



TA Management System

Deliverable-2 1st Iteration

16.03.2025

Course: CS 319

Section: 01

Group No.: 7

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1. Non-Functional Requirements

Here are 6 key non-functional requirements for our TA Management System:

1. Security and Access Control:

- a. The system must implement role-based access control for different user types (TAs, Faculty, Department Staff, Department Chair, Dean, Admin)
- b. User authentication must be secure and prevent unauthorized access
- c. Sensitive data (like personal information of students and staff) must be protected
- d. All actions in the system should be logged for audit purposes

2. Performance and Scalability:

- a. The system should handle multiple users concurrently (particularly during peak times like exam scheduling periods)
- b. Database queries should execute efficiently, especially for the automatic assignment algorithm
- c. The system should be able to scale to accommodate all departments and TAs at the University
- d. Response time for regular operations should not exceed more than few seconds (ideally 3)

3. Reliability and Availability:

- a. Like any other mid-scale system, our system should be available 24/7 with minimal downtime
- b. Regular backups of the database should be performed to prevent data loss
- c. Handle errors properly and provide meaningful error messages

4. Usability and User Experience:

- a. The interface should be intuitive and easy to navigate for all user types
- b. The system should be responsive and work well on different devices and screen sizes
- c. Notification systems should be clear and timely

5. Interoperability and Compatibility:

- a. The system must be compatible with the specified infrastructure (Linux, Apache2, MySQL)
- b. Data import/export functionality should work smoothly with Excel spreadsheets
- c. The system should integrate with email services for notifications
- d. It should be compatible with standard web browsers (Chrome, Firefox, Safari, Edge)

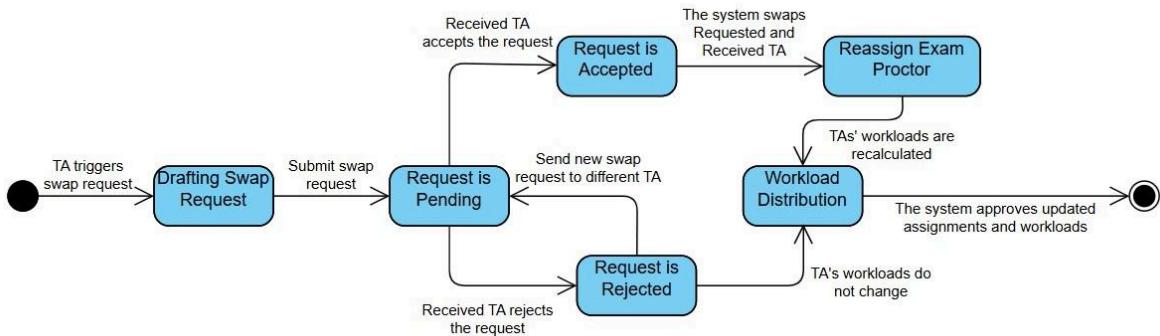
6. Maintainability:

- a. The codebase should follow software engineering best practices for readability and maintainability
- b. The system should be flexible enough to allow for future enhancements and modifications
- c. The system should be designed to accommodate changes in academic policies or procedures

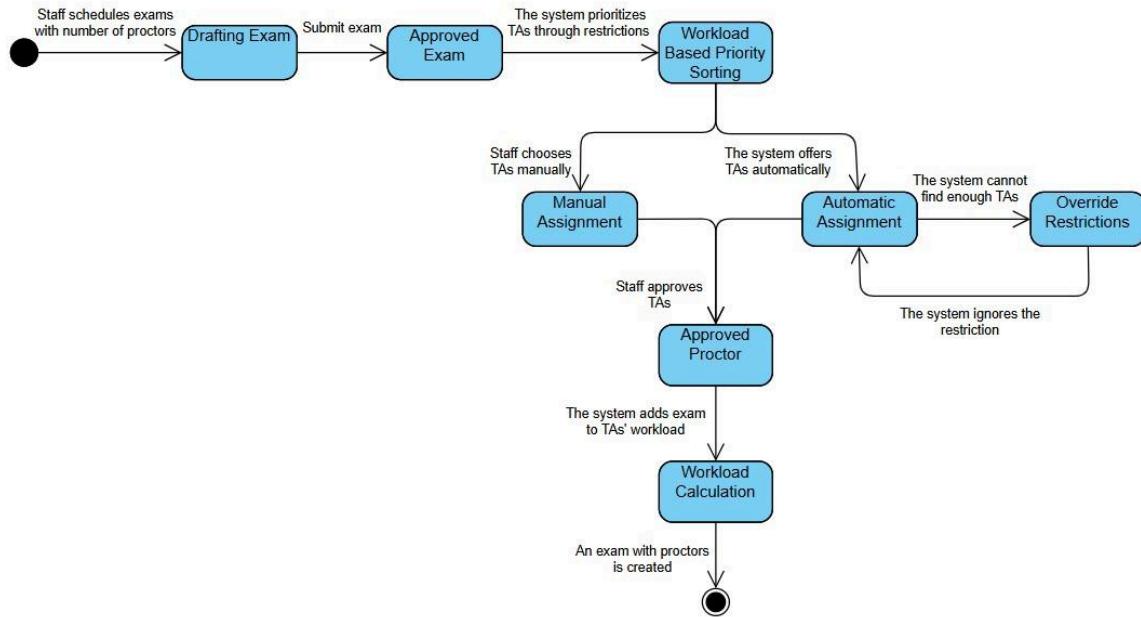
These non-functional requirements address the quality attributes that are crucial for our TA Management System's success beyond just the functional features described in previous documentation.

