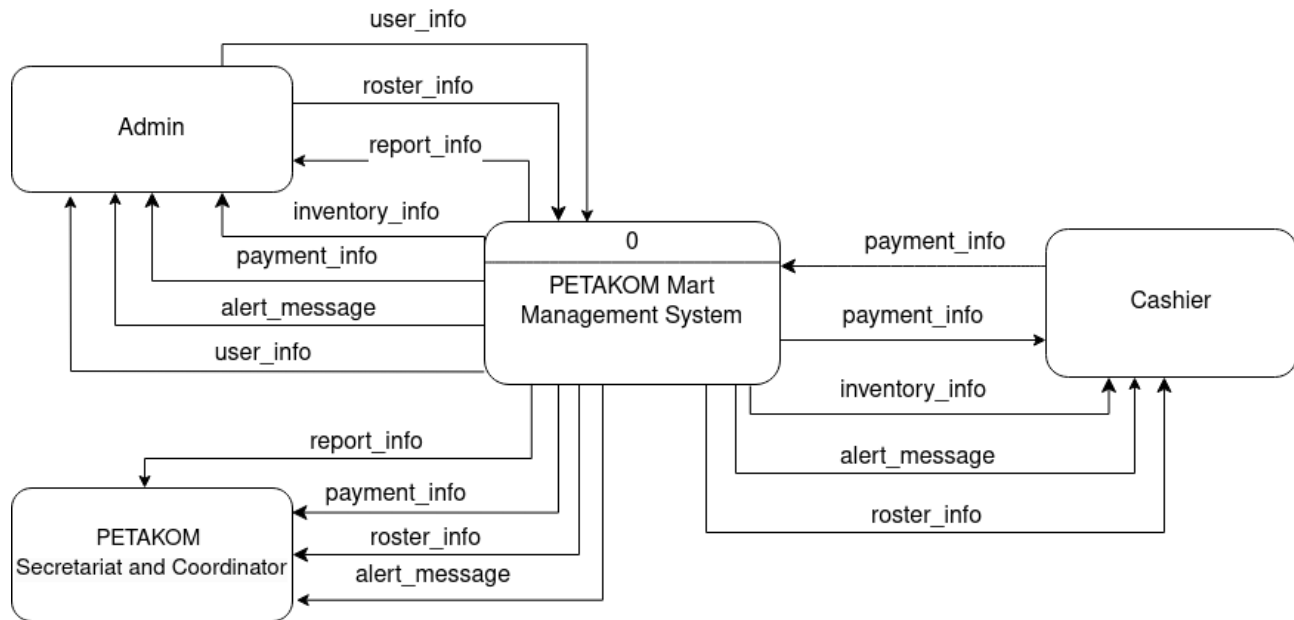


Figure 2.2 Context diagram

3. Detail Requirements Description

3.1 Software Product Function

3.1.1 Manage User Registration

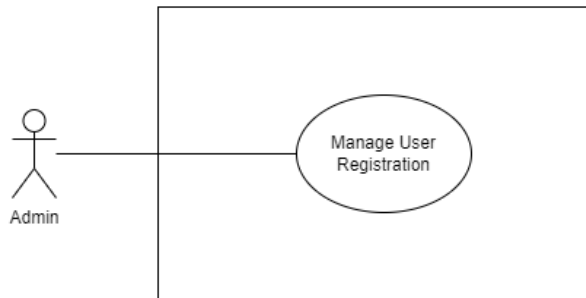


Figure 3.1.1 Use Case Diagram for Manage User Registration

Table 3.1.1 Use Case Manage User Registration

Use Case ID	PMMS-SRS-REQ-100
Brief Description	This use case is initiated by the admin when the admin needs to register an account for the new PETAKOM Committee member or PETAKOM Secretariat and Coordinator. Besides, the admin can delete accounts for them as well.
Actor	Admin
Pre-Conditions	Admin has logged in to the PMMS system.
Basic Flow	<p><u>Admin</u></p> <ol style="list-style-type: none"> 1. The use case begins when the admin navigates to the user listing page. 2. The system displays the user listing page. 3. Admin can do the following options: [A1] Create New User Account [A2] Delete User Account [A3] Edit User Account 4. The use case ends.

Alternative Flow	<p>A1: Create New User Account [PMMS-SRS-REQ-101]</p> <ol style="list-style-type: none"> Admin clicks on the “Create New User” button. The system displays a registration form, requesting the new user’s personal information. Admin fills in user information and submit the registration form. [E1: Incomplete or Invalid User Information] The system creates a new user account. The use case continues to step 4 in basic flow (Admin). <p>A2: Delete User Account [PMMS-SRS-REQ-102]</p> <ol style="list-style-type: none"> Admin clicks on the “Delete” button. The system displays a delete confirmation box. Admin click on the “Yes” button. The system deletes the selected user account. The use case continues to step 4 in basic flow (Admin). <p>A3: Edit User Account [PMMS-SRS-REQ-103]</p> <ol style="list-style-type: none"> Admin clicks on the “Edit” button. The system displays an edit user account form. Admin edits user information and submit the edit user account form. The system updates the selected user account. The use case continues to step 4 in basic flow (Admin).
Exception Flow	<p>E1: Incomplete or Invalid User Information [PMMS-SRS-REQ-104]</p> <ol style="list-style-type: none"> Admin registers a new user account with incomplete or invalid user information. The system displays an error message indicating that the registration cannot be completed. Admin makes corrections on the user information and submit the registration form. The use case continues to step number 4 in alternative flow A1.
Post-Conditions	<ol style="list-style-type: none"> The new user registration is successfully done. The selected user account is successfully updated. The selected user account is successfully deleted.
Rules	<p>R1: Complete and Valid User Information [PMMS-SRS-REQ-105]</p> <ol style="list-style-type: none"> Admin must fill in all the text fields and the password must be at least 12 characters long with a combination of uppercase and numbers.

Constraints	Not applicable.
Sequence Diagram	<p>Refer Appendix</p> <p>A1-1: Sequence diagram - Manage User Basic Flow (Admin)</p> <p>A1-2: Sequence diagram - Manage User Alternative Flow A1 (Admin) - Create New User Account</p> <p>A1-3: Sequence diagram - Manage User Alternative Flow A2 (Admin) - Delete User Account</p> <p>A1-4: Sequence diagram - Manage User Alternative Flow A3 (Admin) - Edit User Account</p> <p>A1-5: Sequence diagram - Manage User Exception Flow E1 (Admin) - Incomplete or Invalid User Information</p>

3.1.2 Inventory Management

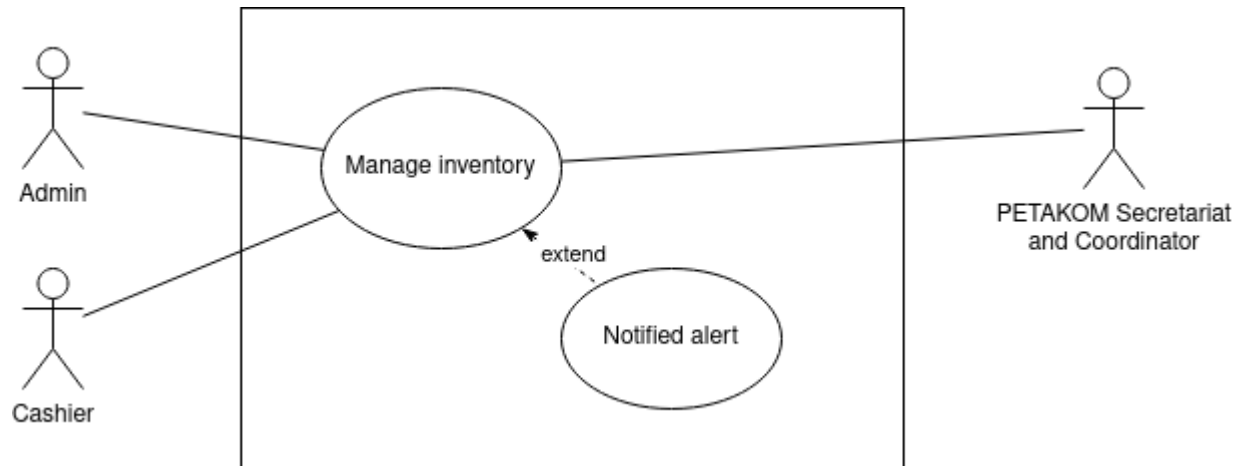


Figure 3.1.2 Use Case Diagram for Manage Inventory

Table 3.1.2 Use Case Manage Inventory

Use Case ID	PMMS-SRS-REQ-200
Brief Description	This use case describes how the system manages the inventory, allowing the admin, cashier, PETAKOM Secretariat and Coordinator to create, view and update inventory data. Besides, the system can send alerts if any inventory is low.
Actor	<ol style="list-style-type: none"> 1. Admin 2. Cashier 3. PETAKOM Committee Secretariat and Coordinator
Pre-Conditions	<ol style="list-style-type: none"> 1. The system is running and the user has logged in as an admin, cashier or PETAKOM Secretariat and Coordinator. 2. The user has necessary permission to manage inventory.
Basic Flow	<p><u>Admin</u></p> <ol style="list-style-type: none"> 1. Admin selects the "Inventory Management" option from the main menu. 2. The system displays the inventory management page. <p>[A1: Low inventory alerts]</p> <ol style="list-style-type: none"> 3. Admin can perform any of the following operations: <ol style="list-style-type: none"> a. Create: Admin can add new inventory information by clicking the "Create New" button from the page. b. Read: Admin can view the inventory information

- by searching from the inventory list and clicking the “View” button from the stock item.
- c. Update: Admin can update a particular inventory data by clicking the “Edit” button from the inventory.
 - d. Update opening: Admin clicks the “Opening inventory” button to insert the opening quantity of each inventory.
 - e. Update closing: Admin clicks the “Closing inventory” button to insert the closing quantity of each inventory.
 - f. Delete: Admin can delete a particular inventory by selecting the item from the inventory list and clicking the “Delete” button.
4. After performing an operation, the system saves the inventory data in the database. **[E1: Failed to save in the database]**
 5. The use case ends.

Cashier

1. Cashier selects the "Inventory Management" option from the main menu.
2. The system displays the inventory management page. **[A1: Low inventory alerts]**
3. Cashier can perform any of the following operations:
 - a. Read: Cashier can view the inventory information by searching from the inventory list and clicking the “View” button from the stock item.
 - b. Update: Cashier can update a particular inventory data by clicking the “Edit” button from the inventory.
 - c. Update opening: Cashier clicks the “Opening inventory” button to insert the opening quantity of each inventory.
 - d. Update closing: Cashier clicks the “Closing inventory” button to insert the closing quantity of each inventory.
4. After performing an operation, the system saves the inventory data in the database. **[E1: Failed to save in the database]**
5. The use case ends.

	<p><u>PETAKOM Committee Secretariat and Coordinator</u></p> <ol style="list-style-type: none"> 1. The user selects the "Inventory Management" option from the main menu. 2. The system displays the inventory management page. <p>[A1: Low inventory alerts]</p> <ol style="list-style-type: none"> 3. The user can view the inventory data by clicking the "View" button from the inventory list. 4. The use case ends.
Alternative Flow	<p>A1: Low inventory alerts. [PMMS-SRS-REQ-201]</p> <ol style="list-style-type: none"> 1. The record implies that one or more inventory is low. 2. The system sends an alert message to notify the user which inventory is low. 3. The user clicks on that message then the system displays the list of low inventory data. 4. The user who is admin or cashier can click the "Edit" button to update the inventory data. 5. The user updates the inventory data and clicks the "Save" button. 6. The system saves the inventory data in the database. 7. The use case continues at step 2 from the basic flow.
Exception Flow	<p>E1: Failed to save in the database. [PMMS-SRS-REQ-202]</p> <ol style="list-style-type: none"> 1. If the system encounters an error while updating inventory data, the system displays an error message to the user and prompts the user to try again later. 2. The use case ends.
Post-Conditions	<ol style="list-style-type: none"> 1. The inventory data in the system is updated to reflect actual inventory changes. 2. The system displays a successful message to the user after successful inventory updates.
Rules	<p>R1: Access control. [PMMS-SRS-REQ-203]</p> <ol style="list-style-type: none"> 1. The admin grants all permission to manage inventory data. 2. The cashier can only create, view and update inventory as well as add opening and closing inventory data. 3. The system should only allow cashiers to add opening and closing inventory at the beginning and the end of every operating day respectively. 4. The PETAKOM Committee Secretariat and Coordinator can only view the inventory data.

	<p>5. All inventory details must be saved in the database and cannot be null.</p> <p>R2: Alert notifications. [PMMS-SRS-REQ-204]</p> <ol style="list-style-type: none"> 1. The system should identify low inventory levels every time the user updates the inventory data and send an alert notification. 2. If the opening inventory does not match the closing inventory from the previous day, the system should send an alert notification.
Constraints	<p>C1: Inventory value [PMMS-SRS-REQ-205]</p> <ol style="list-style-type: none"> 1. The quantity, unit cost, and price values must be greater than 0. 2. Only one picture can be uploaded per inventory item. 3. The maximum file size for attachments is 10 MB.
Sequence Diagram	<p>Refer Appendix</p> <ol style="list-style-type: none"> 1. A2-1: Sequence diagram - Manage Inventory Basic Flow (Admin & Cashier) 30 2. A2-2: Sequence Diagram - Manage Inventory Basic Flow (Petakom Secretariat And Coordinator) 30 3. A2-3: Sequence Diagram - Manage Inventory Alternative Flow - Low Inventory Alerts 31 4. A2-4: Sequence Diagram - Manage Inventory Exception Flow (Admin & Cashier) - Failed To Save In The Database

3.1.3 Use Case Payment

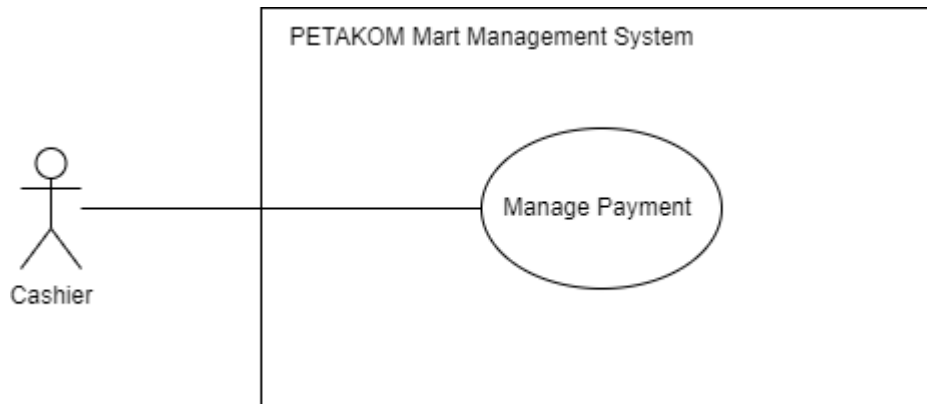


Figure 3.1.3 Use Case Manage Payment Diagram

Table 3.1.3 Use Case Manage Payment

Use Case ID	PMMS-SRS-REQ-300
Brief Description	This use case is initiate by cashier when there is customer that want to checkout their items. Total items purchase and the total payment amount will be displayed, payment from customer will be received by cashier. A receipt will be generated after payment complete.
Actor	1. Cashier
Pre-Conditions	The cashier had logged in to his/her account.
Basic Flow	<ol style="list-style-type: none"> 1. The cashier selects/scans the items that want to be purchase by the customer and clicks "PAY" button. 2. The system displays the total items purchase and total price. [A1: Edit item quantity] 3. The cashier receive payment from customer and clicks "DONE" button. [E1: Cancel Payment] 4. The system displays a receipt with necessary information likes receipt ID, date, items purchase, price of each item, and the total price. 5. The use case end.
Alternative Flow	A1: Edit Item quantity [PMMS-SRS-REQ-301] <ol style="list-style-type: none"> 1. The cashier can edit the item quantity by clicking the "-" or "+" icon to edit the item quantity. 2. The use case continue with step 3 in basic flow.

Exception Flow	E1: Cancel Payment. [PMMS-SRS-REQ-302] <ol style="list-style-type: none">1. The cashier clicks “Cancel” button.2. The system cancel the purchase and navigate cashier back to the homepage.3. The use case end.
Post-Conditions	The items purchase will be deducted from the inventory and the payment is made by the customer.
Rules	Not Applicable
Constraints	C1: Maximum quantity of item selected. [PMMS-SRS-REQ-303] <ol style="list-style-type: none">1. The quantity of a selected item cannot exceed the maximum amount of that item in the inventory.
Sequence Diagram	Refer Appendix A3-1: Sequence diagram of manage payment A3-2: Sequence diagram of edit item quantity A3-3: Sequence diagram of cancel payment

3.1.4 Use Case Duty Roster

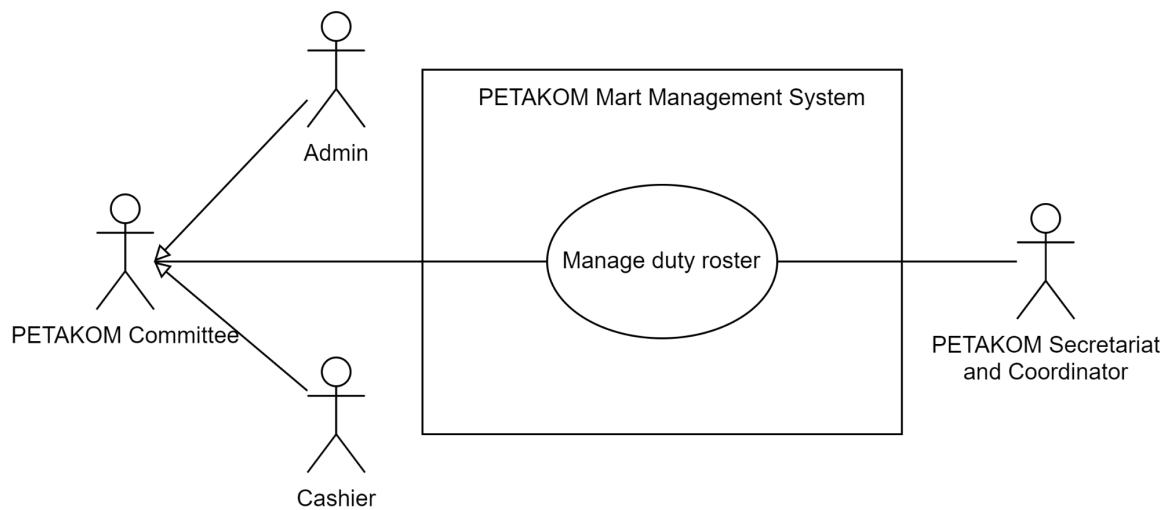


Figure 3.1.4 Use Case Diagram for Manage Duty Roster

Table 3.1.4 Use Case Manage Duty Roster

Use Case ID	PMMS-SRS-REQ-400
Brief Description	This use case is initiated by the PETAKOM Committee or PETAKOM Secretariat and Coordinator. It allows admin to create and update the duty roster. PETAKOM Committees are allowed to select slots and view their cashier duty schedule. The admin and PETAKOM Secretariat and Coordinator can view the duty roster.
Actor	2. Admin 3. PETAKOM Committee 4. PETAKOM Secretariat and Coordinator
Pre-Conditions	The user had logged in to his/her account.
Basic Flow	<u>Admin</u> <ol style="list-style-type: none"> 1. The admin navigates to the duty roster page. 2. The system displays the latest duty roster. 3. The admin can manage duty roster by doing the following options: [A1: Create New Duty Roster] [A2: Edit Duty Roster] [A3: Delete Duty Roster] 4. The use case ends.

