



2024-2025 SPRING SEMESTER

CS319 – Object-Oriented Software Engineering

Deliverable #2

March 16 2025

Members:

Ege İpekçi 21902333

Ege Kaan Eren 21601625

Enes Özdemir 22102534

İdil Su Öztürk 22102729

Rasul Ibrahimzade 22201022

Ali Majidi (Didn't contribute at all)

1. SEQUENCE DIAGRAM

- 1.1 Task Approval Sequence Diagram

2. ACTIVITY DIAGRAMS

- 2.1 Common Workflow Activity Diagram
- 2.2 Admin Activity Diagram
- 2.3 TA Activity Diagram
- 2.4 Instructor/Department Chair Activity Diagram

3. STATE DIAGRAM

- 3.1 Login State Diagram
- 3.1 Task Request State Diagram

4. CLASS DIAGRAM

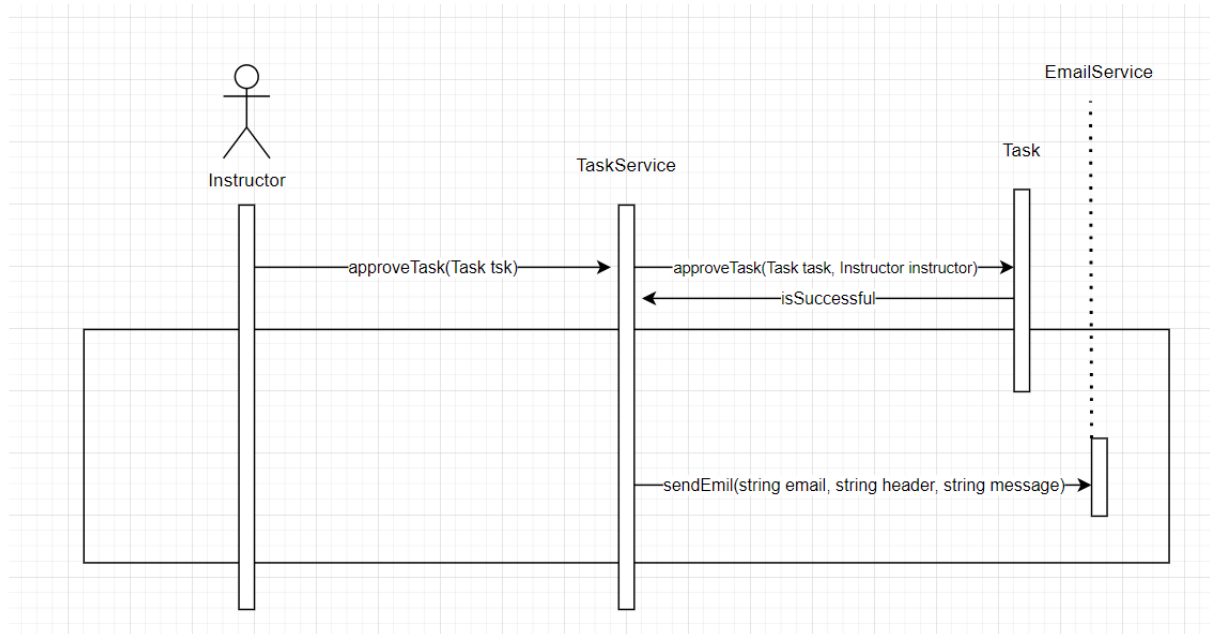
5. NON-FUNCTIONAL REQUIREMENTS

6. MOCK UP

- 6.1 Login Page
- 6.2 Home Page
- 6.3 Schedule Page.
- 6.4 All Tasks View
- 6.5 Proctoring Information Page
- 6.6 Swap Proctoring Request for Specific Exam View
- 6.7 Select Swaping TA View
- 6.8 Completed Swap Request View
- 6.9 Task Grading Approval
- 6.10 Task Editing Page
- 6.11 All Courses View
- 6.12 TA Courses View
- 6.13 TA Course Information Page
- 6.14 TA Notifications View
- 6.15 Profile Information Box View
- 6.16 Instructor's Courses Page
- 6.17 Instructor's Notification View