2. State Diagrams

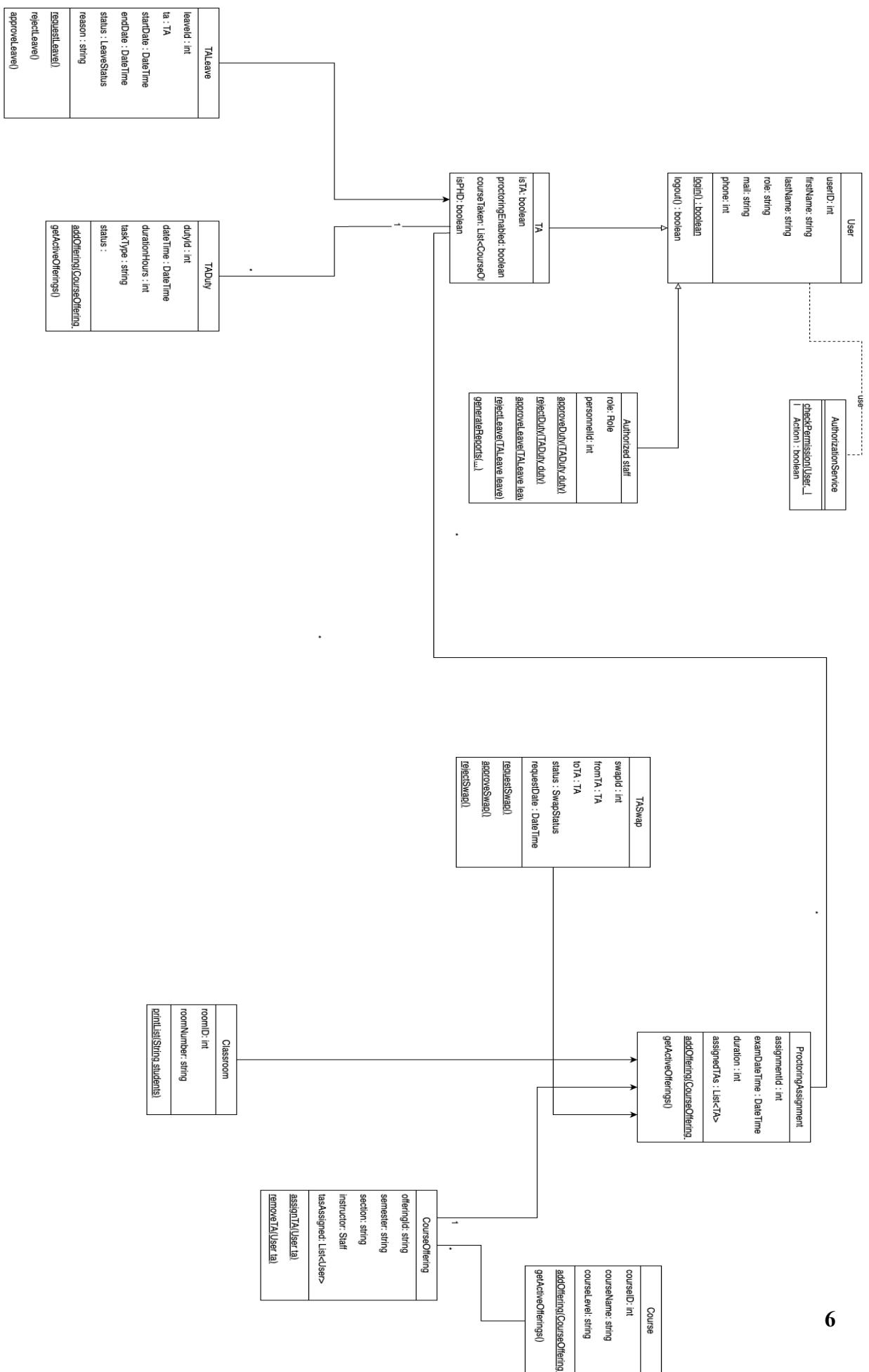
1. Request Swap



2. Proctor Assignment

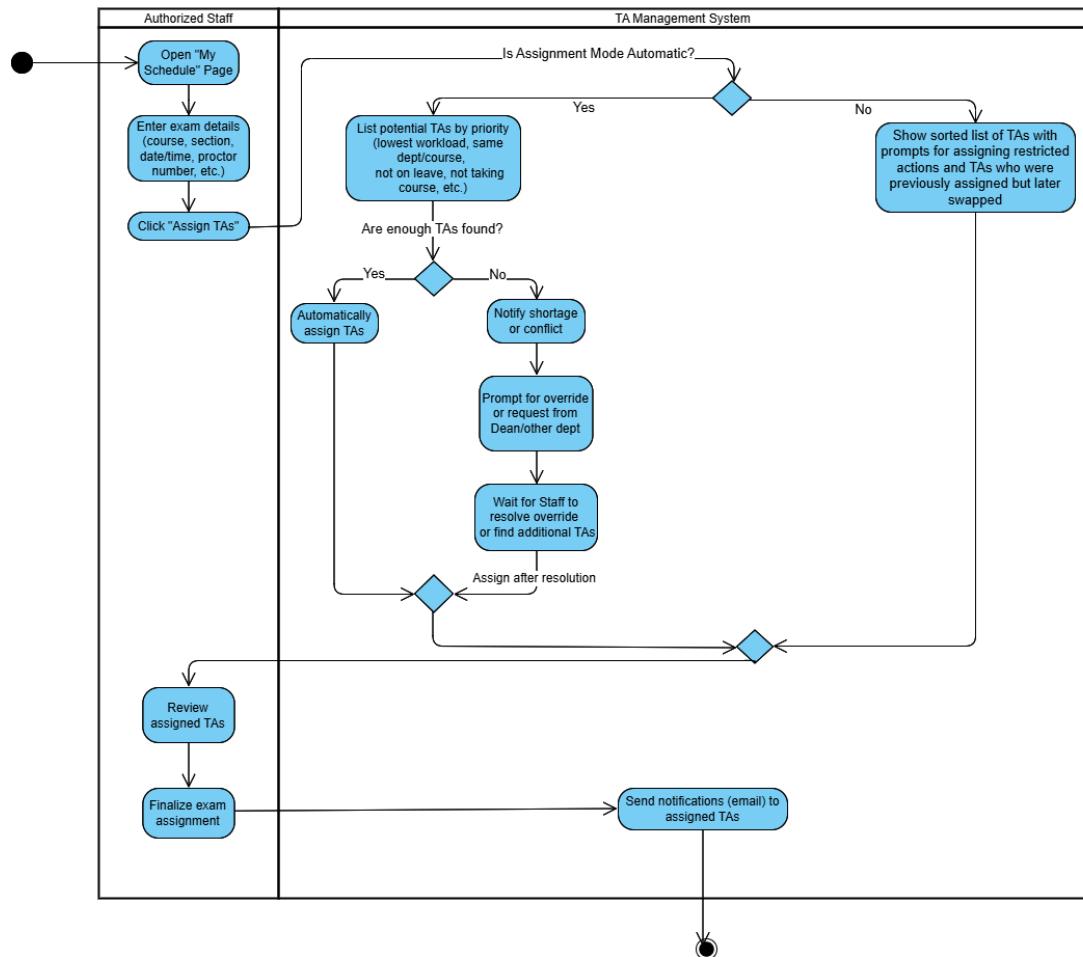


3. Class Diagram

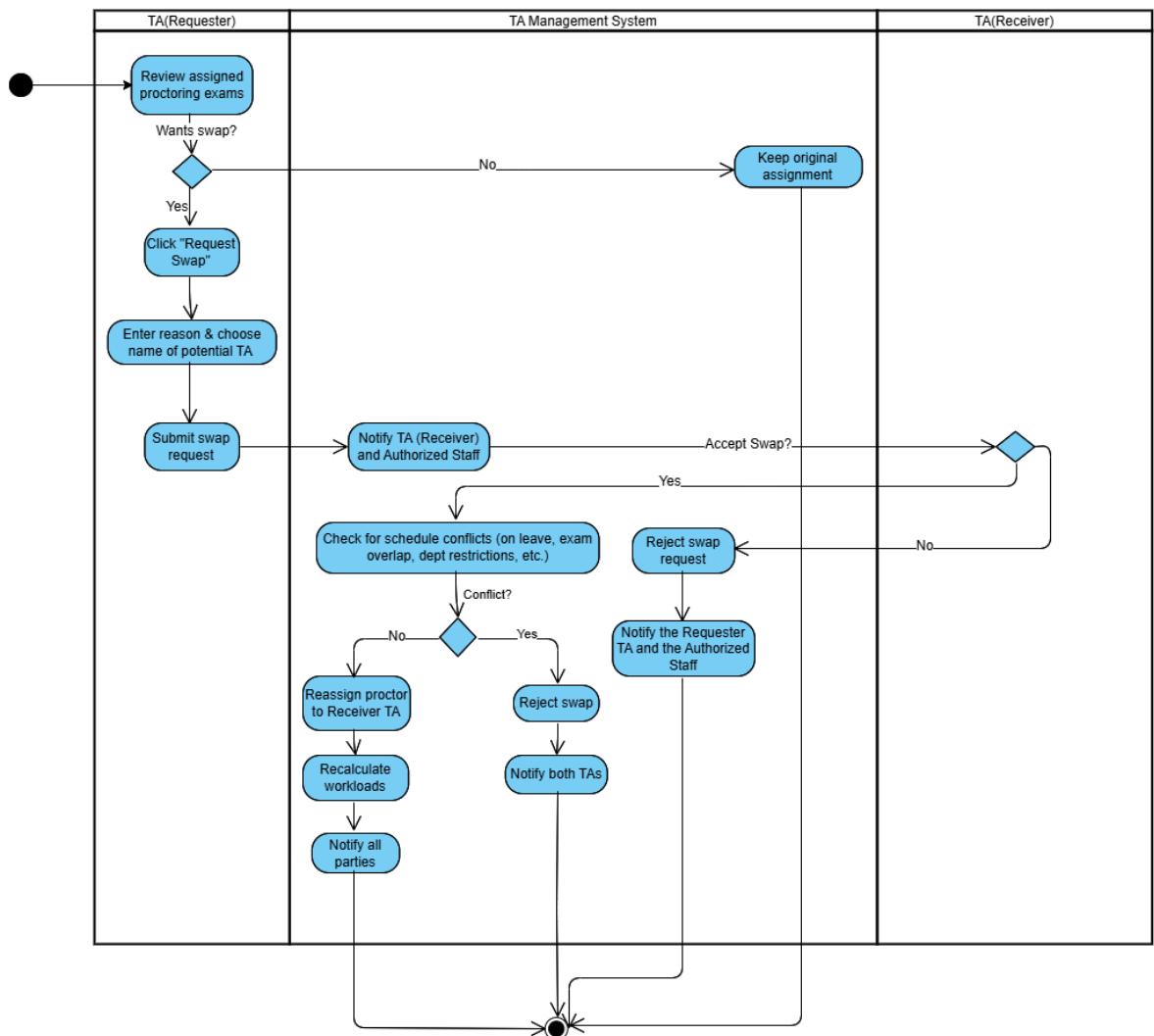


4. Activity Diagrams

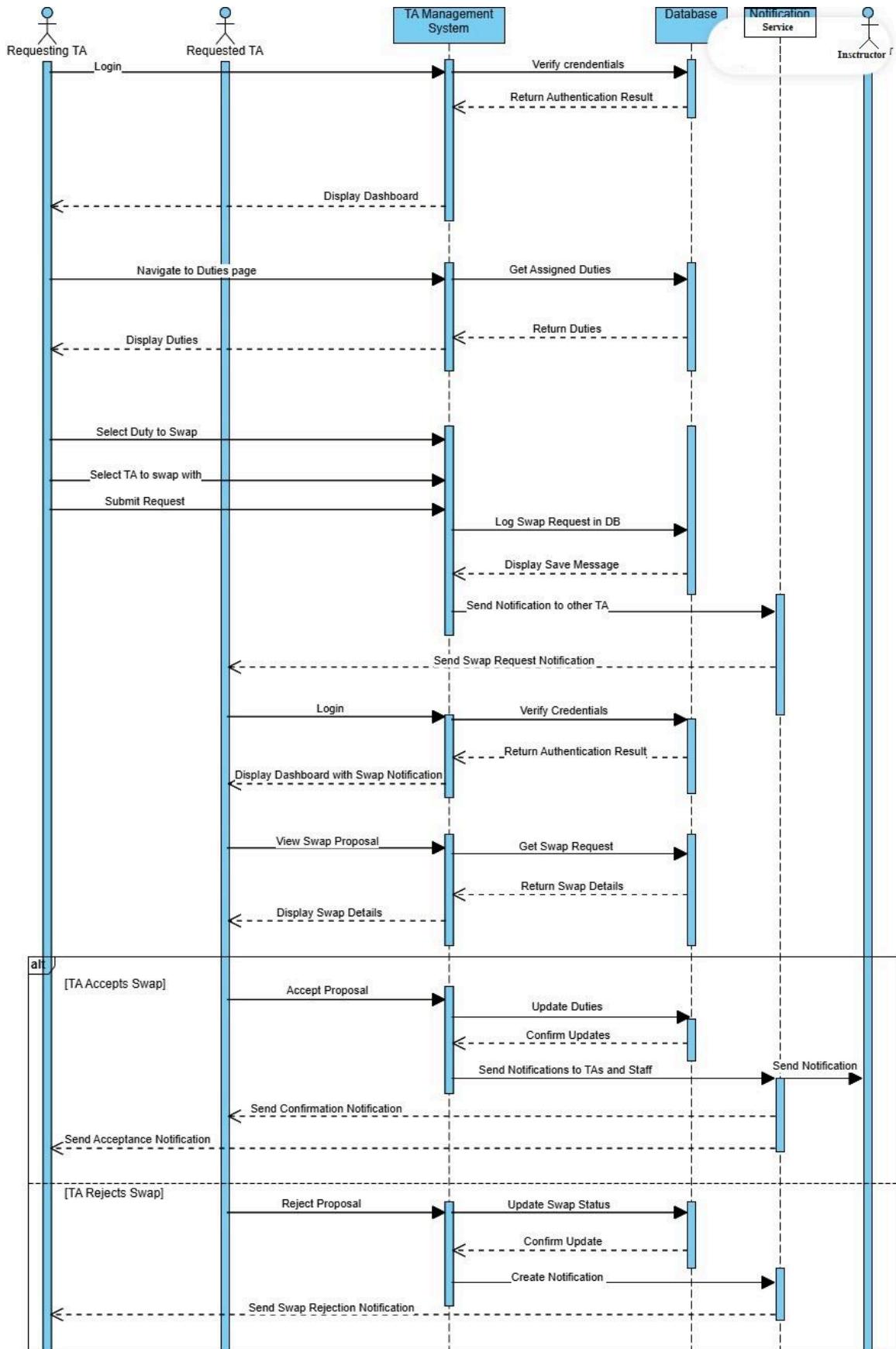
1. Proctor Assignment



2. Request Swap