	<p><u>PETAKOM Committee</u></p> <ol style="list-style-type: none"> 1. The PETAKOM Committee navigates to the duty roster page. 2. The system displays the latest duty roster with time slots. 3. The PATAKOM Committee can perform any of the following options: [A4: Add Time Slot] [A5: View Own Schedule] 4. The use case ends. <p><u>PETAKOM Secretariat and Coordinator</u></p> <ol style="list-style-type: none"> 1. The PETAKOM Secretariat and Coordinator navigates to the duty roster page. 2. The system displays the latest duty roster. 3. The use case ends.
Alternative Flow	<p>A1: Create New Duty Roster [PMMS-SRS-REQ-401]</p> <ol style="list-style-type: none"> 1. The admin clicks the “+NEW” button. 2. The system requests the input data of date, opening time and closing time. 3. The admin selects the date, opening time and closing time. 4. The admin clicks the “POST” button. 5. Back to Basic Flow - Admin step 2.
	<p>A2: Edit Duty Roster [PMMS-SRS-REQ-402]</p> <ol style="list-style-type: none"> 1. The admin clicks the “EDIT” button. 2. The system displays the current duty roster. 3. The admin edits the date, opening time or closing time. 4. The admin clicks the “UPDATE” button. 5. The system overwrites the previous duty roster in the database. 6. Back to Basic Flow - Admin step 2.
	<p>A3: Delete Duty Roster [PMMS-SRS-REQ-403]</p> <ol style="list-style-type: none"> 1. The admin clicks the “DELETE” button. 2. The system displays the message “Are you sure to delete?”. 3. The admin clicks the “YES” button. [E1: Cancel action] 4. The system deletes the selected duty roster from the database. 5. Back to Basic Flow - Admin step 2.
	<p>A4: Add Time Slot [PMMS-SRS-REQ-404]</p> <ol style="list-style-type: none"> 1. The PETAKOM Committee clicks the “ADD SLOT”

	<p>button.</p> <ol style="list-style-type: none"> The system displays the date and time slot to be selected. The PETAKOM Committee selects the date and time slot and clicks the “ADD” button. The system checks the duty time slot in the database. [E2: Unavailable selected time slot] The system saves the data in the database. [E3: Failed to save in the database] Back to Basic Flow – PETAKOM Committee step 2.
	<p>A5: View Own Schedule [PMMS-SRS-REQ-405]</p> <ol style="list-style-type: none"> The PETAKOM Committee clicks the “MY SCHEDULE” button. The system displays the duty schedule of the user. [A6: Drop Time Slot] Back to Basic Flow – PETAKOM Committee step 3.
	<p>A6: Drop Time Slot [PMMS-SRS-REQ-406]</p> <ol style="list-style-type: none"> The PETAKOM Committee clicks the “DROP” button of the selected time slot. The system displays the message “Are you sure you want to drop this time slot?” The PETAKOM Committee clicks the “YES” button. [E1: Cancel action] The system deletes the selected slot record from the database. Back to Alternative Flow - View Own Schedule [A5] step 2.
Exception Flow	<p>E1: Cancel action [PMMS-SRS-REQ-407]</p> <ol style="list-style-type: none"> The admin clicks the “No” button. The system cancels the action. Back to Alternative Flow - Delete Duty Roster [A3] step 5 or Alternative Flow - Drop Time Slot [A6] step 5.
	<p>E2: Unavailable selected time slot [PMMS-SRS-REQ-408]</p> <ol style="list-style-type: none"> The PETAKOM Committee submits the unavailable time slot. The system shows an error message “The time slot may be full, or it has been added before. Please select another time slot”. Back to Alternative Flow - Add Time Slot [A4] step 3.
	<p>E3: Failed to save in the database [PMMS-SRS-REQ-409]</p> <ol style="list-style-type: none"> The system displays an error message. Back to Alternative Flow - Add Time Slot [A4] step 3.

Post-Conditions	The system displays the updated duty roster according to the user's operation.
Rules	Not Applicable
Constraints	C1: Maximum quota for each time slot. [PMMS-SRS-REQ-410] 1. Each time slot cannot be owned by more than two people.
	C2: Forbidden repeated account in one time slot. [PMMS-SRS-REQ-411] 1. Each committee is not allowed to add the same time slot to his/her duty schedule.
Sequence Diagram	Refer Appendix A4-1: Sequence diagram - Manage Duty Roster Basic Flow (Admin) A4-2: Sequence diagram - Manage Duty Roster Basic Flow (PETAKOM Committee) A4-3: Sequence diagram - Manage Duty Roster Basic Flow (PETAKOM Secretariat and Coordinator) A4-4: Sequence diagram - Manage Duty Roster Alternative Flow A1 (Admin) - Create New Duty Roster A4-5: Sequence diagram - Manage Duty Roster Alternative Flow A2 (Admin) - Edit Duty Roster A4-6: Sequence diagram - Manage Duty Roster Alternative Flow A3 (Admin) - Delete Duty Roster A4-7: Sequence diagram - Manage Duty Roster Alternative Flow A4 (PETAKOM Committee) - Add Time Slot A4-8: Sequence diagram - Manage Duty Roster Alternative Flow A5 (PETAKOM Committee) - View Own Schedule A4-9: Sequence diagram - Manage Duty Roster Alternative Flow A6 (PETAKOM Committee) - Drop Time Slot A4-10: Sequence diagram - Manage Duty Roster Exception Flow E1 (Admin, PETAKOM Committee) - Cancel Action A4-11: Sequence diagram - Manage Duty Roster Exception Flow E2 (PETAKOM Committee) - Unavailable Selected Time Slot A4-12: Sequence diagram - Manage Duty Roster Exception Flow E3 (PETAKOM Committee) - Failed to Save In the Database

3.1.5 Report

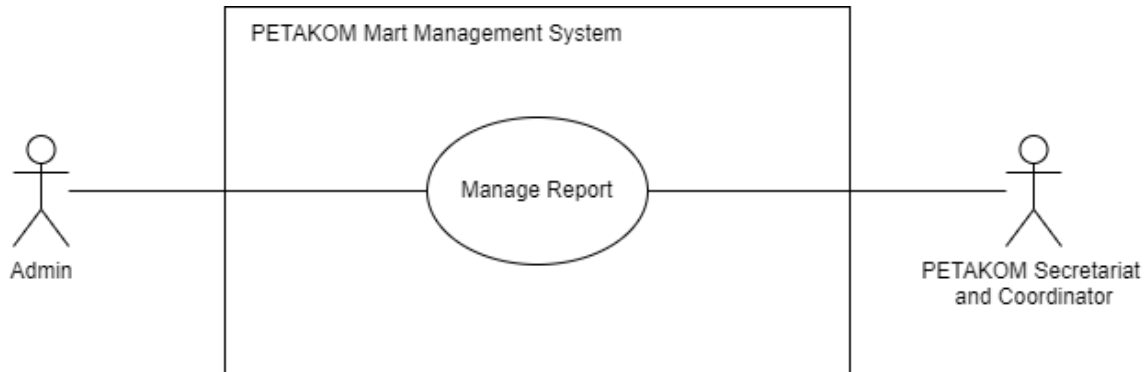


Figure 3.5 Use Case Manage Report Diagram

Table 3.5 Use Case Manage Report

Use Case ID	PMMS-SRS-REQ-500
Brief Description	This use case is initiate by admin or PETAKOM secretariat or coordinator. It allows user to view the data of PETAKOM mart in report form, including sales report and inventory report. They can also view reports with different period, like daily, monthly, or yearly.
Actor	<ol style="list-style-type: none"> 1. Admin 2. PETAKOM secretariat and coordinator
Pre-Conditions	The admin, PETAKOM secretariat, and coordinator had logged into their account.
Basic Flow	<ol style="list-style-type: none"> 1. The user clicks “Report” in the side tab. 2. The system displays the reports to the user. 3. The use case ends.
Alternative Flow	Not Applicable
Exception Flow	Not Applicable
Post-Conditions	The admin or PETAKOM secretariat or coordinator had viewed the report.
Rules	Not Applicable
Constraints	Not Applicable

Sequence Diagram	Refer Appendix A5-1: Sequence diagram of manage report
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GUI/ Wireframe

User Interface	Description	User Interface Layout
View User Listing (Admin)	The system allows admin to view existing users' details in list form.	Refer Appendix B1-1
Create User Account (Admin)	The system allows admin to create user accounts for the PETAKOM Committee members and PETAKOM Secretariat and Coordinator.	Refer Appendix B1-2
Delete User Account (Admin)	The system allows admin to delete selected user accounts for the PETAKOM Committee members and PETAKOM Secretariat and Coordinator.	Refer Appendix B1-3
Edit User Account (Admin)	The system allows admin to edit user information for selected user accounts for the PETAKOM Committee members and PETAKOM Secretariat and Coordinator.	Refer Appendix B1-4
Inventory Management	The system displays a list of inventory items, including their names, quantities, costs, and prices.	Refer Appendix B2-1
Create Inventory	The system displays inventory forms for users to add new inventory data.	Refer Appendix B2-2
View/Edit/Delete Inventory	The system allows users to view, edit, and delete inventory data for the selected item.	Refer Appendix B2-3
Manage Inventory (Cashier)	The system displays a list of inventory items to cashier, including their names, quantities, costs, and prices.	Refer Appendix B2-4
Update Opening and Closing Inventory (Cashier)	The system presents a form with a list of inventory items, enabling users to enter the actual quantity and comments.	Refer Appendix B2-5
Item Selection	The system displays all the available items in the store. Item selection can be made by cashier and proceed to payment page.	Refer Appendix B3-1
Confirm Order	The system displays the items and	Refer Appendix B3-2

	quantity chosen for confirmation purpose.	
Receipt	The system displays the receipt of the payment made. Details like order ID, time, date, items purchased, and total price are included in the receipt.	Refer Appendix B3-3
Admin View Duty Roster	The system displays the latest duty roster with PIC for each time slot. Admin can create new, edit or delete duty roster from this interface.	Refer Appendix B4-1
Create New Duty Roster	The system allows the admin to select the date and time slot for a new duty roster.	Refer Appendix B4-2
Edit Duty Roster	The system allows the admin to edit the date and time slot for the selected duty roster.	Refer Appendix B4-3
Delete Duty Roster Confirmation Message	The system displays a confirmation message to check whether the delete action needs to proceed.	Refer Appendix B4-4
PETAKOM Committee View Duty Roster	The system displays the latest duty roster with time slots provided. The “ADD SLOT” button is provided.	Refer Appendix B4-5
Add Time Slot	The system allows the users to select their desired date and time slot.	Refer Appendix B4-6
View Schedule	The system displays the added time slots details. The system allows the user to drop his/her added time slot in this interface.	Refer Appendix B4-7
Drop Time Slot Confirmation Message	The system displays a confirmation message to check whether the drop action needs to proceed.	Refer Appendix B4-8
Unavailable Time Slot Error Message	The system displays an error message and prompts the user to select another time slot.	Refer Appendix B4-9
Save Failed Error Message	The system displays an error message and prompts the user to try again later.	Refer Appendix B4-10
PETAKOM Secretariat and Coordinator View	The system displays the latest duty roster with PIC for each time slot. The action of	Refer Appendix B4-11

Duty Roster	create, edit or delete duty roster is not provided.	
Report	The system displays the sales report/inventory report according to the time scale.	Refer Appendix B5-1

4.0 Acronyms and Abbreviation/Requirement Traceability

4.1 Acronyms and Abbreviation

Term	Abbreviation
PMMS	The short form for PETAKOM Mart Management System
PETAKOM	The malay short form for “Persatuan Teknologi Komputer”
REQ	The short form for requirement
ID	The short form for identification number
CRUD	The short form for create, read, update and delete operation.
Users	Person who interacts with the system

4.2 Requirement Traceability

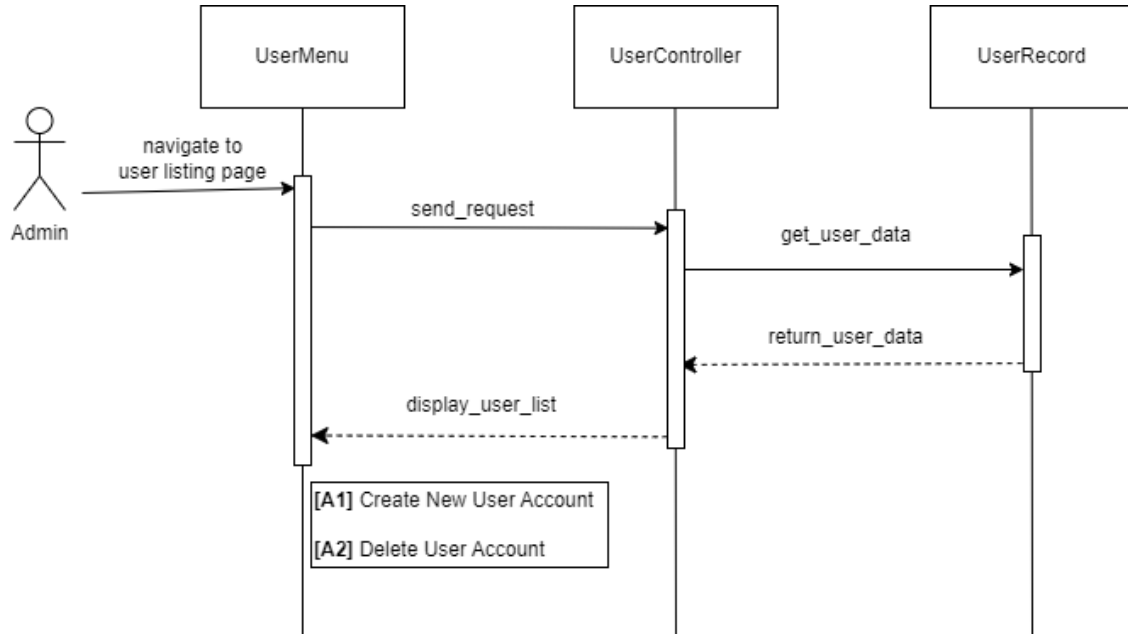
Requirements	Description
PMMS-SRS-REQ-100	Manage User Registration Allow admin to view user listing in list form and manage user registration.
PMMS-SRS-REQ-101	Create New User Account Allow admin to create a new user account for the PETAKOM Committee members and PETAKOM Secretariat and Coordinator.
PMMS-SRS-REQ-102	Delete User Account Allow admin to delete selected user account for the PETAKOM Committee members and PETAKOM Secretariat and Coordinator.
PMMS-SRS-REQ-103	Edit User Account Allow admin to edit user information for selected user account for the PETAKOM Committee members and PETAKOM Secretariat and Coordinator.
PMMS-SRS-REQ-104	Incomplete or Invalid User Information Handle the exceptional scenario in which the admin fills in incomplete or invalid user information.
PMMS-SRS-REQ-105	Complete and Valid User Information Must fill in all the text fields and the password must be at least 12 characters long with a combination of uppercase and numbers.
PMMS-SRS-REQ-200	Manage Inventory Enables admin, cashier, PETAKOM secretariat, and coordinator to manage inventory.
PMMS-SRS-REQ-201	Low inventory alerts Sends alerts to enable admin, cashier, PETAKOM secretariat, and coordinator to view low inventory items.
PMMS-SRS-REQ-202	Failed to save in the database. Handles the exceptional scenario where the inventory data is failed to save in the database.

PMMS-SRS-REQ-203	Access control Assign specific inventory management permissions for admin, cashier, PETAKOM secretariat, and coordinator.
PMMS-SRS-REQ-204	Alert notification Specifies the rules for the system to send an alert.
PMMS-SRS-REQ-205	Inventory value Specifies the rules for validating inventory values.
PMMS-SRS-REQ-300	Manage Payment Provides the ability for cashier to make payment for customer.
PMMS-SRS-REQ-301	Cancel Payment Provides the ability for cashier to cancel the payment.
PMMS-SRS-REQ-400	Manage Duty Roster Enables admin, PETAKOM Committee, PETAKOM secretariat and coordinator to manage duty roster.
PMMS-SRS-REQ-401	Create New Duty Roster Allow admin to create a new duty roster.
PMMS-SRS-REQ-402	Edit Duty Roster Allow admin to edit the selected duty roster.
PMMS-SRS-REQ-403	Delete Duty Roster Allow admin to delete the selected duty roster.
PMMS-SRS-REQ-404	Add Time Slot Allow the PETAKOM Committee to add time slots to his/her duty schedule.
PMMS-SRS-REQ-405	View Own Schedule Allow the PETAKOM Committee to view his/her duty schedule with the added time slots.
PMMS-SRS-REQ-406	Drop Time Slot Allow the PETAKOM Committee to drop the selected time slot in his/her duty schedule.