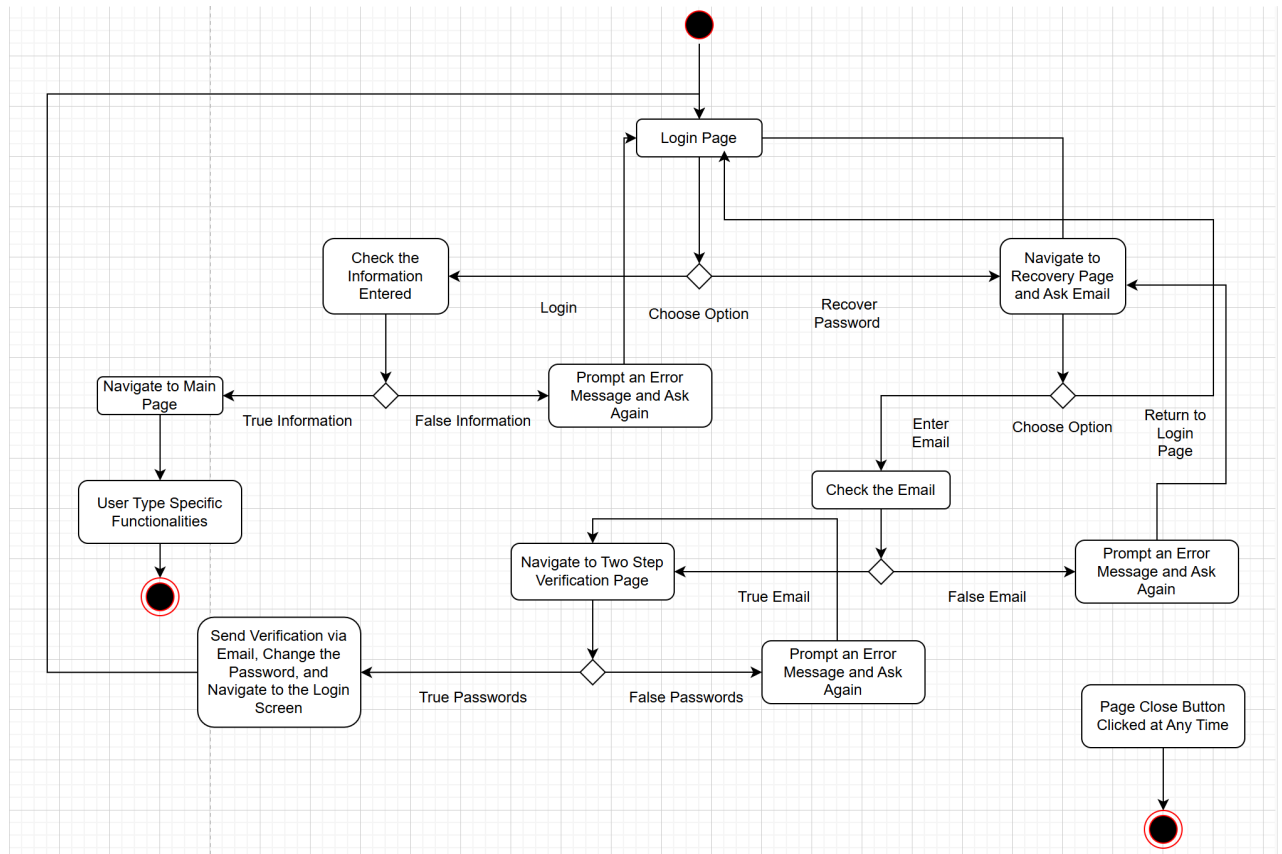
1. SEQUENCE DIAGRAM

2.1 Task Approval Sequence Diagram:

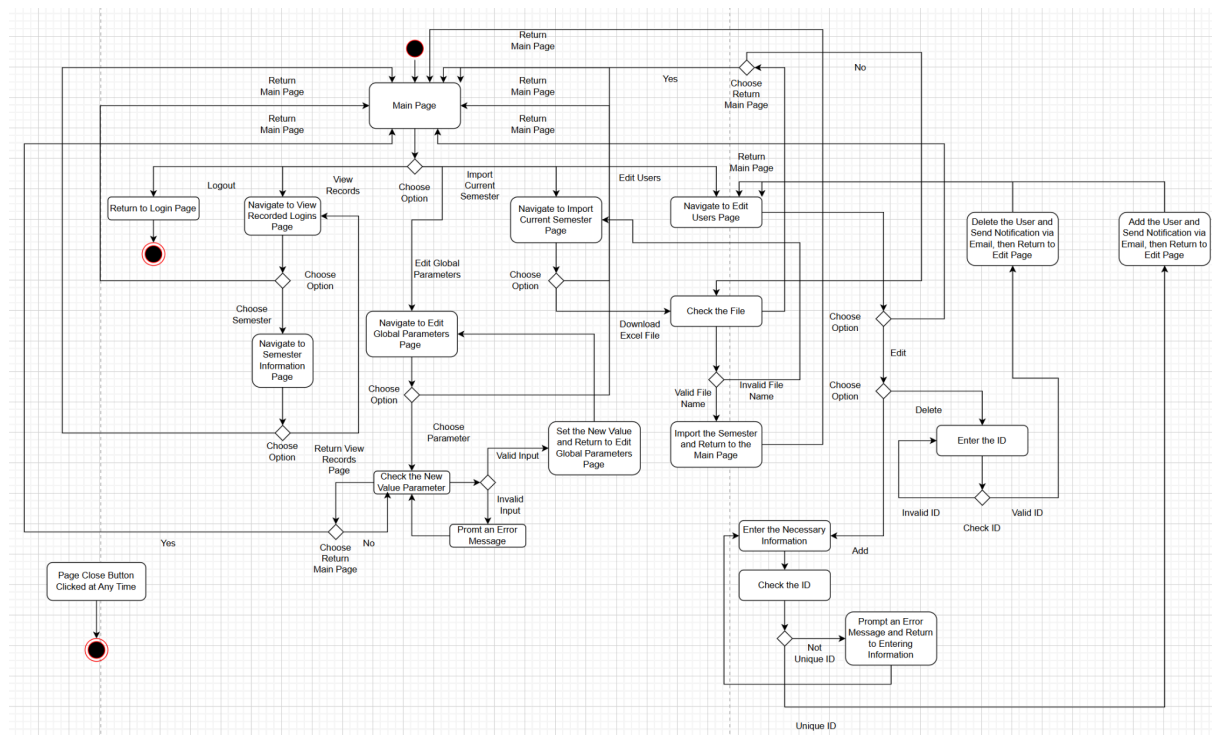