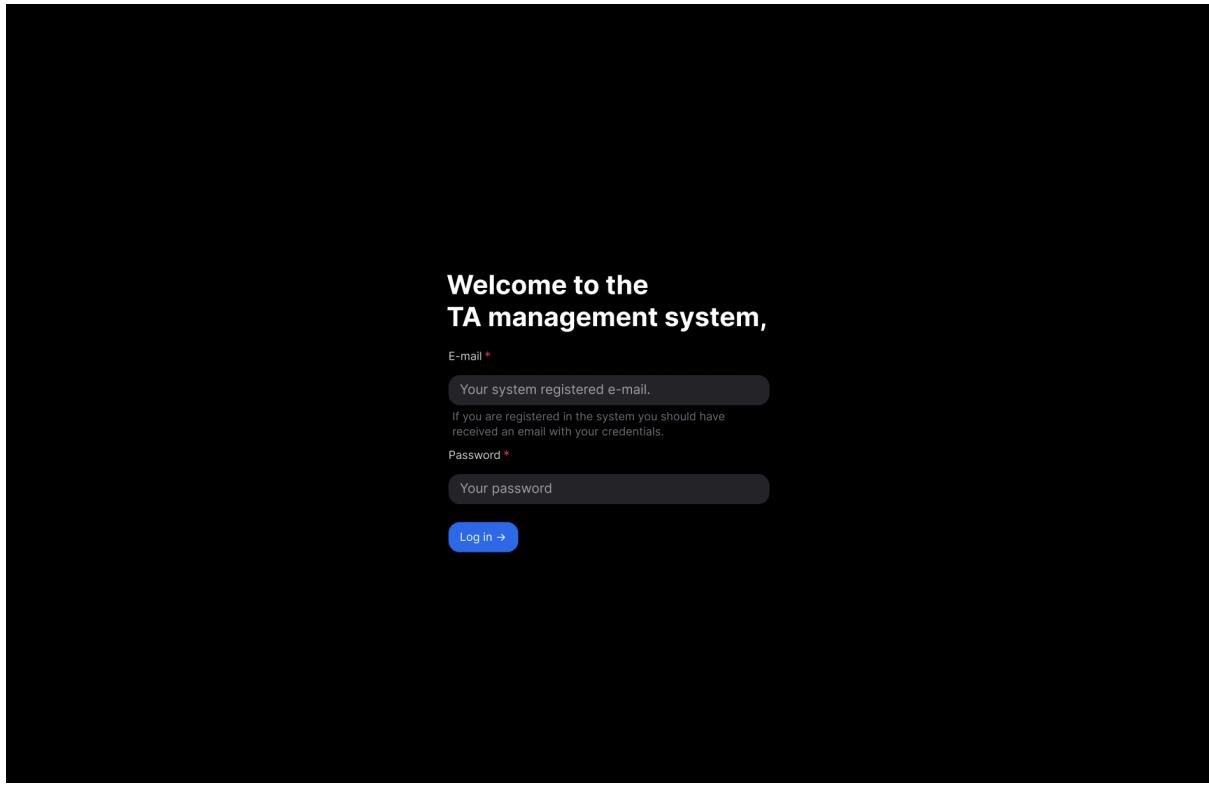


5. Sequence Diagram



6. Mockups

1. Login page



2. My Schedule Page

The schedule page has a sidebar with "Hello Emre Uzun." and links: "My Schedule", "Exams", "Approve/Reject Requests", "Edit/ View Informations", and "Settings". The main area shows "My Schedule" with tabs "Day", "Week" (selected), and "Month". It includes navigation arrows and a week view from Monday 17 to Sunday 23. The schedule grid shows various events: a red box for "202 Lab Grading Rejected by Bahar Yetis" on Tuesday 18 at 01:00; a grey box for "Grading In draft" on Wednesday 19 at 08:00; a brown box for "Grading Pending Approval" on Friday 21 at 09:00; and a purple box for "IE 324 Exam Proctoring Assigned by Bahar Yetis Classroom EE-04" on Saturday 22 at 10:00. A green box for "IE 202 Lab Duty Approved by Bahar yetis" is at 10:00 on Monday 17. An "Add Event" button is visible between Wednesday and Thursday.