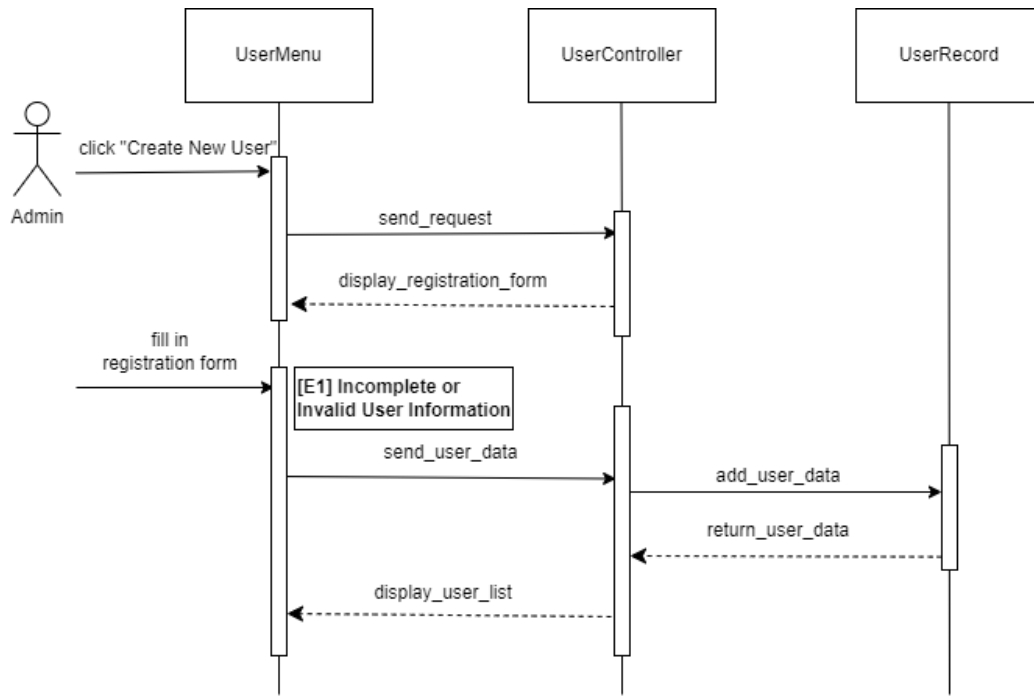
PMMS-SRS-REQ-407	Cancel Action Provide the ability for the admin and PETAKOM Committee to cancel his/her action such as delete or drop the duty roster.
PMMS-SRS-REQ-408	Unavailable Selected Time Slot Exception when the selected time slot is either full of quota or it has been already added in the user's duty schedule.
PMMS-SRS-REQ-409	Failed to Save In the Database Exception when the system is unable to store the data in the database.
PMMS-SRS-REQ-410	Maximum Quota For Each Time Slot Constraint to restrict the maximum quota for every time slot.
PMMS-SRS-REQ-411	Forbidden Repeated Account in One Time Slot Constraint to avoid one time slot owned by the same account.
PMMS-SRS-REQ-500	Manage Report Provides the ability for admin, PETAKOM secretariat, and coordinator to view reports of PETAKOM Mart.

Appendix A: Sequence Diagram

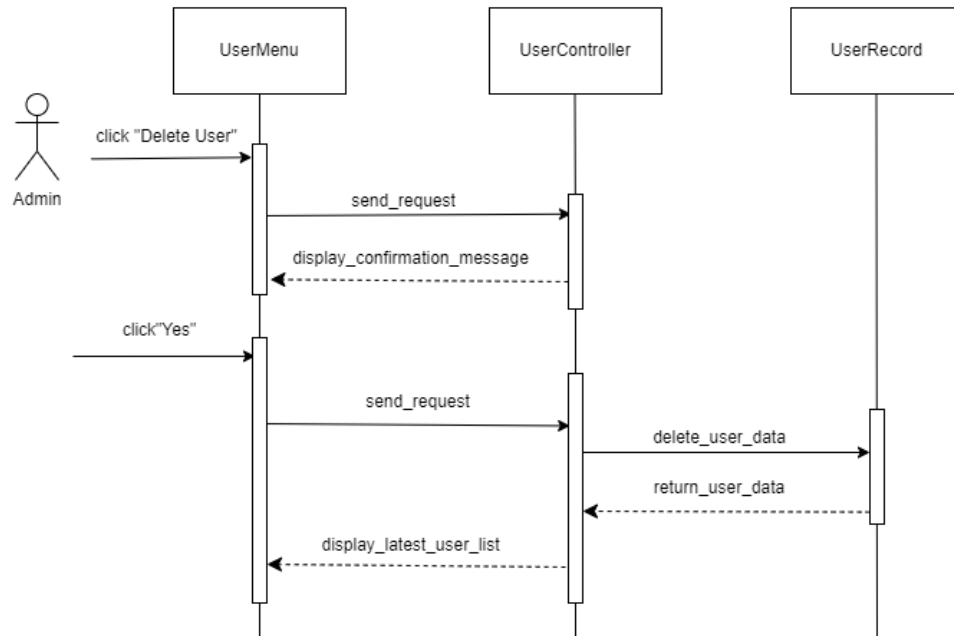
A1-1: Sequence diagram - Manage User Basic Flow (Admin)



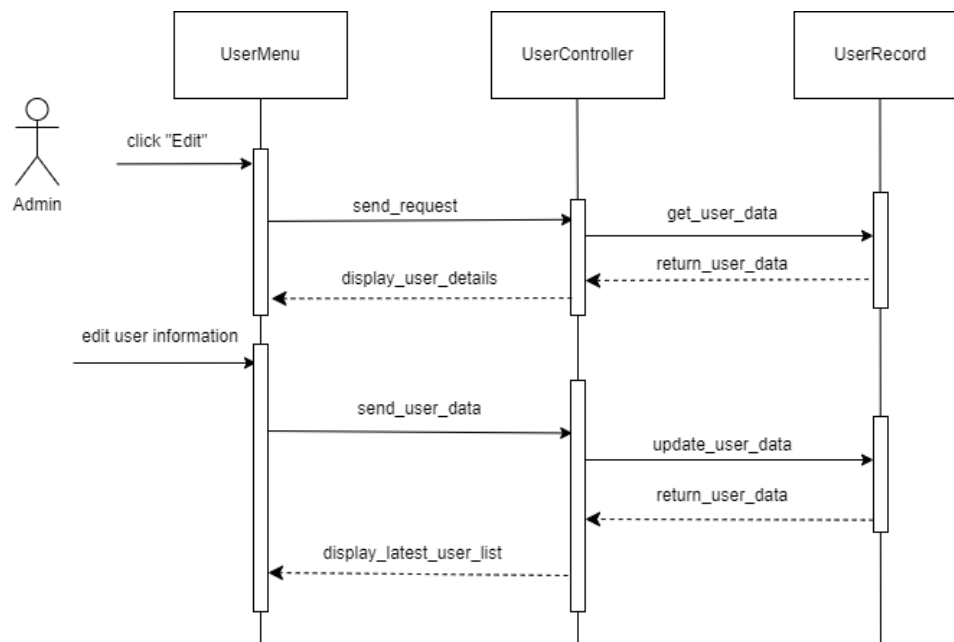
A1-2: Sequence diagram - Manage User Alternative Flow A1 (Admin) - Create New User Account



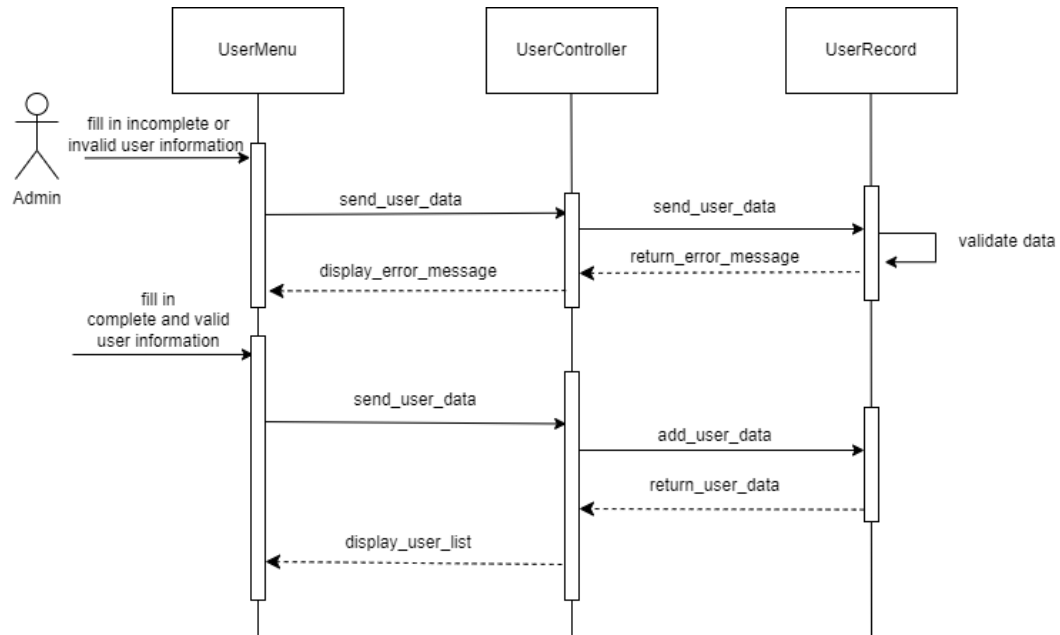
A1-3: Sequence diagram - Manage User Alternative Flow A2 (Admin) - Delete User Account

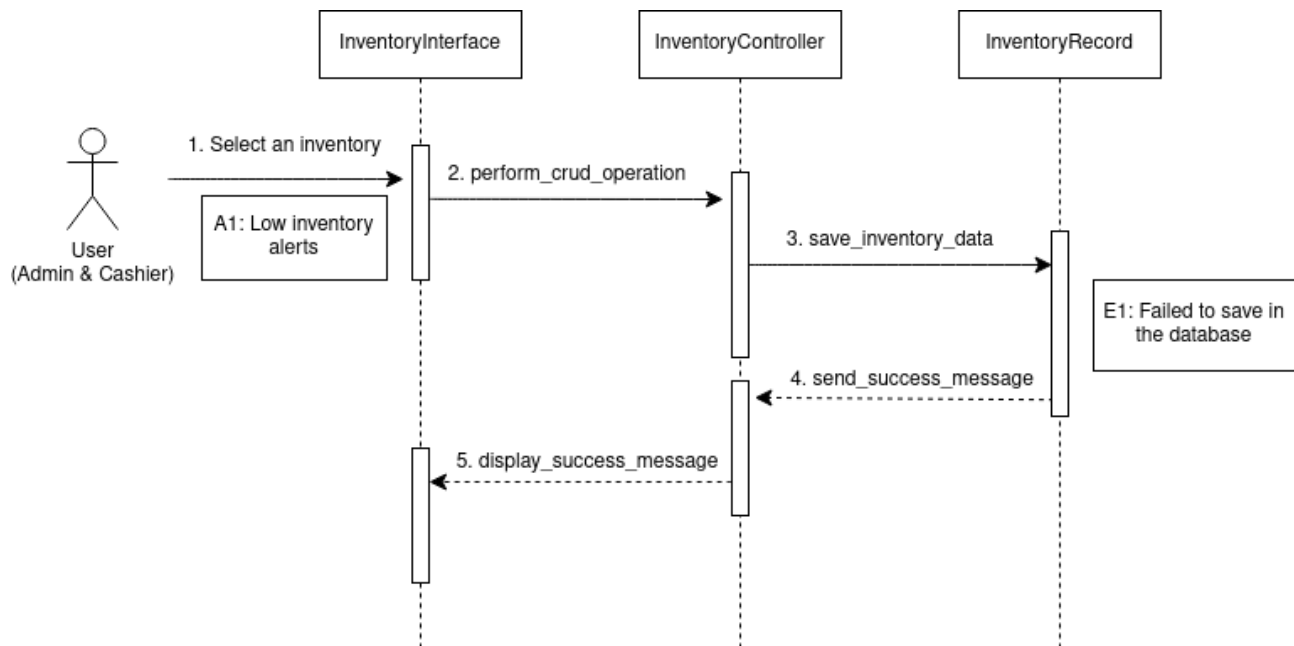
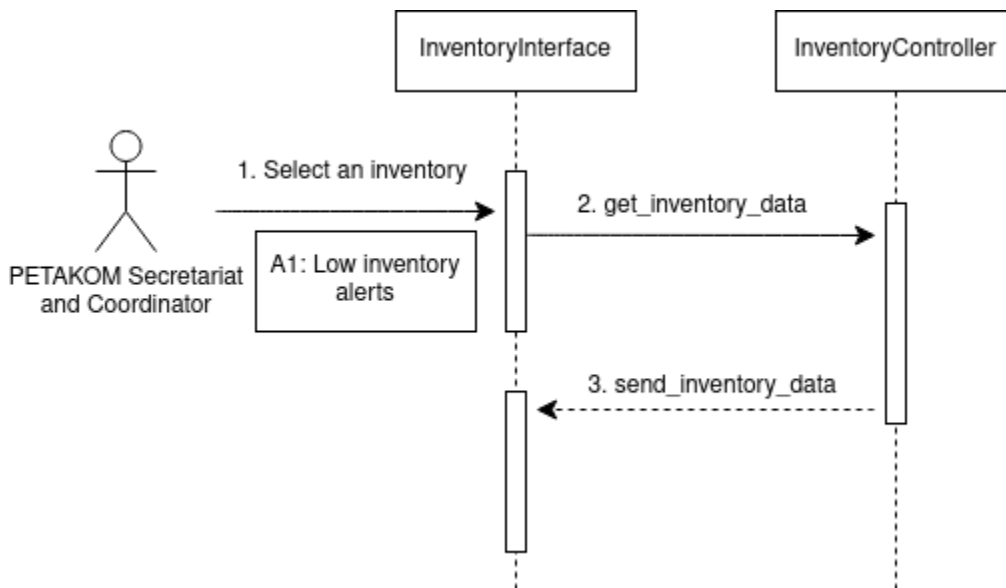


A1-4: Sequence diagram - Manage User Alternative Flow A3 (Admin) - Edit User Account