3. My Schedule Event Details Page

The screenshot shows a modal window titled "Event in Draft". At the top, there are tabs: Absence, Grading (which is selected), Recitation, Lab, and Other. Below the tabs, a dropdown menu says "Select Course * IE 202". The "Task Description" field contains the text: "I graded half of the third quiz papers. as we discussed earlier." A note below it says "Write here the details of your task". Under "Stay duration *", it shows "3/13/2025 - 3/13/2025" with a calendar icon. The "Start Time" is listed as "12:00 AM" and the "End Time" as "11:59 PM". At the bottom of the modal are buttons for "Back", "Delete", "Save" (disabled), and "Request Approval".

4. My Schedule Exam Details Swap Appeal Page

The screenshot shows a page for "IE 521 Midterm I". It displays the exam date and time: "Sunday, 25 March, 9:00 - 12:00" and the classrooms: "Classrooms (4): EE-03, EE-04, EE-05, EE-06". It provides links to "Print student classroom distribution alphabetically" or "random". A note says: "Select a proctor you want to swap with, if you have no choice and just want to be discharged do not select. You can't select already assigned ones." Below this is a text input field: "and write here the description of your excuse. content |". A table lists potential proctors:

<input type="checkbox"/>	NAME	DEPARTMENT	WORKLOAD	REMARKS
<input type="checkbox"/>	Emre Uzun	IE	34.3h	Own Course
<input type="checkbox"/>	Dogus Berk Kocak	IE	32.5h	
<input type="checkbox"/>	Gencay Pekdogru	IE	40.3	
<input type="checkbox"/>	Sunay Sayan	IE	41.6h	
<input type="checkbox"/>	Yuksel Yilmaz	IE	32.8h	Swapped Before
<input type="checkbox"/>	Sobhan Teal	IE	43h	PHD/MS Level
<input type="checkbox"/>	John Pork	CS	45h	Department Mismatch Close Work/Exam
<input type="checkbox"/>	Idil Yazgan	IE	48.5	Absent Exceeds Total Workload

At the bottom are "Back" and "Update Proctors 4/4" buttons.

5. Exams Page

The screenshot shows a dark-themed interface for managing exams. On the left, a sidebar lists navigation options: My Schedule, Exams (which is selected), Approve/Reject Requests, Edit/View Informations, and Settings. The main area is titled "Exams" and displays a weekly calendar grid from Monday 17 to Sunday 23. The grid shows time slots from 00:00 to 12:00. Two exam events are listed: "IE 375 Exam Classroom EE-04, EE-05" at 09:00 on Saturday 22, and "IE 400 Classroom EE-03, EE-04, EE-05" at 09:00 on Sunday 23. A tooltip "09:28" is visible near the 09:00 slot on Saturday. A button "Add Event" is located in the center of the grid.

6. Exam Details Page

The screenshot shows the details for the IE 521 Midterm I exam. At the top, it says "IE 521 Midterm I" and provides exam details: "Exam date and time: Sunday, 25 March, 9:00 - 12:00" and "Classrooms (4): EE-03, EE-04, EE-05, EE-06". It also links to print student classroom distribution "alphabetically" or "random". Below this, a dropdown menu shows "4 Proctor Needed" (Default is the classroom count). A note "Make sure to meet the classroom count." is displayed. The main table lists student information:

	NAME	DEPARTMENT	WORKLOAD	REMARKS
<input checked="" type="checkbox"/>	Emre Uzun	IE	34.3h	Own Course
<input checked="" type="checkbox"/>	Dogus Berk Kocak	IE	32.5h	
<input checked="" type="checkbox"/>	Gencay Pekdogru	IE	40.3	
<input checked="" type="checkbox"/>	Sunay Sayan	IE	41.6h	
<input type="checkbox"/>	Yuksel Yilmaz	IE	32.8h	Swapped Before
<input type="checkbox"/>	Sobhan Teal	IE	43h	PHD/MS Level
<input type="checkbox"/>	John Pork	CS	45h	Department Mismatch Close Work/Exam
<input type="checkbox"/>	Idil Yazgan	IE	48.5	Absent Exceeds Total Workload

At the bottom, there are "Back" and "Update Proctors 4/4" buttons.

7. Approve Requests Page

The screenshot shows a dark-themed user interface for managing approval requests. On the left, a sidebar displays a greeting and navigation links: My Schedule, Exams, Approve/Reject Requests (which is selected and highlighted in blue), Edit/View Informations, and Settings. The main content area is titled "Approval Requests". It features a header with "Mark as read", "Batch Reject", and "Batch Approve" buttons. Below the header is a table with columns: DESCRIPTION, STATUS, and FROM. The table lists four requests:

DESCRIPTION	STATUS	FROM
Workload: Other	Pending	Dogus Berk Kocak
Absence	Pending	Yunus Tepeli
Swap Request	Approved	Berkan Sahin
Workload: Lab	Approved	Idil Yazgan
Workload: Grading	Rejected	Erdem Unal

8. Approve Requests Detail Subpage

This screenshot shows a detailed view of a specific approval request. The title at the top is partially visible as "Approval Requests". The main content is a card for Yunus Tepeli, stating: "Yunus Tepeli wants to swap their exam proctoring." Below this, it says: "Yunus Tepeli wants to swap their exam proctoring assignment of IE 521 Midterm in Sunday, 28 March at 9:00 with Dogus Berk Kocak." It also provides details about Dogus Berk Kocak's workload and remarks. At the bottom of the card, it says: "Yunus Tepeli's Description is" followed by a quote in Turkish. At the very bottom of the card are "Back", "Reject", and "Approve" buttons.

9. Informations Student Page

The screenshot shows a dark-themed web application interface. On the left, a sidebar displays a greeting "Hello Emre Uzun." and several navigation links: "My Schedule" (with a calendar icon), "Exams" (with a checkmark icon), "Approve/Reject Requests" (with a checkmark icon), "Edit/ View Informations" (with a pencil and document icon), and "Settings" (with a gear icon). The main content area is titled "Informations" in large bold letters. Below the title, there are tabs for "Students" (which is selected and highlighted in blue), "Staff", "Offerings", and "Classrooms". A search bar contains the placeholder "Search by name..." and a dropdown menu labeled "Filter Department" with "IE" selected. A table lists student information with columns: NAME, IS TA, DEPARTMENT, MS/PHD LEVEL, ID, and ACTIONS. The table data includes:

	NAME	IS TA	DEPARTMENT	MS/PHD LEVEL	ID	ACTIONS
<input type="checkbox"/>	Idil Yazgan	TA	IE	Masters	21809987	
<input type="checkbox"/>	Dogus Berk Kocak	TA	IE	PHD	23901432	
<input type="checkbox"/>	Yunus Tepeli	TA	IE	None	34231525	
<input type="checkbox"/>	John Pork		IE	None	43242153	
<input type="checkbox"/>	Yigit Eyi		IE	None	12355436	

At the bottom of the table area, there are three buttons: "Batch Delete" (red), "Batch Import" (blue), and "+ Add a new entry" (blue). To the right of the table, a button group contains "View & update" and "Delete".

10. Informations Student Edit Subpage

The screenshot shows a modal dialog titled "Student Details". Inside the dialog, there are several input fields and dropdown menus:

- E-mail in the system: `berk.kocak@bilkent.edu.tr`
- Full Name: `Dogus Berk Kocak`
- ID: `21708957`
- Department: `IE` (dropdown menu)
- MS/PHD Level: `None` (dropdown menu)
- Courses: `IE 376 X IE 451 X Fa|` (tags input field)
- Student is a TA
- Their password: `439frjr4g0j-9994HG&&-78`

A note below the password field states: "If a student is a TA, they have an account in the system created. You can edit their password here. By default system generates a strong password for accounts."

At the bottom of the dialog, there are buttons for "Back" (with a left arrow icon), "Delete", and "Save" (highlighted in blue).

11. Informations Staff Page

The screenshot shows a dark-themed web application interface. On the left, a sidebar displays a greeting "Hello Emre Uzun." and several menu items: "My Schedule", "Exams", "Approve/Reject Requests", "Edit/ View Informations" (which is currently selected), and "Settings". The main content area is titled "Informations" and contains a navigation bar with tabs: "Students", "Staff" (which is underlined to indicate it is active), "Offerings", and "Classrooms". Below the navigation is a search bar with placeholder text "Search by name..." and dropdown filters for "Filter Department" (set to "None") and "Filter Role" (set to "None"). A table lists five staff members with columns: NAME, ROLE, DEPARTMENT, and ACTIONS. The data is as follows:

	NAME	ROLE	DEPARTMENT	ACTIONS
<input type="checkbox"/>	Emre Uzun	Faculty	IE	
<input type="checkbox"/>	Dogus Berk Kocak	Dean	CS	
<input type="checkbox"/>	Begum Clnar	Admin	IE	
<input type="checkbox"/>	Eray Tuzun		IE	
<input type="checkbox"/>	Can Alkan		IE	

At the bottom of the table are three buttons: "Batch Delete" (red), "Batch Import" (blue), and "+ Add a new entry" (blue). A small callout box in the bottom right corner of the table area says "View & update" and "Delete".