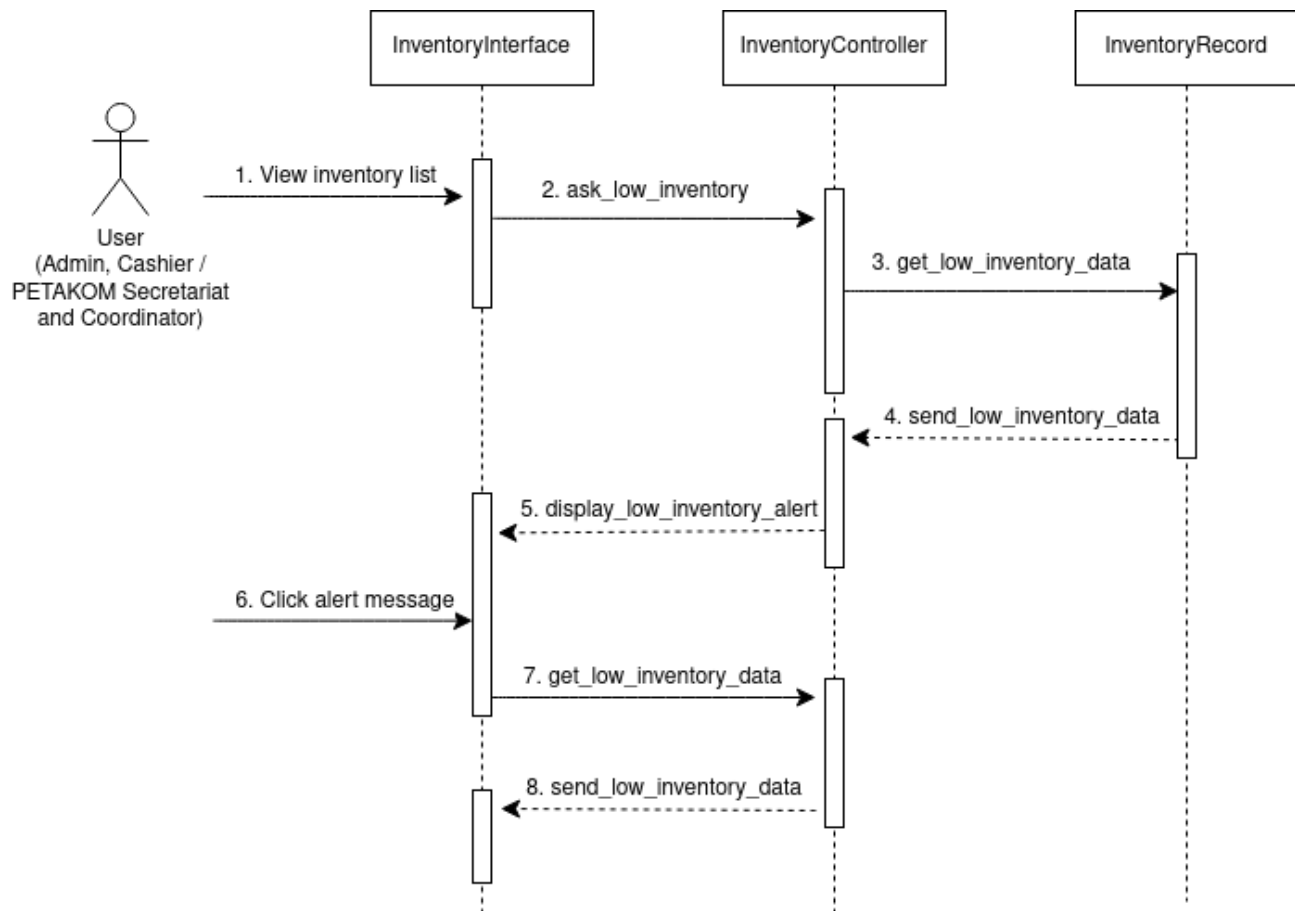


**A1-5: Sequence diagram - Manage User Exception Flow E1 (Admin) -
Incomplete or Invalid User Information**

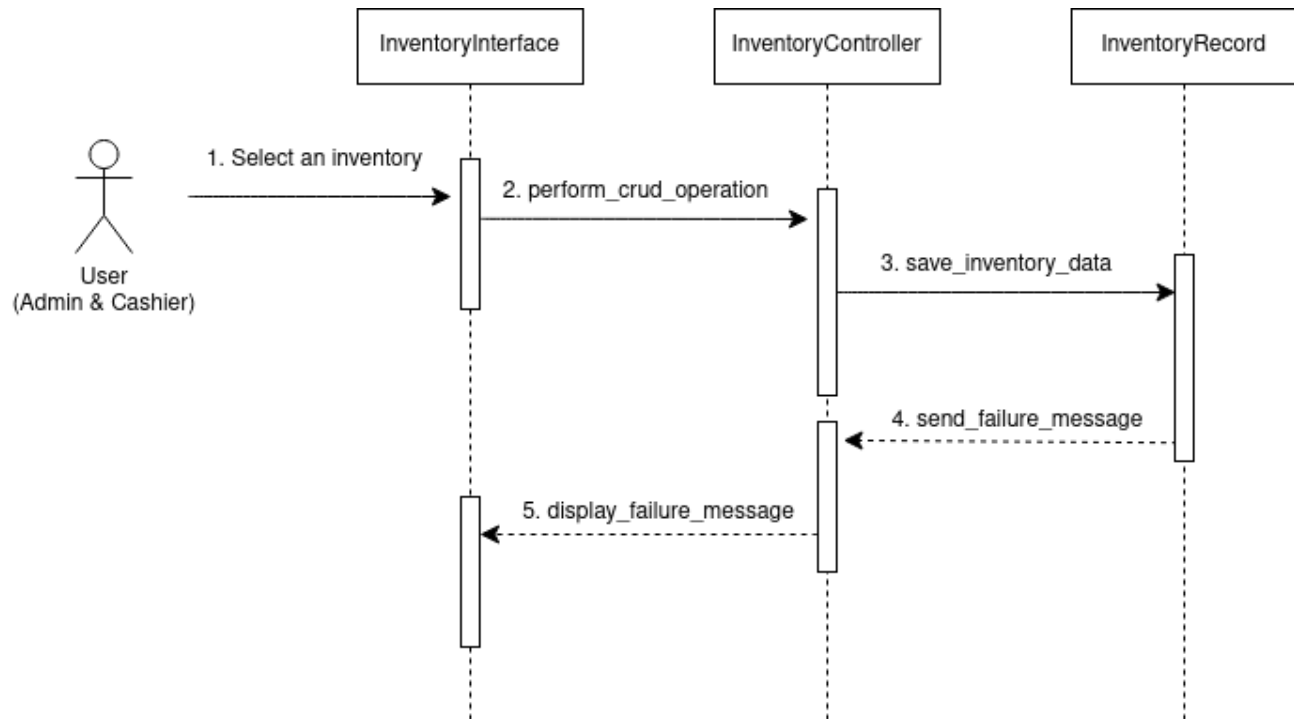


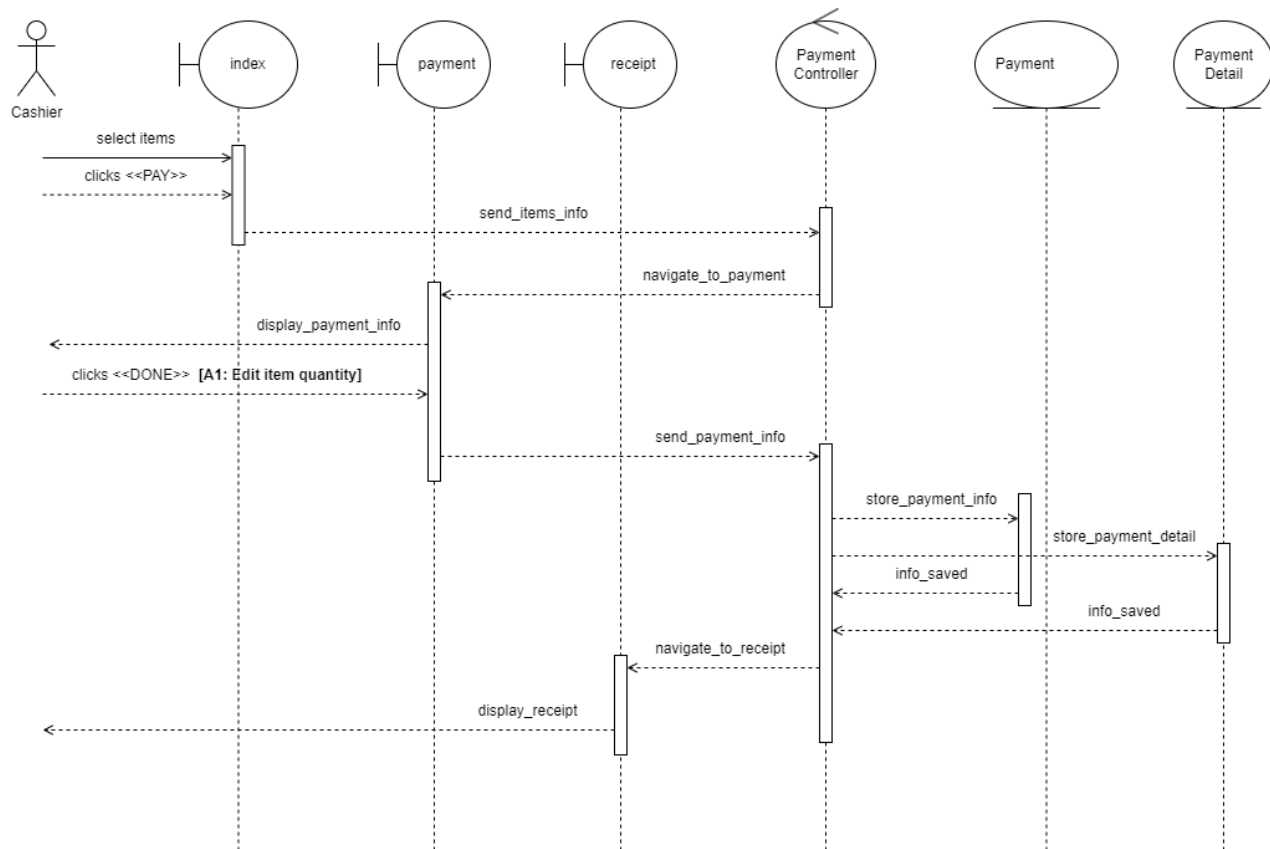
A2-1: Sequence diagram - Manage Inventory Basic Flow (Admin & Cashier)**A2-2: Sequence Diagram - Manage Inventory Basic Flow (Petakom Secretariat And Coordinator)**

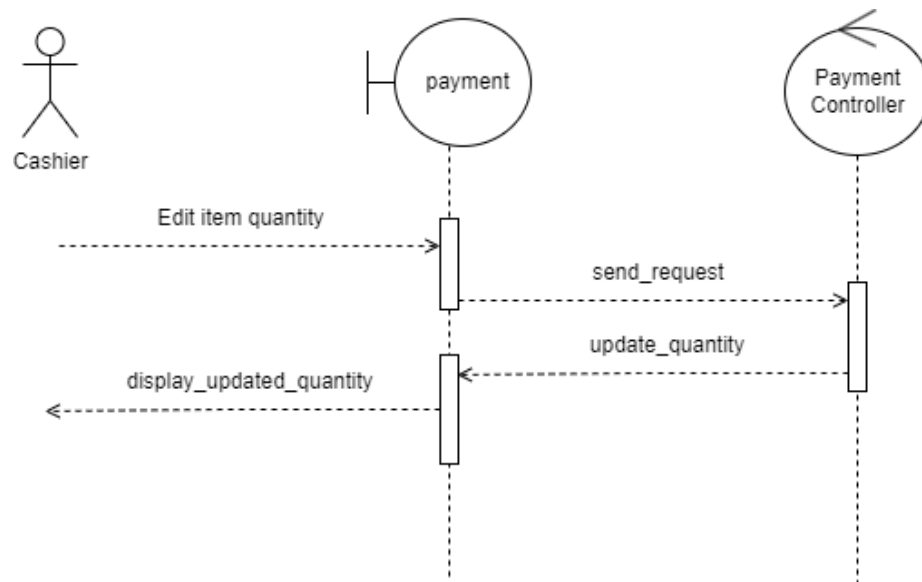
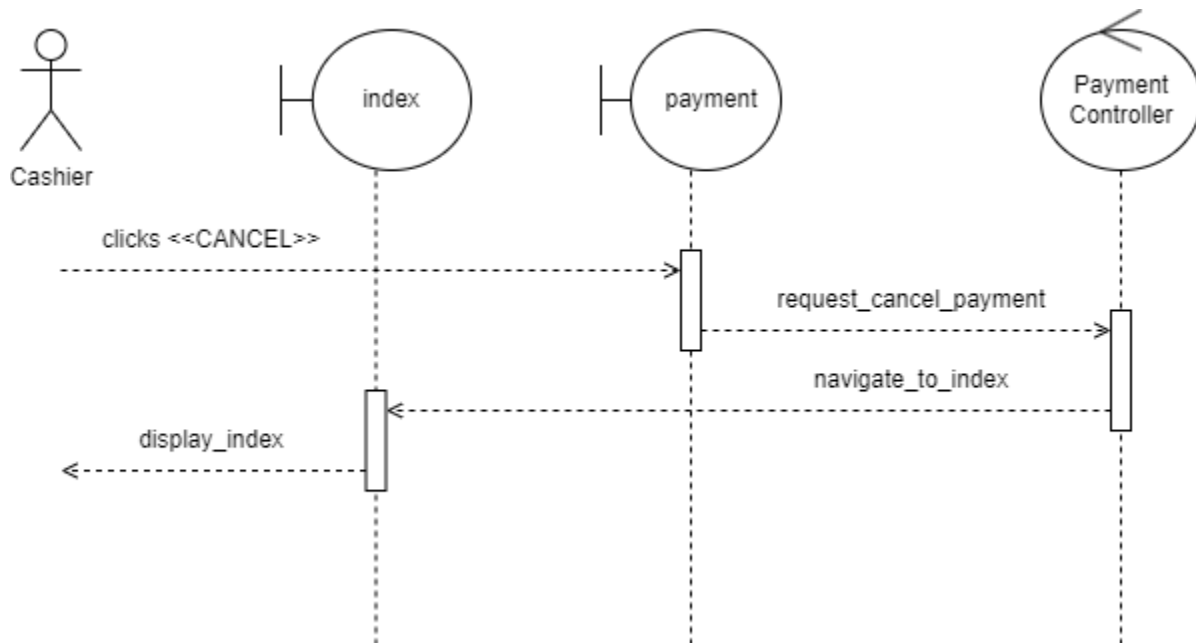
A2-3: Sequence Diagram - Manage Inventory Alternative Flow - Low Inventory Alerts

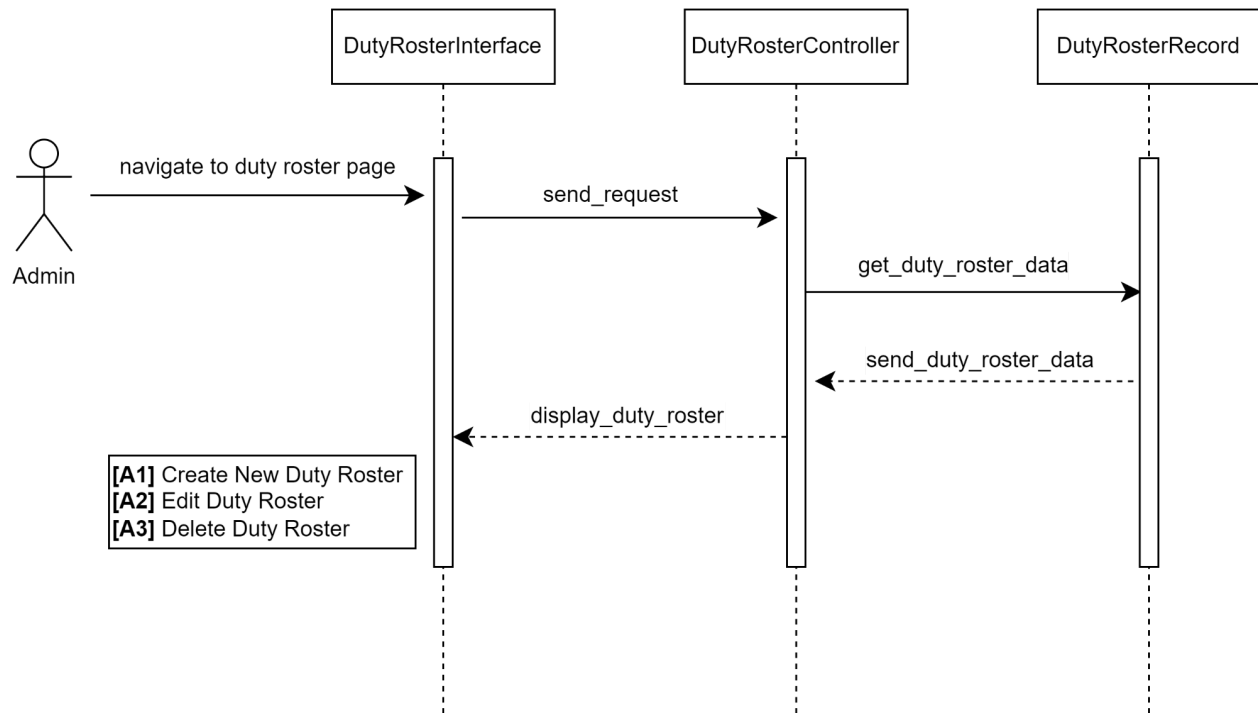


A2-4: Sequence Diagram - Manage Inventory Exception Flow (Admin & Cashier) - Failed To Save In The Database

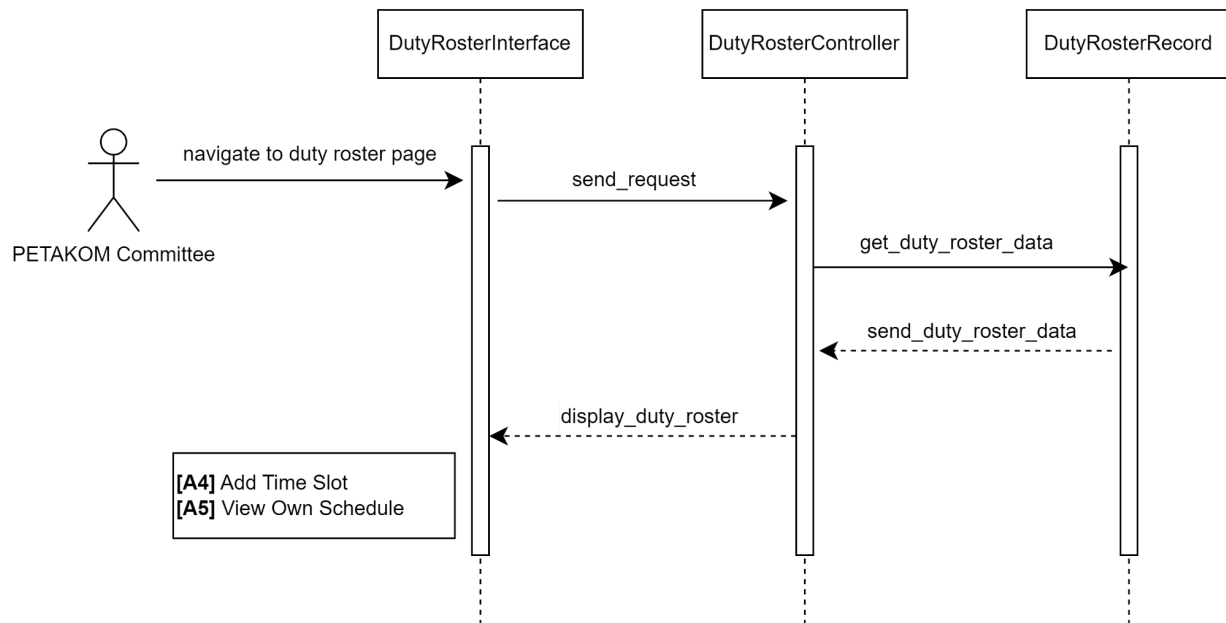


A3-1: Sequence diagram of manage payment

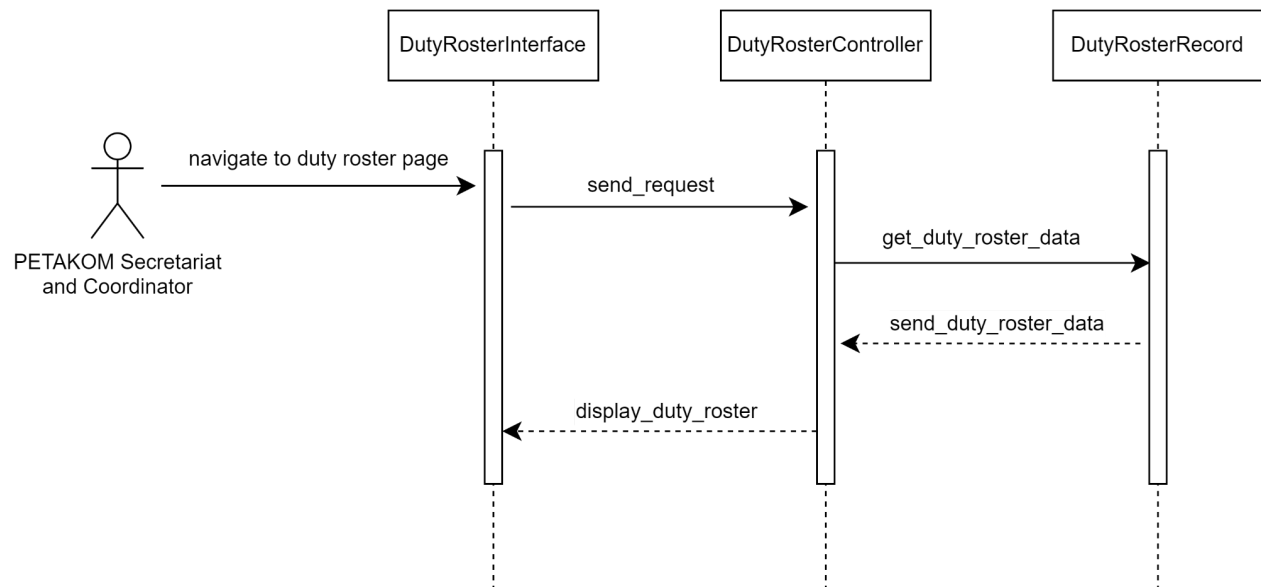
A3-2: Sequence diagram of edit item quantity**A3-3: Sequence diagram of cancel payment**

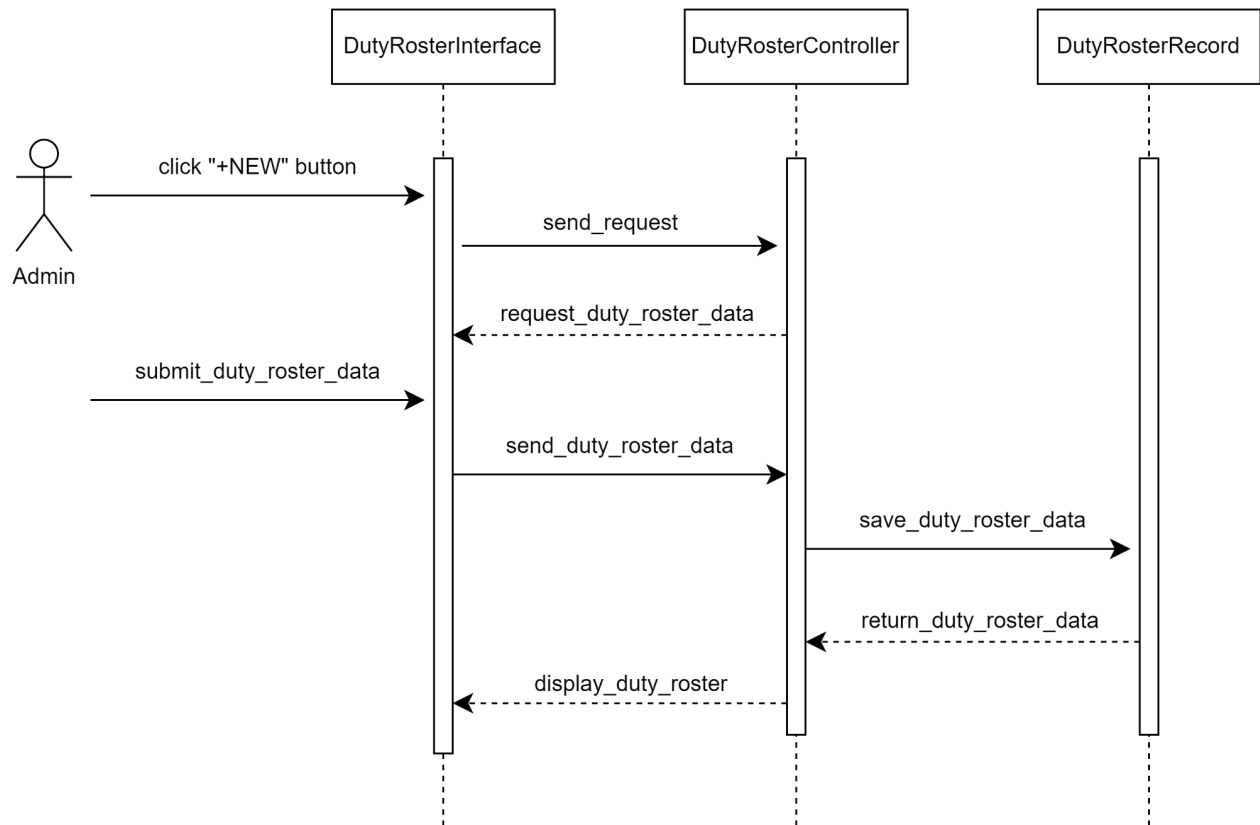
A4-1: Sequence diagram - Manage Duty Roster Basic Flow (Admin)

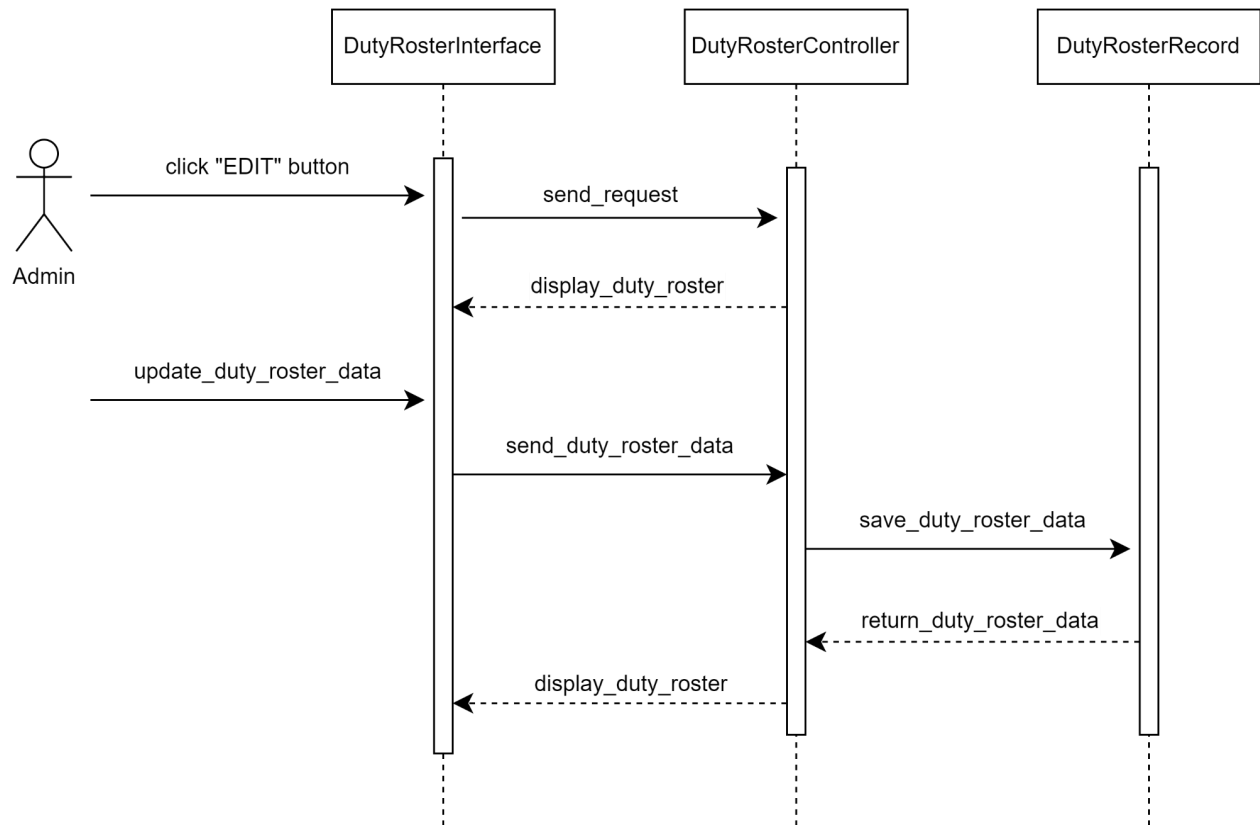
A4-2: Sequence diagram - Manage Duty Roster Basic Flow (PETAKOM Committee)

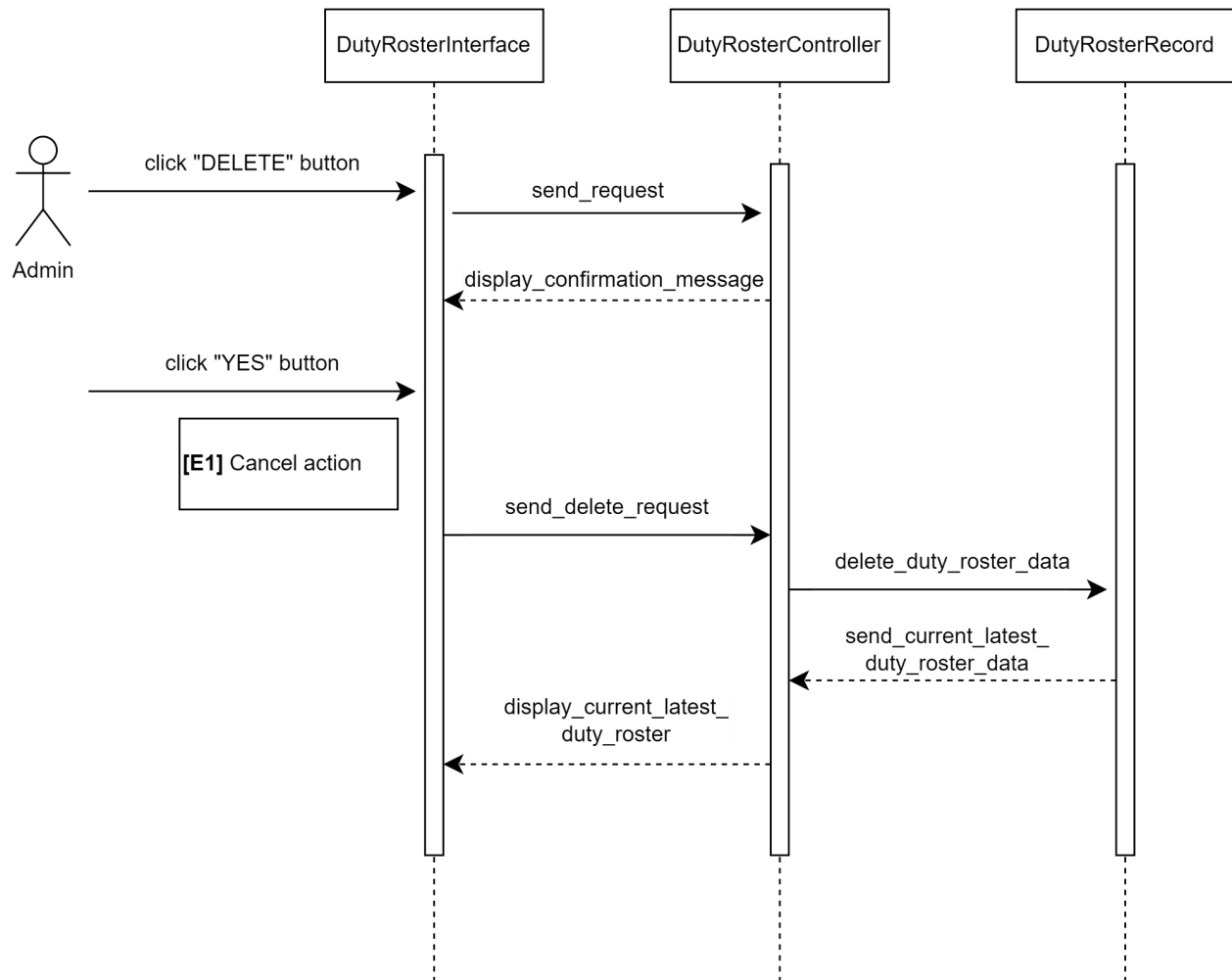


A4-3: Sequence diagram - Manage Duty Roster Basic Flow (PETAKOM Secretariat and Coordinator)

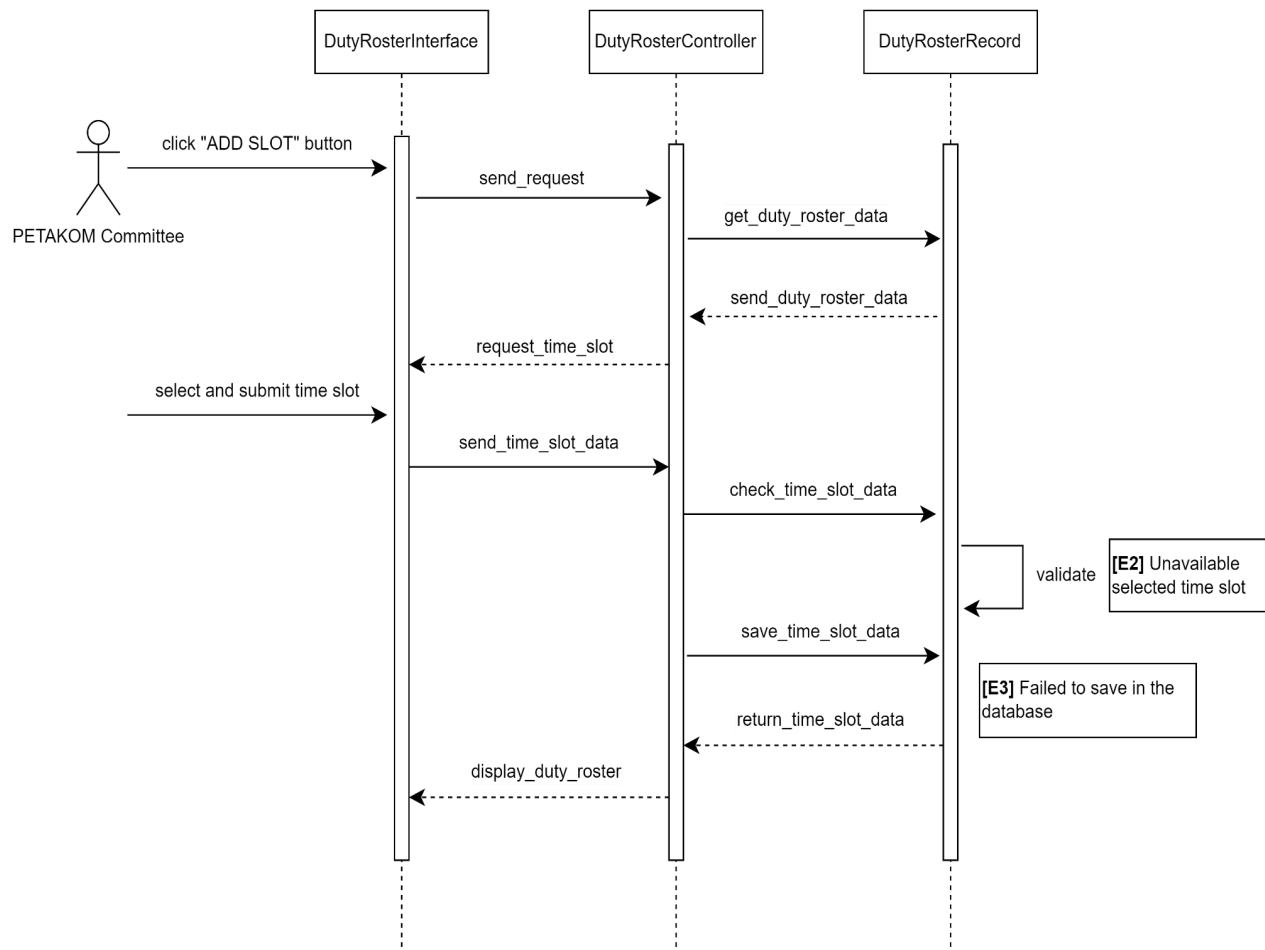


A4-4: Sequence diagram - Manage Duty Roster Alternative Flow A1 (Admin) - Create New Duty Roster

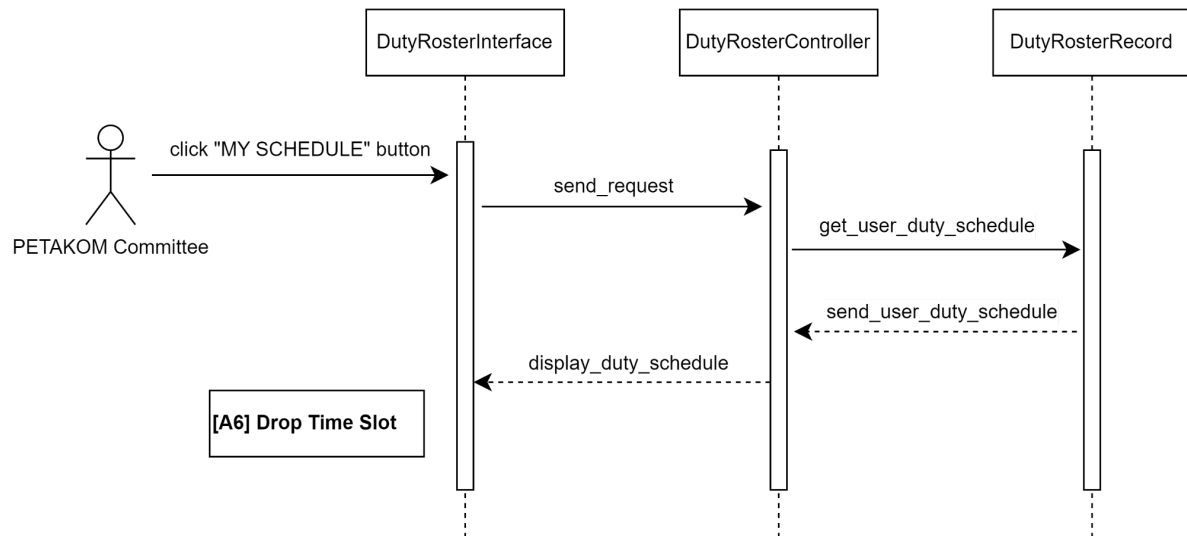
A4-5: Sequence diagram - Manage Duty Roster Alternative Flow A2 (Admin) - Edit Duty Roster

A4-6: Sequence diagram - Manage Duty Roster Alternative Flow A3 (Admin) - Delete Duty Roster