12. Informations Staff Edit Subpage

This screenshot shows a modal dialog titled "Staff Details" over a blurred background. The form fields include:

- E-mail in the system: `berk.kocak@bilkent.edu.tr`
- Full Name: `Dogus Berk Kocak`
- Department: `IE` (selected from a dropdown)
- Roles: `Chair X`, `Faculty X`, `Dea|` (tags in an input field)
- Offerings: `IE376-1 X`, `IE451-2 X`, `Fa|` (tags in an input field)
- Their password: `439frjr4g0j-9994HG&&&-78`

A note below the password field states: "You can edit their password here. By default system generates a strong password for accounts."

At the bottom of the modal are three buttons: "< Back", "Delete", and "Save" (highlighted in blue).

13. Informations Offering Page

The screenshot shows a dark-themed user interface for managing course offerings. On the left, a sidebar displays a greeting and links: My Schedule, Exams, Approve/Reject Requests, Edit/View Informations (which is currently selected), and Settings. The main area is titled "Informations" and contains tabs for Students, Staff, Offerings (which is underlined), and Classrooms. A search bar at the top allows filtering by name and department. Below the search bar is a table listing course offerings with columns for Course, Section, Instructor, Quota/Available, and Actions. The table data is as follows:

	COURSE	SECTION	INSTRUCTOR	QUOTA/ AVAILABLE	ACTIONS
<input type="checkbox"/>	IE 324 Simulat...	1	Emre Uzun	45/7	
<input type="checkbox"/>	IE 324 Simulat...	2	Emre Uzun	45/8	
<input type="checkbox"/>	IE 376 Product...	1	Emre Nadar	45/6	
<input type="checkbox"/>	IE 451 Data An...	1	Savas Dayanik	60/23	
<input type="checkbox"/>	CS 115 Introduc...	4	Aynur Dayanik	30/7	

At the bottom of the table are buttons for "View & update" and "Delete". Below the table are buttons for "Batch Delete", "Batch Import", and "+ Add a new entry".

14. Informations Offering Edit Subpage

The screenshot shows a modal window titled "Offering Details" for the course IE 376 Production Systems. The window includes fields for Course, Section (2), Quota (45), Instructor (Emre Uzun), and a dropdown for adding students (Yigit Eyi, yigit.eyi..., 22209898). A "Search by name..." input field and a "Batch Delete" button are also present. Below these are two sections: "STUDENT NAME", "ID", "E-MAIL", and "ACTION". The first section lists four students: (TA) Dogus Berk Ko... (ID: 22204567, Email: berk.kocak@t, Action: edit), Gunes Dogan (ID: 32435442, Email: gunes.dogan@t, Action: delete), John Pork (ID: 23094324, Email: john.pork@ug, Action: edit), and Leyla Hakan (ID: 34594350, Email: leyla.hakan@t, Action: edit). At the bottom are "Back", "Delete", and "Save" buttons.

15. Informations Classroom Page

The screenshot shows a dark-themed user interface for managing classrooms. On the left, a sidebar displays a greeting and several navigation links: My Schedule, Exams, Approve/Reject Requests, Edit/View Informations (which is currently selected), and Settings. The main content area is titled "Informations" and has tabs for Students, Staff, Offerings, and Classrooms (the active tab). A search bar at the top allows filtering by name and building. Below is a table listing classrooms:

	CLASSROOM	CAPACITY	ACTIONS
<input type="checkbox"/>	EE05	45	<input type="button" value="Edit"/>
<input type="checkbox"/>	EE04	45	<input type="button" value="Edit"/>
<input type="checkbox"/>	EE01	45	<input type="button" value="Edit"/>
<input type="checkbox"/>	EE03	60	<input type="button" value="Edit"/>
<input type="checkbox"/>	EE214	30	<input type="button" value="Edit"/>

At the bottom are buttons for Batch Delete, Batch Import, and Add a new entry. A "View & update" and "Delete" button is located on the right side of the table.

16. Informations Classroom Edit Subpage

This screenshot shows a modal dialog titled "Classroom Details" for editing a specific classroom. The form includes fields for Code (set to EE04), Building (set to EE), Capacity (set to 60), and Exam Capacity (set to 60). At the bottom are Back, Delete, and Save buttons.

17. Settings Page

The screenshot shows the 'Settings' page for a user named Emre Uzun. The page has a dark theme with white text and light-colored buttons.

Personal Settings:

- New password: ****
Enter your new password make sure to note it down.
- Confirm New password: ****
Rewrite your new password to confirm.
- Your current password: ****
Enter your new password make sure to note it down.
- [Change your password](#)

Reports:

- [Download Log →](#)
- Fall 2025 X Spring 2025 X Fa| Yunus T... X Dogus Berk... X Idil Y|
- [Download Total Proctoring Sheet](#)
- [Download Total TA Duty Sheet](#)

Admin Settings:

- Current Semester: Fall 2025
- Max Workload for a TA: 50 Hours