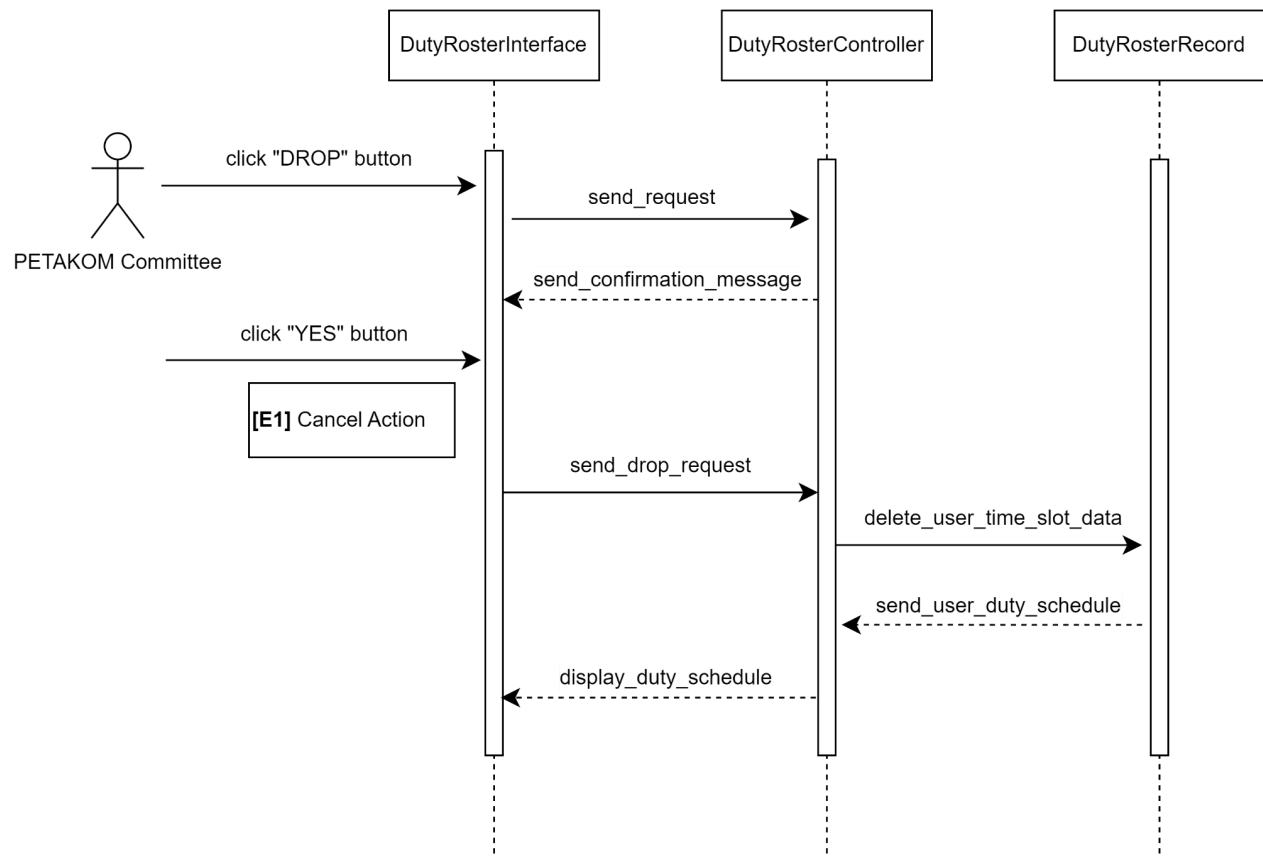
A4-7: Sequence diagram - Manage Duty Roster Alternative Flow A4 (PETAKOM Committee) - Add Time Slot

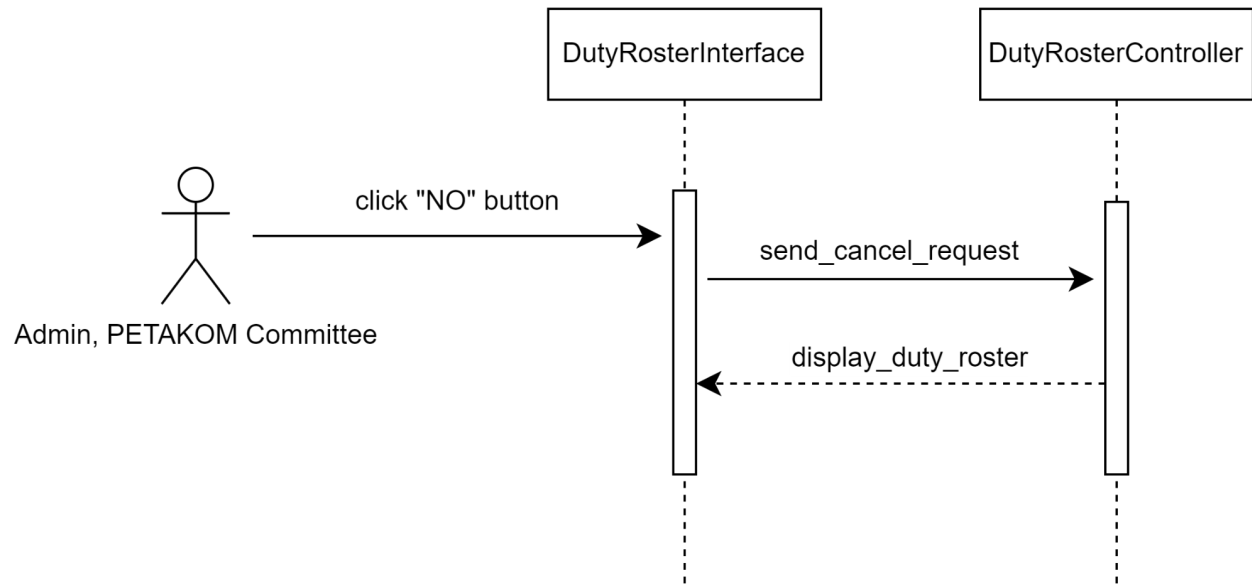


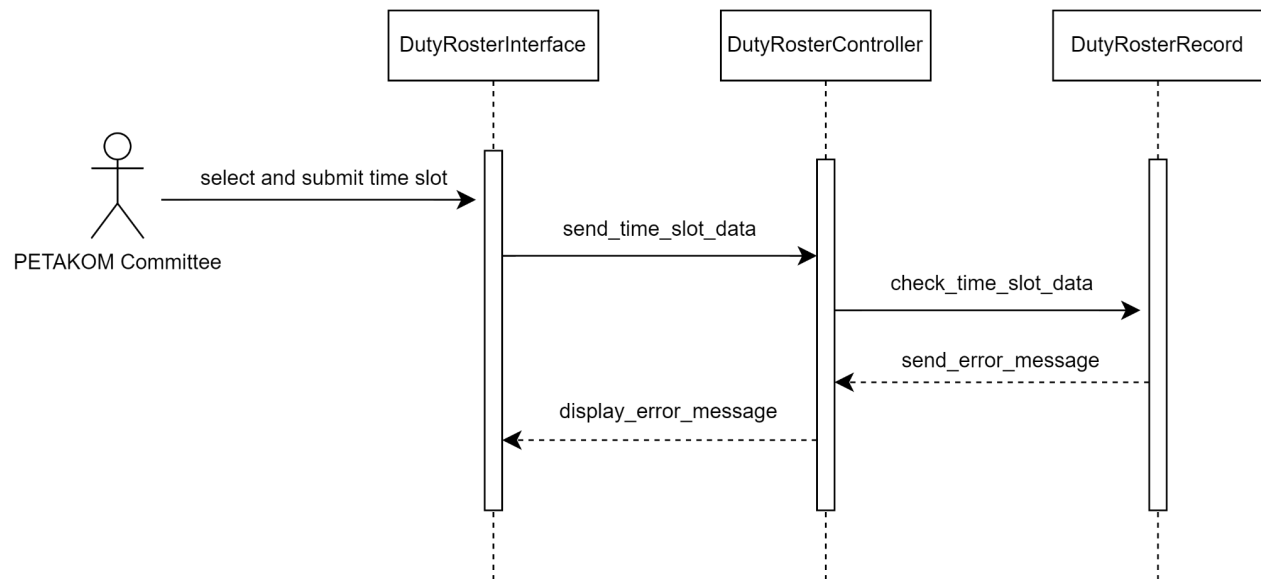
A4-8: Sequence diagram - Manage Duty Roster Alternative Flow A5 (PETAKOM Committee) - View Own Schedule

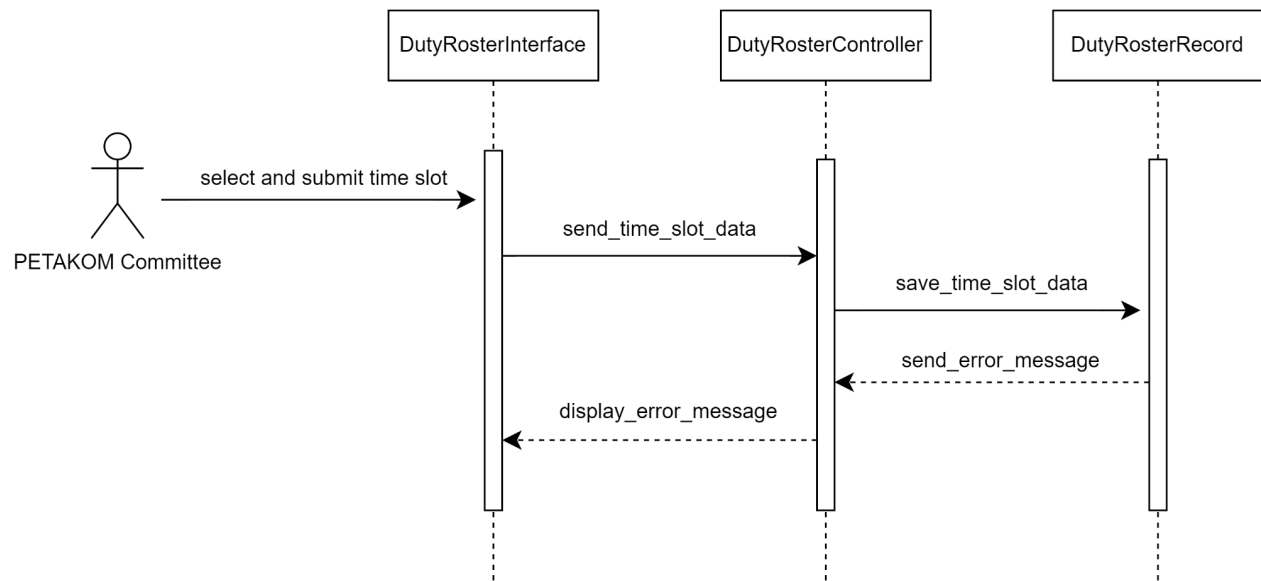


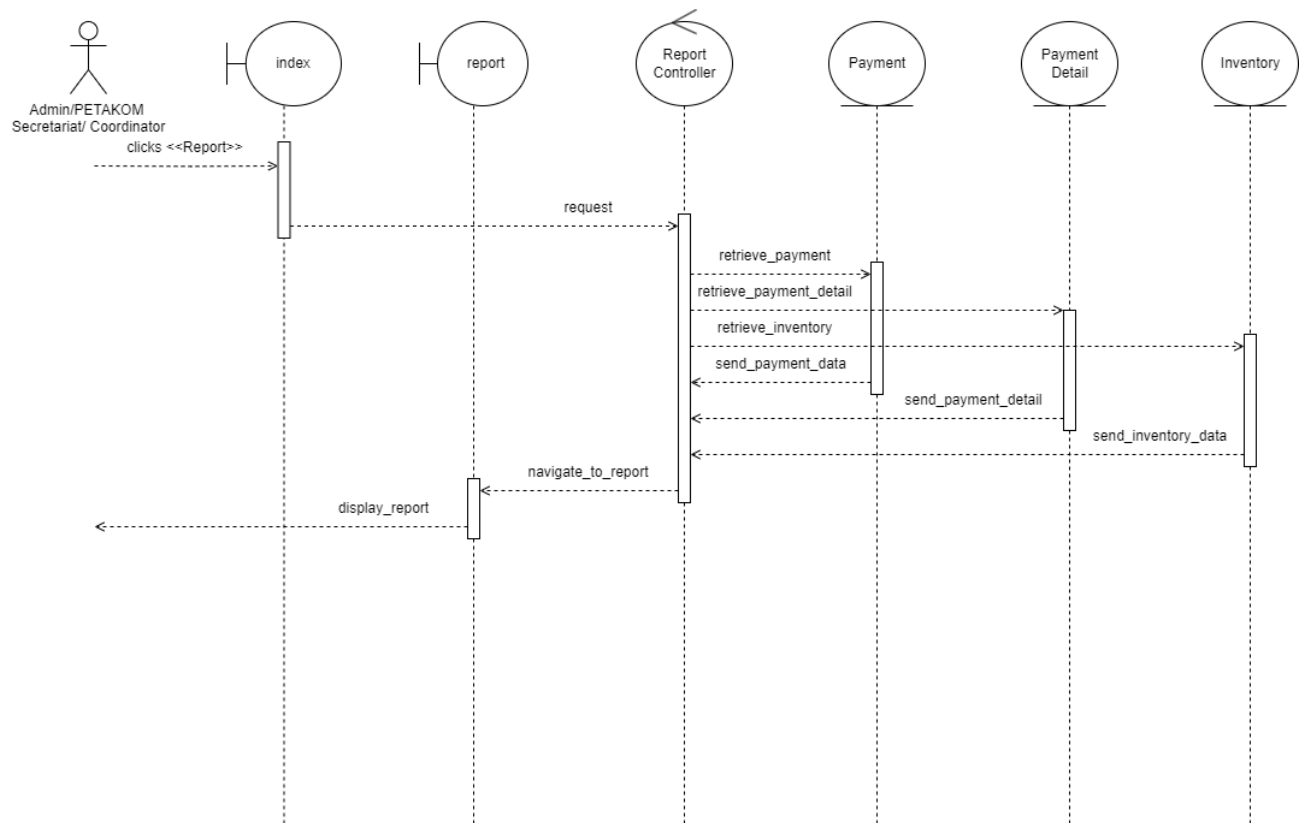
A4-9: Sequence diagram - Manage Duty Roster Alternative Flow A6 (PETAKOM Committee) - Drop Time Slot



A4-10: Sequence diagram - Manage Duty Roster Exception Flow E1 (Admin, PETAKOM Committee) - Cancel Action

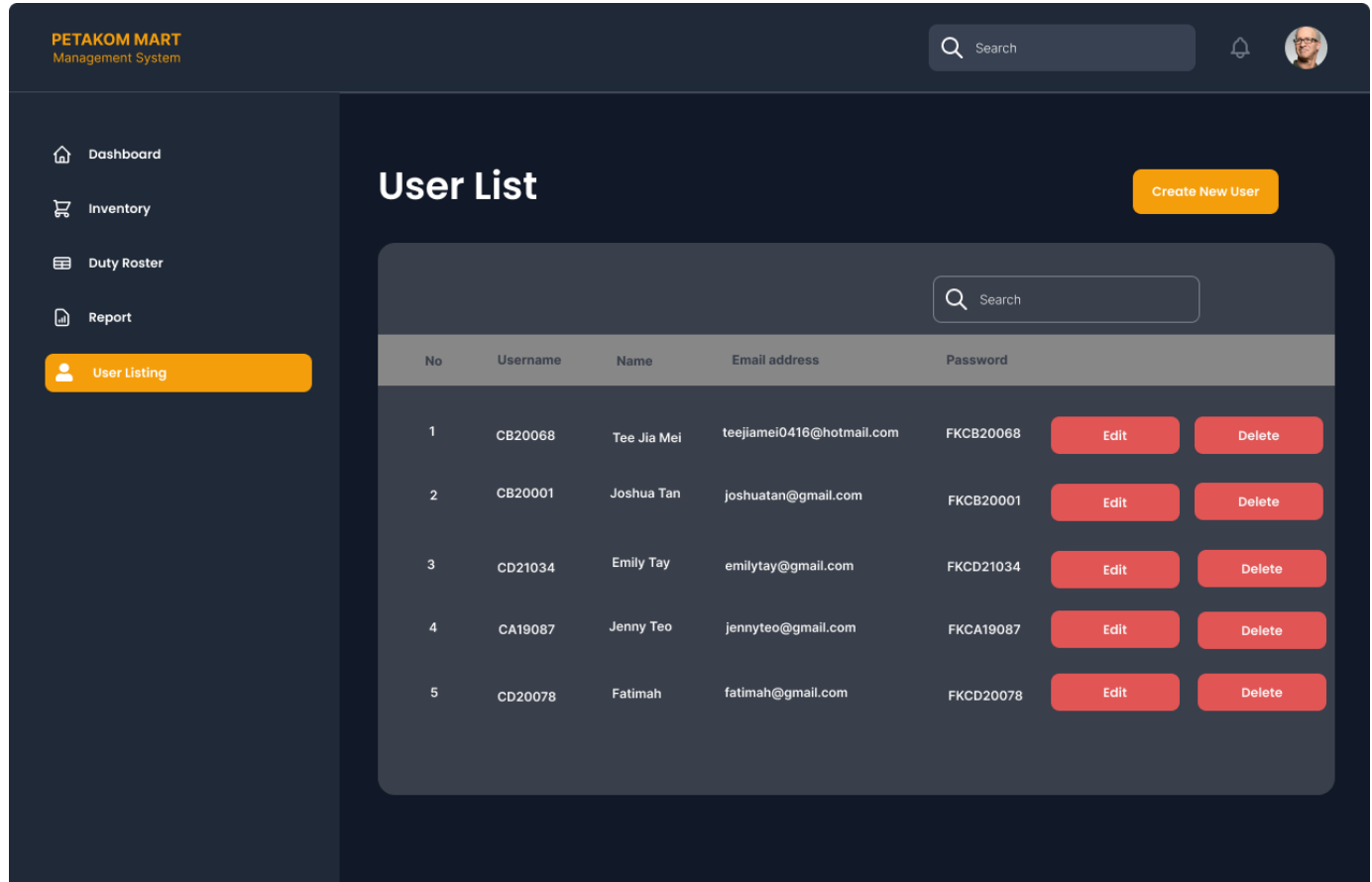
**A4-11: Sequence diagram - Manage Duty Roster Exception Flow E2
(PETAKOM Committee) - Unavailable Selected Time Slot**

**A4-12: Sequence diagram - Manage Duty Roster Exception Flow E3
(PETAKOM Committee) - Failed to Save In the Database**

A5-1: Sequence diagram of manage report

Appendix B: User Interface

B1-1: View User Listing (Admin)



B1-2: Create User Account (Admin)

The screenshot displays the PETAKOM MART Management System interface. The top header includes the system name, a search bar, and a user profile icon. A left sidebar contains navigation links for Dashboard, Inventory, Duty Roster, Report, and User Listing (which is highlighted). The main content area is titled 'Create New User' and contains a form with the following fields: Username, Name, Email Address, Password, and User Type (a dropdown menu). At the bottom of the form are 'Save' and 'Cancel' buttons.

PETAKOM MART
Management System

Search

Dashboard

Inventory

Duty Roster

Report

User Listing

Create New User

Username

Name

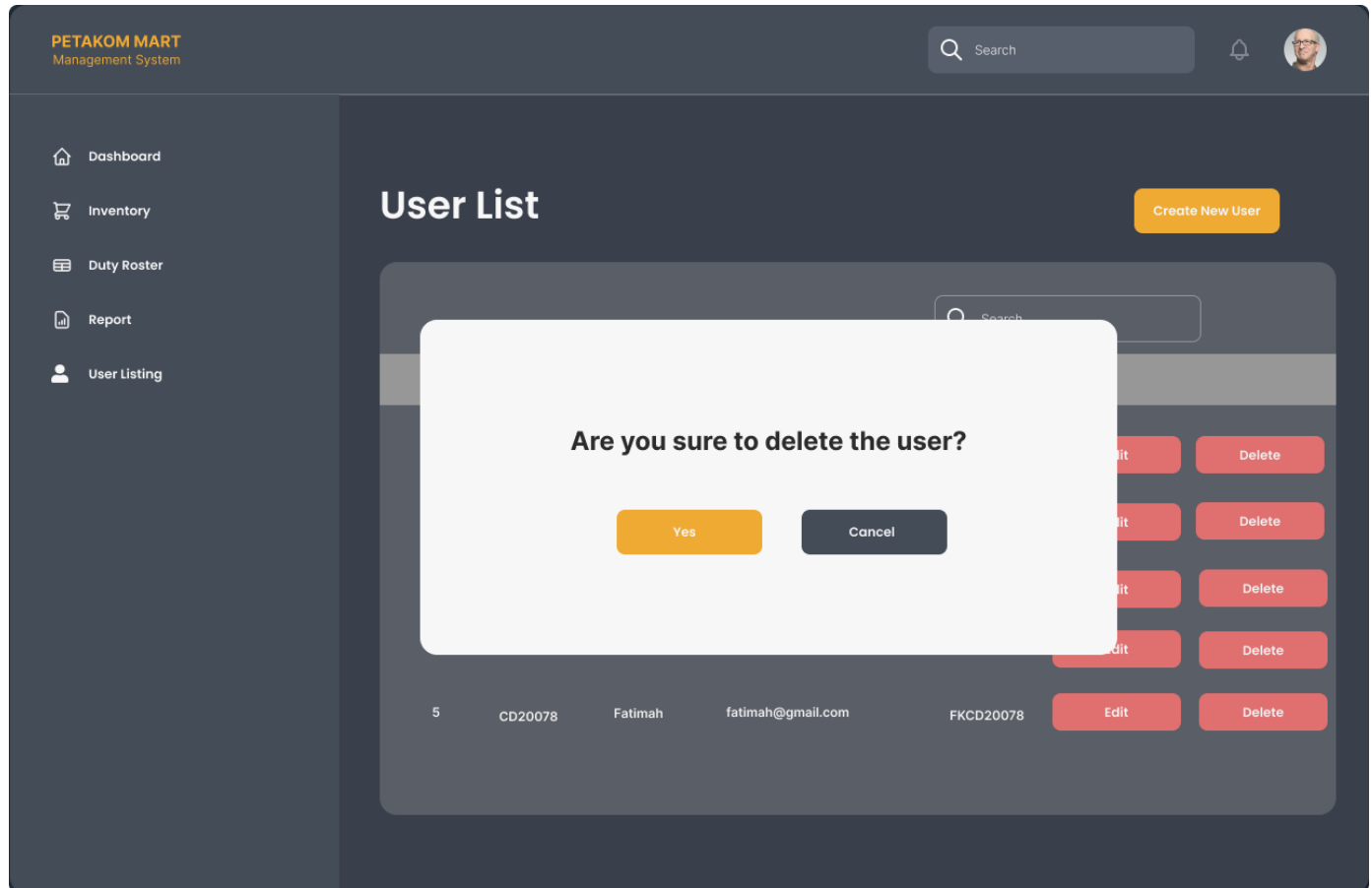
Email Address

Password

User Type

Save Cancel

B1-3: Delete User Account (Admin)



B1-4: Update User Account (Admin)

The screenshot displays the 'Edit User' interface within the PETAKOM MART Management System. The system's logo and name are in the top-left corner. A search bar and a user profile icon are in the top-right. A sidebar on the left contains navigation links: Dashboard, Inventory, Duty Roster, Report, and User Listing (which is highlighted in orange). The main content area is titled 'Edit User' and contains a form with the following fields: Username (CB20068), Name (TEE JIA MEI), Email Address (teejiamei0416@hotmail.com), and User Type (a dropdown menu currently showing 'Committee Member'). At the bottom of the form are two buttons: a prominent orange 'Save' button and a grey 'Cancel' button.

PETAKOM MART
Management System

Search

Dashboard

Inventory

Duty Roster

Report

User Listing

Edit User

Username
CB20068

Name
TEE JIA MEI

Email Address
teejiamei0416@hotmail.com

User Type
Committee Member

Save Cancel

B2-1: Inventory management Page for users to a list of inventory

PETAKOM MART
Management System

Search

Dashboard

Inventory

Duty Roster

Report

Inventory

New Inventory

Search

No	Item name	Brand	Unit cost	Item price		
1	Mamee	Maggie	12.00	24.00	View	Edit
1	Mamee	Maggie	12.00	24.00	View	Edit
1	Mamee	Maggie	12.00	24.00	View	Edit
1	Mamee	Maggie	12.00	24.00	View	Edit
1	Mamee	Maggie	12.00	24.00	View	Edit

B2-2: Create new inventory Page for admin and cashier

PETAKOM MART
Management System

Search

Dashboard

Inventory

Duty Roster

Report

Create New Inventory

Name

Unit cost

Brand

Price

Quantity

Upload item photo

Save Cancel


B2-3 View/ Edit/ Delete inventory Page for users

The screenshot displays the 'Edit Inventory' interface of the PETAKOM MART Management System. The page features a dark blue sidebar on the left with navigation links: 'Dashboard' (home icon), 'Inventory' (shopping cart icon, highlighted in orange), 'Duty Roster' (list icon), and 'Report' (document icon). The top header includes the system name 'PETAKOM MART Management System', a search bar with a magnifying glass icon, a notification bell, and a user profile picture. The main content area is titled 'Edit Inventory' and contains a form with the following fields: 'Name', 'Unit cost', 'Brand', 'Price', and 'Quantity'. Each field is represented by a dark blue input box. Below the 'Brand' field is a large dark blue box with the text 'Upload item photo'. At the bottom of the form are three buttons: 'Save' (orange), 'Delete' (red), and 'Cancel' (dark blue).

B2-4: Manage Inventory Page for cashier

PETAKOM MART

Management System



Search

No	Item name	Brand	Unit cost	Item price	
1	Mamee	Maggie	12.00	24.00	<div>View</div>
1	Mamee	Maggie	12.00	24.00	<div>View</div>
1	Mamee	Maggie	12.00	24.00	<div>View</div>
1	Mamee	Maggie	12.00	24.00	<div>View</div>
1	Mamee	Maggie	12.00	24.00	<div>View</div>

Previous

1

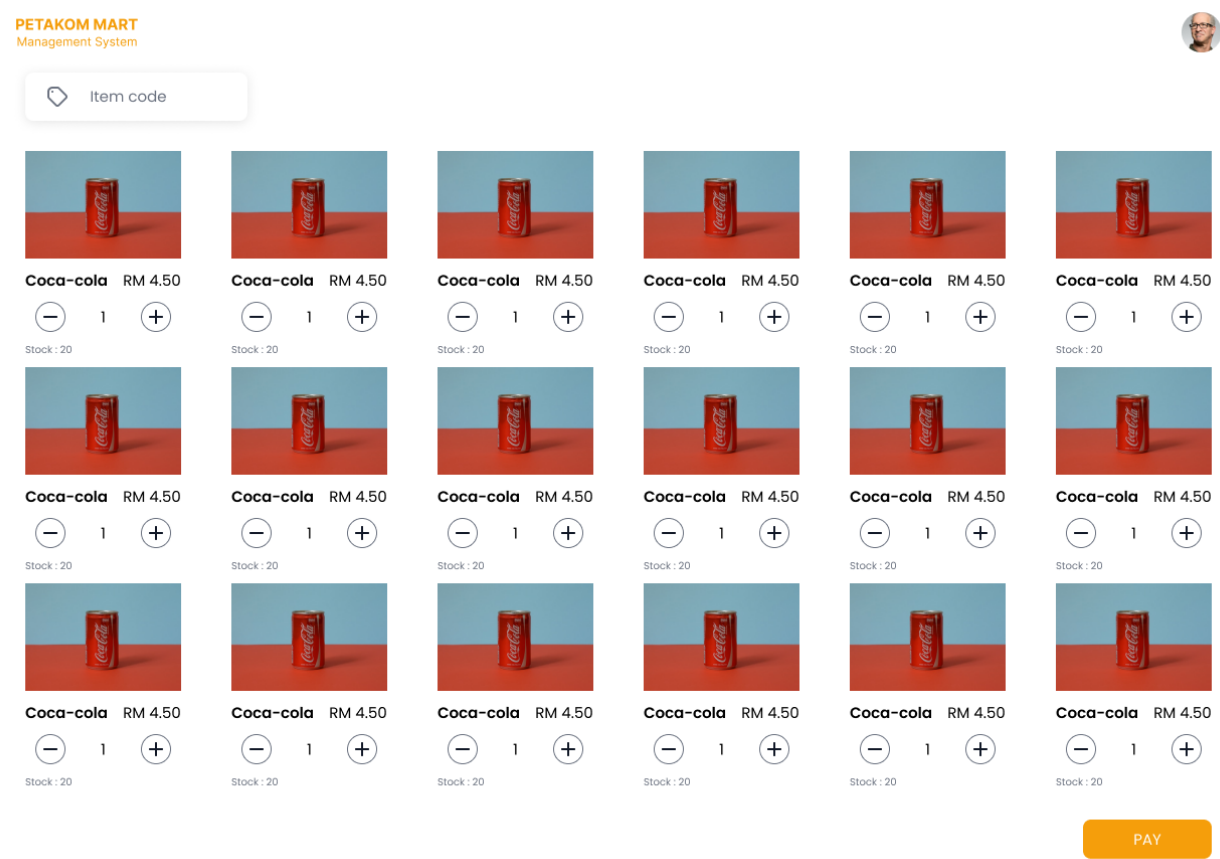
Next

PETAKOM MART
Management System

Search

[illegible]


B3-1: Main page of manage payment



B3-2: Payment confirmation page

PETAKOM MART

Management System



ITEMS	UNIT PRICE	QUANTITY			PRICE
Coca-Cola	RM 2.90	<div><div>-</div><div>1</div><div>+</div></div>			RM 5.80
Coca-Cola	RM 2.90	<div><div>-</div><div>1</div><div>+</div></div>			RM 5.80
Coca-Cola	RM 2.90	<div><div>-</div><div>1</div><div>+</div></div>			RM 5.80

Total Price

RM 17.40

CANCEL

DONE

B3-2: Receipt page



PAYMENT SUCCESSFUL

#13631
1.45 pm | 22/3/2023

ITEMS	PRICE
Coca-Cola x2	RM 5.80
Coca-Cola x2	RM 5.80

Total Price

RM 17.40

HOME

B4-1: Admin - View Duty Roster

The screenshot displays the 'Latest Duty Roster' interface within the PETAKOM MART Management System. The interface features a dark blue sidebar on the left with navigation links: Dashboard, Inventory, Duty Roster (highlighted), Report, and User Listing. The main content area shows a grid of duty assignments for the week of 27 Mar - 2 Apr. The grid has columns for days of the week (MON, TUE, WED, THUR, FRI) and rows for time slots (9:00 AM-11:00 AM, 11:00 AM-1:00 PM, 1:00 PM-3:00 PM, 3:00 PM-5:00 PM). Assignments are listed in the cells, with some cells containing a hyphen (-) indicating no assignment. At the bottom right, there are 'Edit' and 'Delete' buttons. A '+NEW' button is located at the top right of the main content area.

PETAKOM MART
Management System

Search

Dashboard
Inventory
Duty Roster
Report
User Listing

Latest Duty Roster

+NEW

Week for 27 Mar - 2 Apr

	MON	TUE	WED	THUR	FRI
9:00 AM-11:00 AM	Fatimah Jestina	Lee Xing Kumar	-	-	Ahmad
11:00 AM-1:00 PM	Jordan Ahmad	-	Ahmad Khairul	-	-
1:00 PM-3:00 PM	-	-	-	-	-
3:00 PM-5:00 PM	-	-	-	Fatimah Ainul	-

< >

Edit Delete

B4-2: Admin - Create New Duty Roster

The screenshot displays the 'Create New Duty Roster' form within the PETAKOM MART Management System. The interface features a dark blue sidebar on the left with navigation links: Dashboard, Inventory, Duty Roster (highlighted), Report, and User Listing. The top header includes the system name, a search bar, and a user profile icon. The main content area is titled 'Create New Duty Roster' and contains a form with the following elements:

- Date:** A dropdown menu showing '3 Apr 2023'.
- Time Slot:** A list of time slots with checkboxes for selection:
 - ☒ Select All
 - ☒ 9:00 AM-11:00 AM
 - ☒ 11:00 AM- 1:00 PM
 - ☒ 1:00 PM-3:00 PM
 - ☒ 3:00 PM-5:00 PM
- +Add date & time slot:** A link to add additional slots.
- POST:** A button to submit the form.

B4-3: Admin - Edit Duty Roster

PETAKOM MART
Management System

Q Search

Dashboard

Inventory

Duty Roster

Report

User Listing

Edit Duty Roster

Date

27 Mar 2023

▼

Time Slot

✓ Select All

✓ 9:00 AM-11:00 AM

✓ 11:00 AM- 1:00 PM

✓ 1:00 PM-3:00 PM

✓ 3:00 PM-5:00 PM

Date

28 Mar 2023

▼

Time Slot

✓ Select All

✓ 9:00 AM-11:00 AM

✓ 11:00 AM- 1:00 PM

✓ 1:00 PM-3:00 PM

✓ 3:00 PM-5:00 PM

Date

29 Mar 2023

▼

Time Slot

✓ Select All

✓ 9:00 AM-11:00 AM

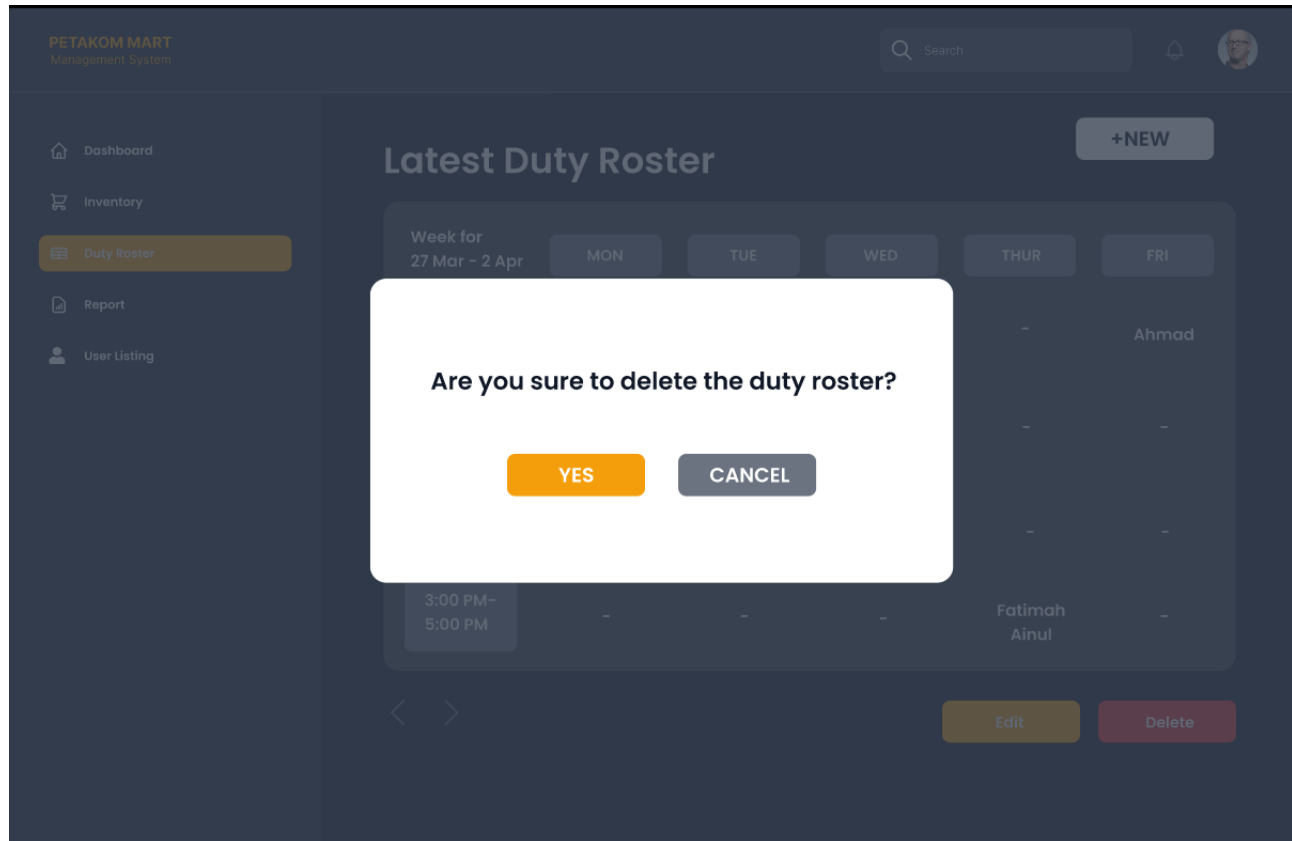
✓ 11:00 AM- 1:00 PM

✓ 1:00 PM-3:00 PM

✓ 3:00 PM-5:00 PM

+Add date & time slot

UPDATE

B4-4: Admin - Delete Duty Roster

B4-5: PETAKOM Committee - View Duty Roster

The screenshot displays the PETAKOM Mart Management System interface. The top header includes the system name, a search bar, and a user profile icon. The left sidebar contains navigation links for Dashboard, Duty Roster (highlighted), and My Schedule. The main content area is titled 'Duty Roster' and shows a calendar for the week of 3 April 2023 to 9 April 2023. The calendar is organized by day (MON, TUE, WED, THUR, FRI) and time slots (9:00 AM, 11:00 AM, 1:00 PM, 3:00 PM, 5:00 PM). An 'ADD SLOT' button is located at the bottom right of the calendar area.

PETAKOM MART
Management System

Search

Dashboard

Duty Roster

My Schedule

Duty Roster

Week for 3 April 2023 – 9 April 2023

MON	TUE	WED	THUR	FRI
9:00 AM 11:00 AM	9:00 AM 11:00 AM	9:00 AM 11:00 AM	9:00 AM 11:00 AM	9:00 AM 11:00 AM
11:00 AM 1:00 PM	11:00 AM 1:00 PM	11:00 AM 1:00 PM	11:00 AM 1:00 PM	11:00 AM 1:00 PM
1:00 PM 3:00 PM	1:00 PM 3:00 PM	1:00 PM 3:00 PM	1:00 PM 3:00 PM	1:00 PM 3:00 PM
3:00 PM 5:00 PM	3:00 PM 5:00 PM	3:00 PM 5:00 PM	3:00 PM 5:00 PM	3:00 PM 5:00 PM

ADD SLOT

B4-6: PETAKOM Committee - Add Time Slot

PETAKOM MART
Management System

Search

Dashboard

Duty Roster

My Schedule

Add Time Slot

Week for 3 April 2023 – 9 April 2023

Date

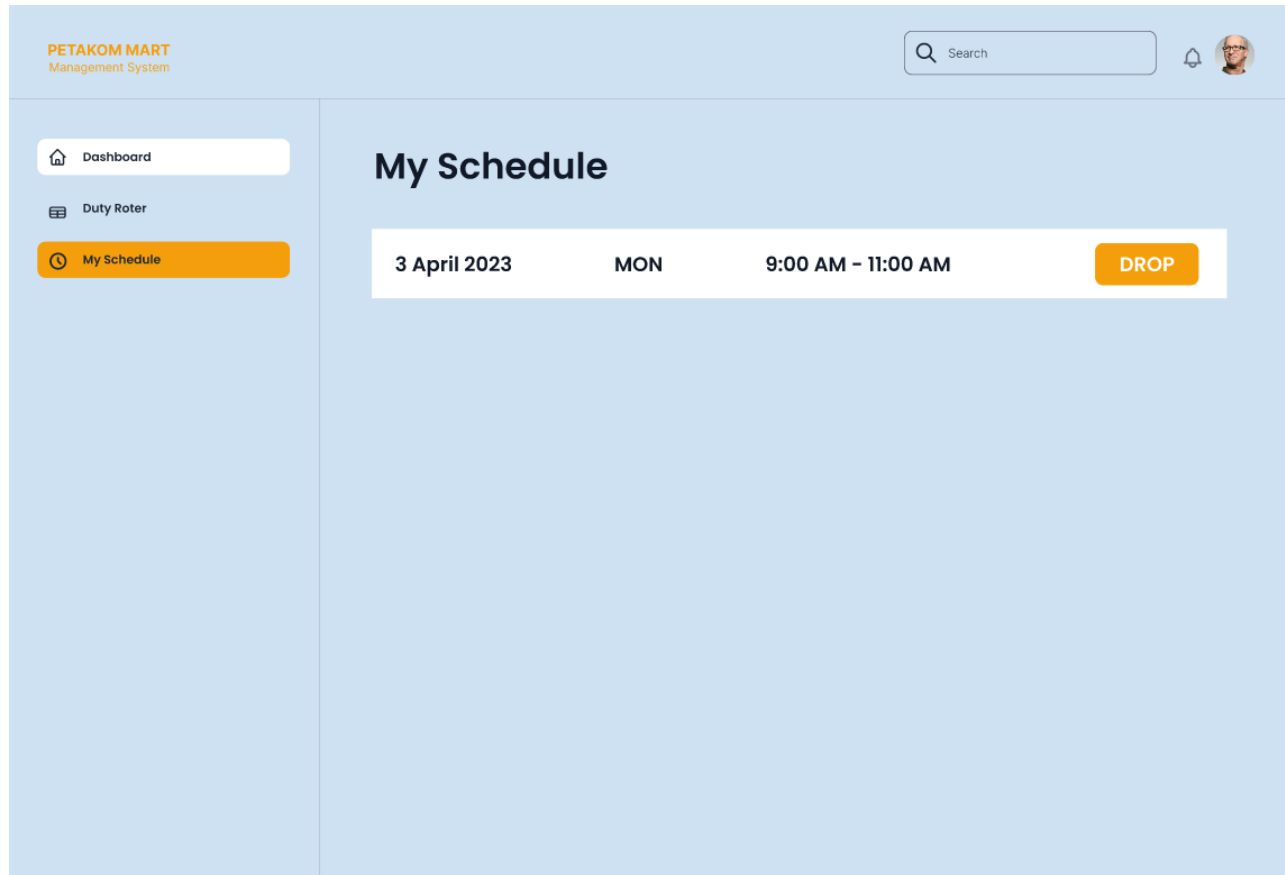
3 Apr 2023

Time Slot

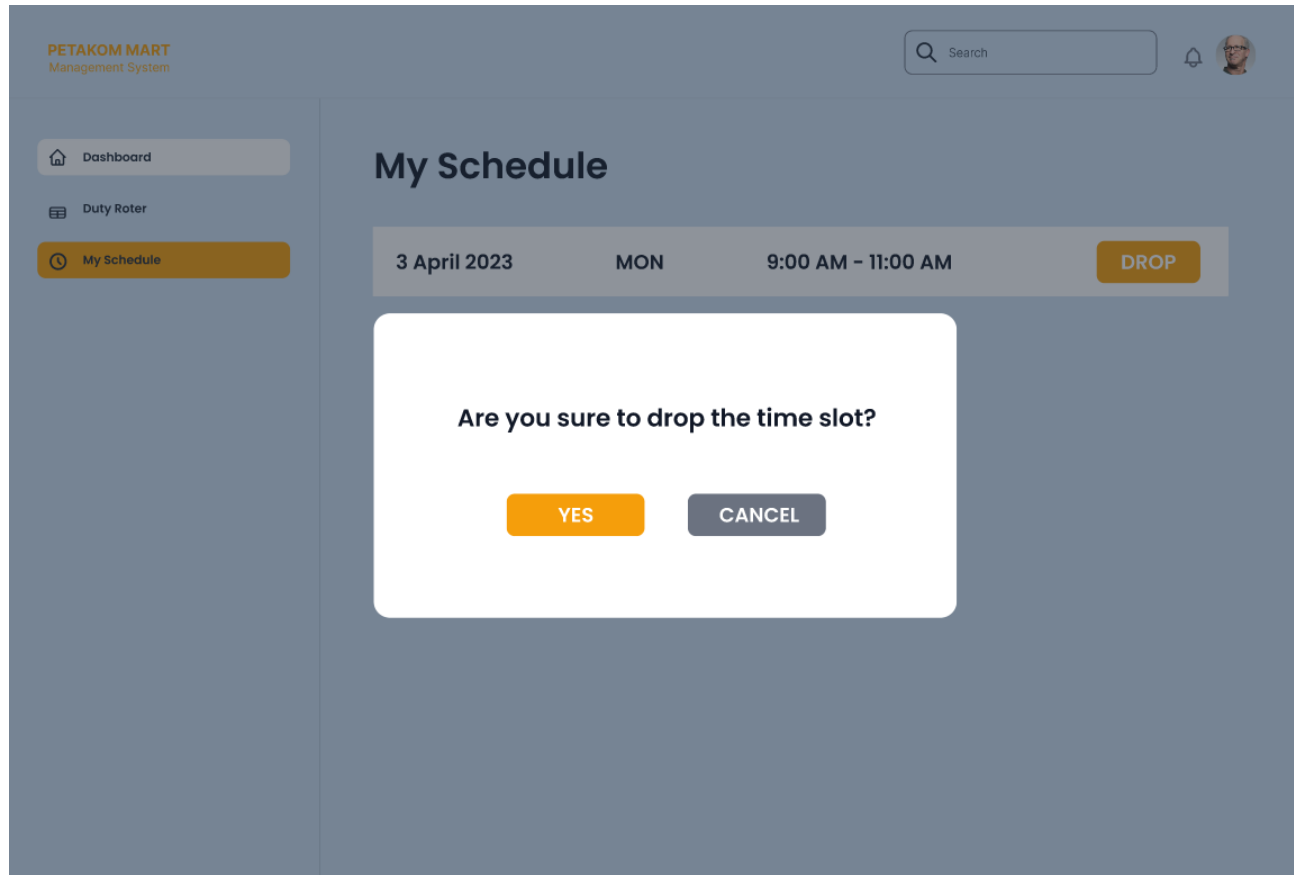
9:00 AM – 11:00 AM

ADD

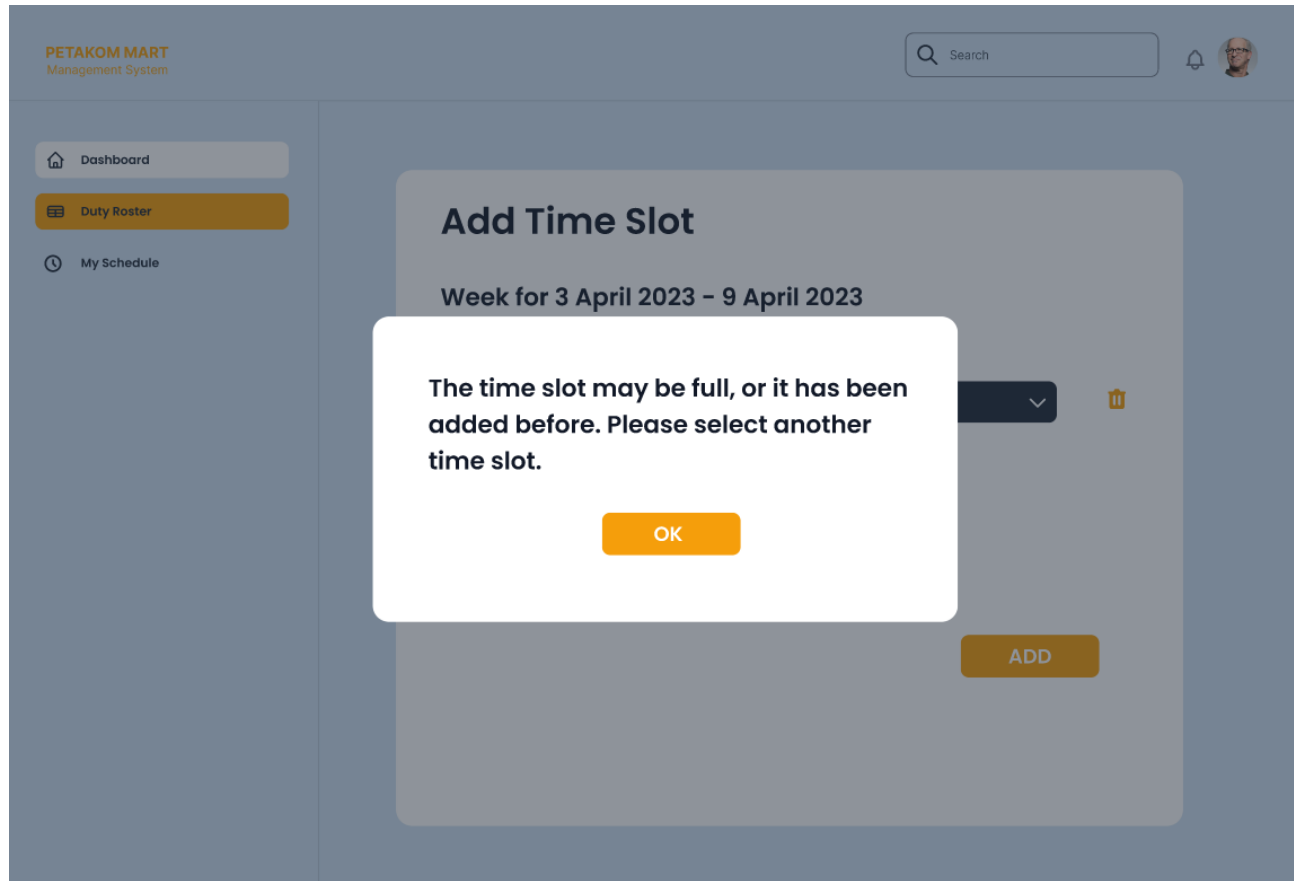
B4-7: PETAKOM Committee - View Own Schedule



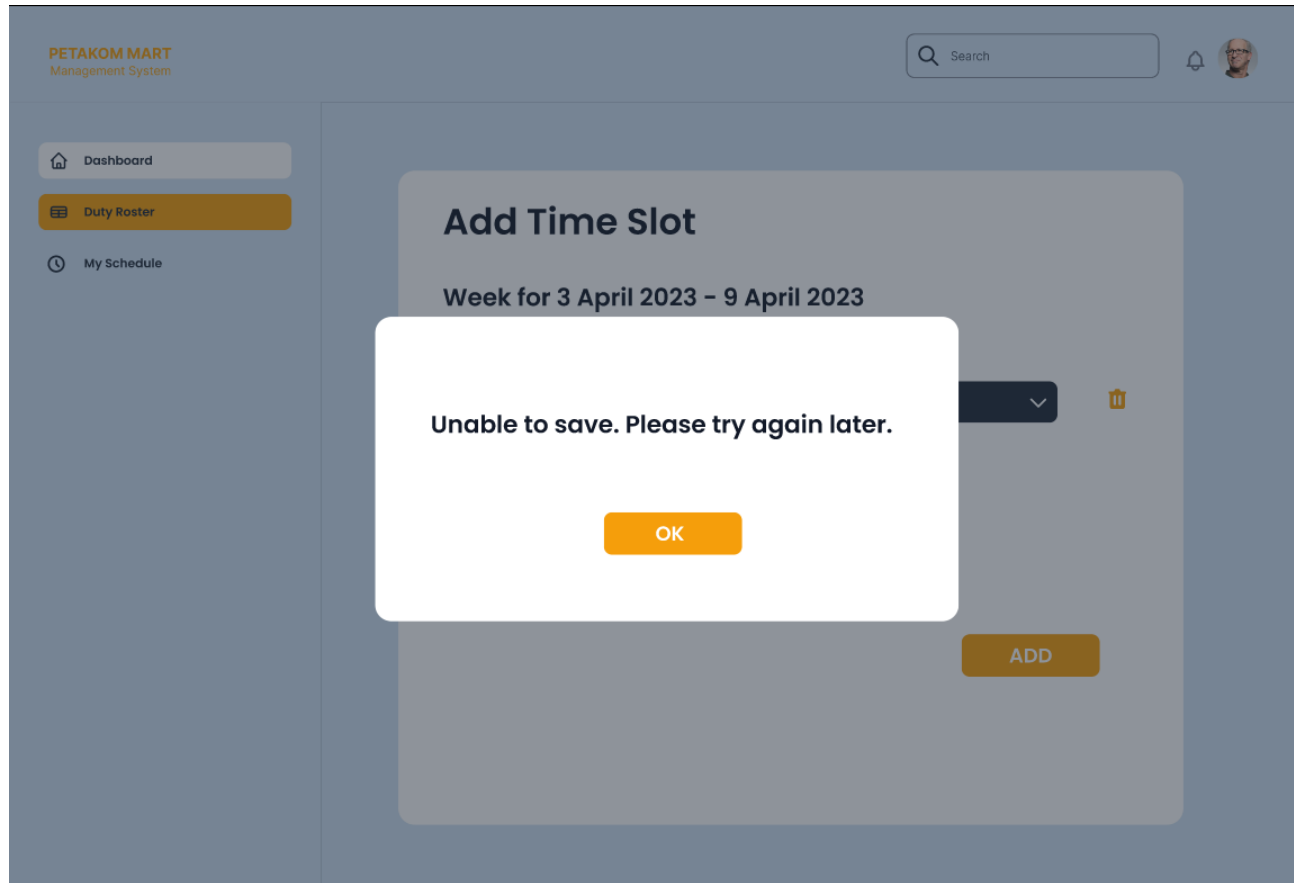
B4-8: PETAKOM Committee - Drop Time Slot



B4-9: PETAKOM Committee - Unavailable Selected Time Slot



B4-10: PETAKOM Committee - Failed to Save in Database



B4-11: PETAKOM Secretariat and Coordinator - View Duty Roster

PETAKOM MART
Management System

Search

Dashboard
Inventory
Duty Roster
Report
User Listing

Latest Duty Roster

Week for 27 Mar - 2 Apr

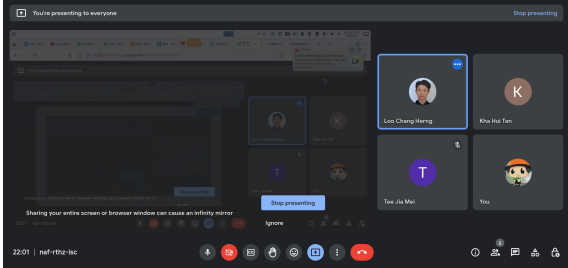
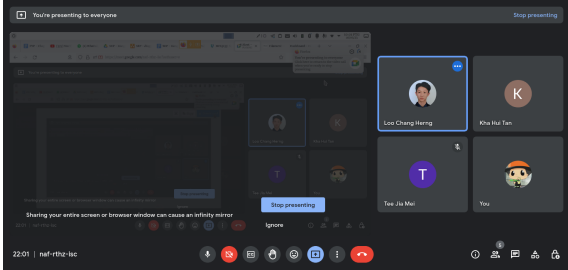
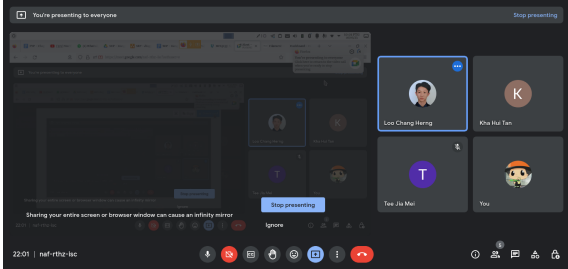
	MON	TUE	WED	THUR	FRI
9:00 AM - 11:00 AM	Fatimah Jestina	Lee Xing Kumar	-	-	Ahmad
11:00 AM - 1:00 PM	Jordan Ahmad	-	Ahmad Khairul	-	-
1:00 PM - 3:00 PM	-	-	-	-	-
3:00 PM - 5:00 PM	-	-	-	Fatimah Ainul	-

< >

B5-1: Manage report page



Appendix C - Task Distribution

	<p>Date: March 16, 2023</p> <p>Discussion:</p> <ol style="list-style-type: none">1. SRS chapter 12. Task distribution
	<p>Date: March 20, 2023</p> <p>Discussion:</p> <ol style="list-style-type: none">1. Complete use case diagram, ERD2. Design Figma GUI3. Review use case description4. Task for sequence diagram
	<p>Date: March 31, 2023</p> <p>Discussion:</p> <ol style="list-style-type: none">1. Compile and finalise SRS