2. ACTIVITY DIAGRAMS

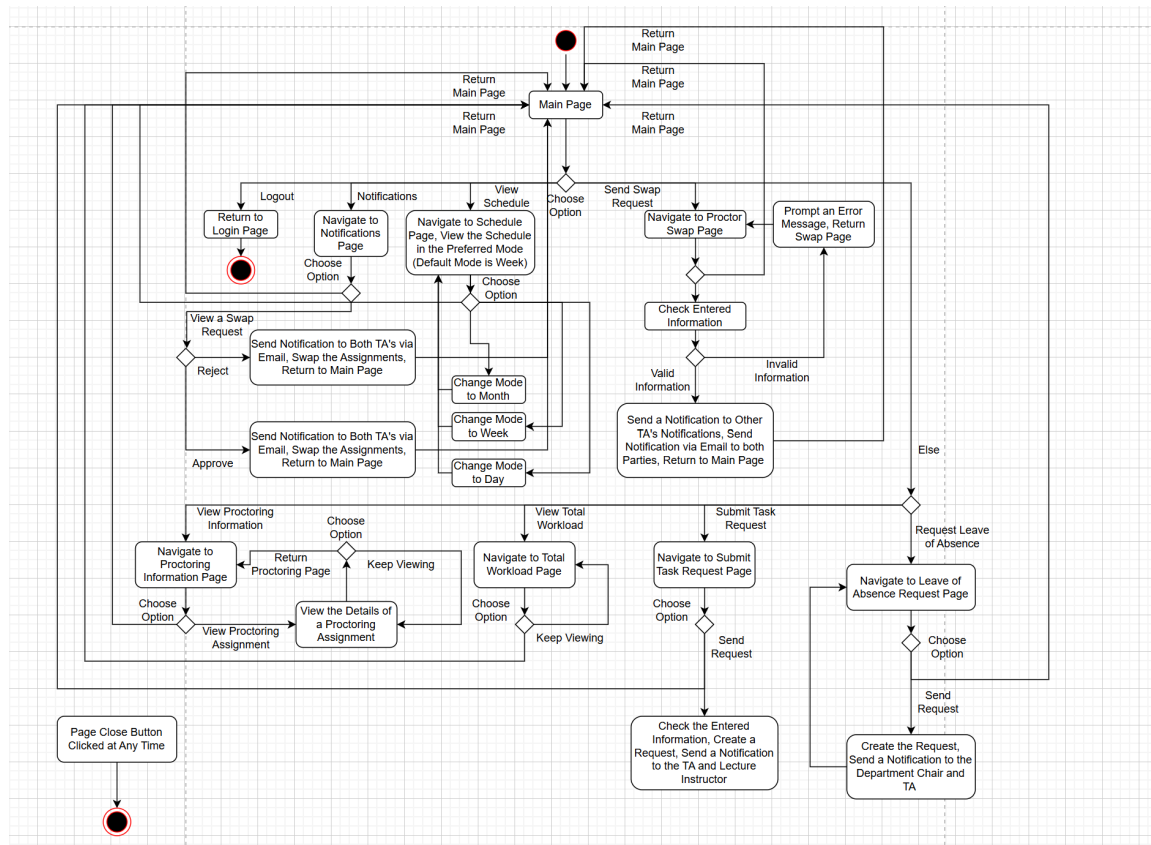
2.1 Common Flow Activity Diagram:



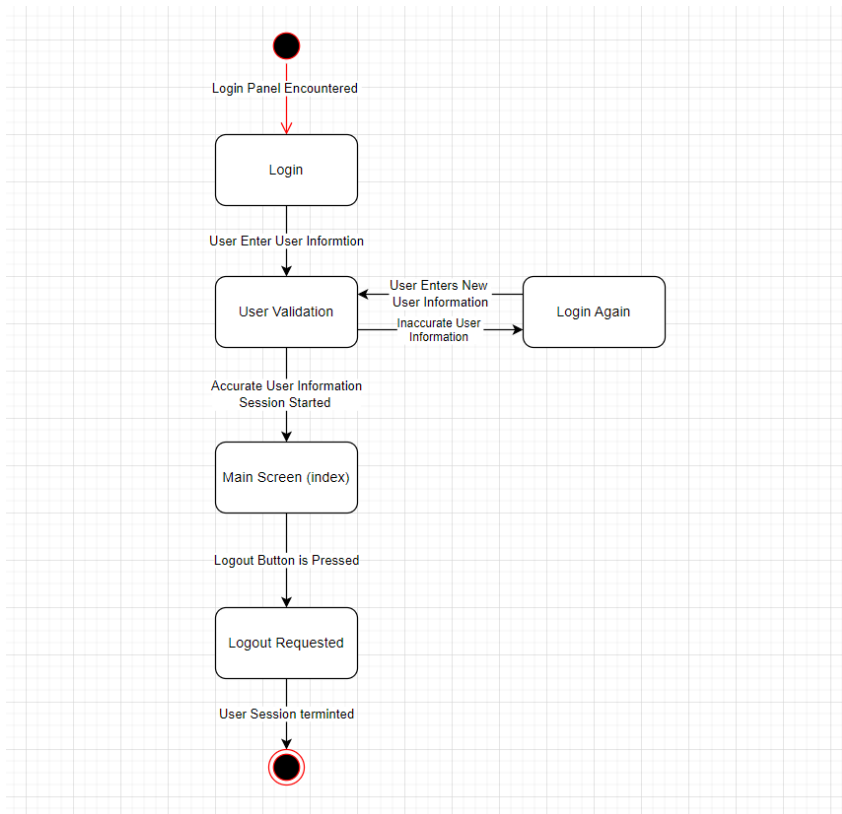
2.2 Admin Activity Diagram:



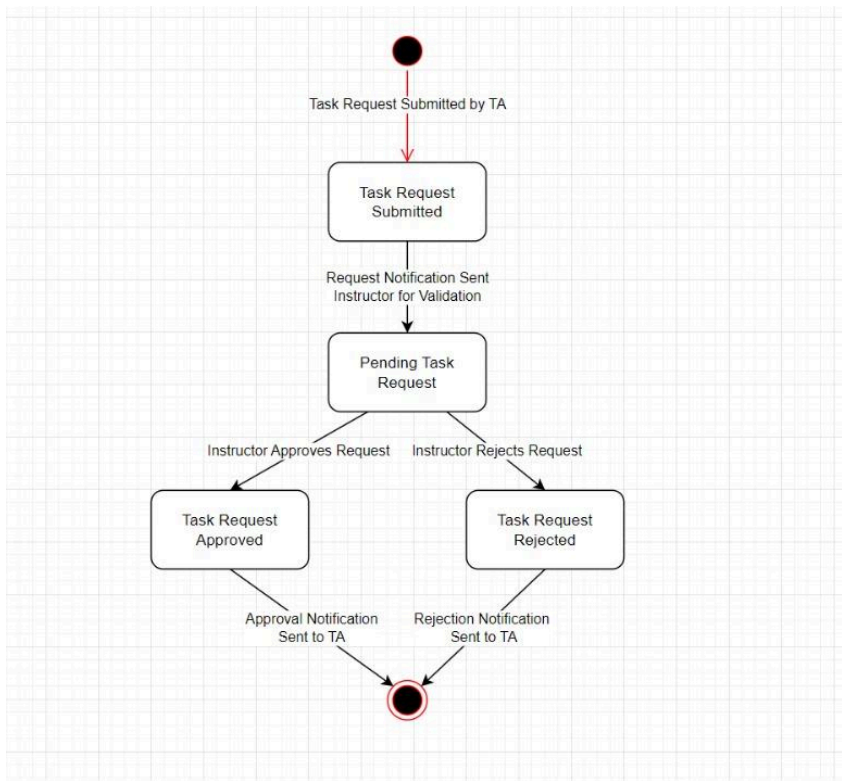
2.3 TA Activity Diagram:



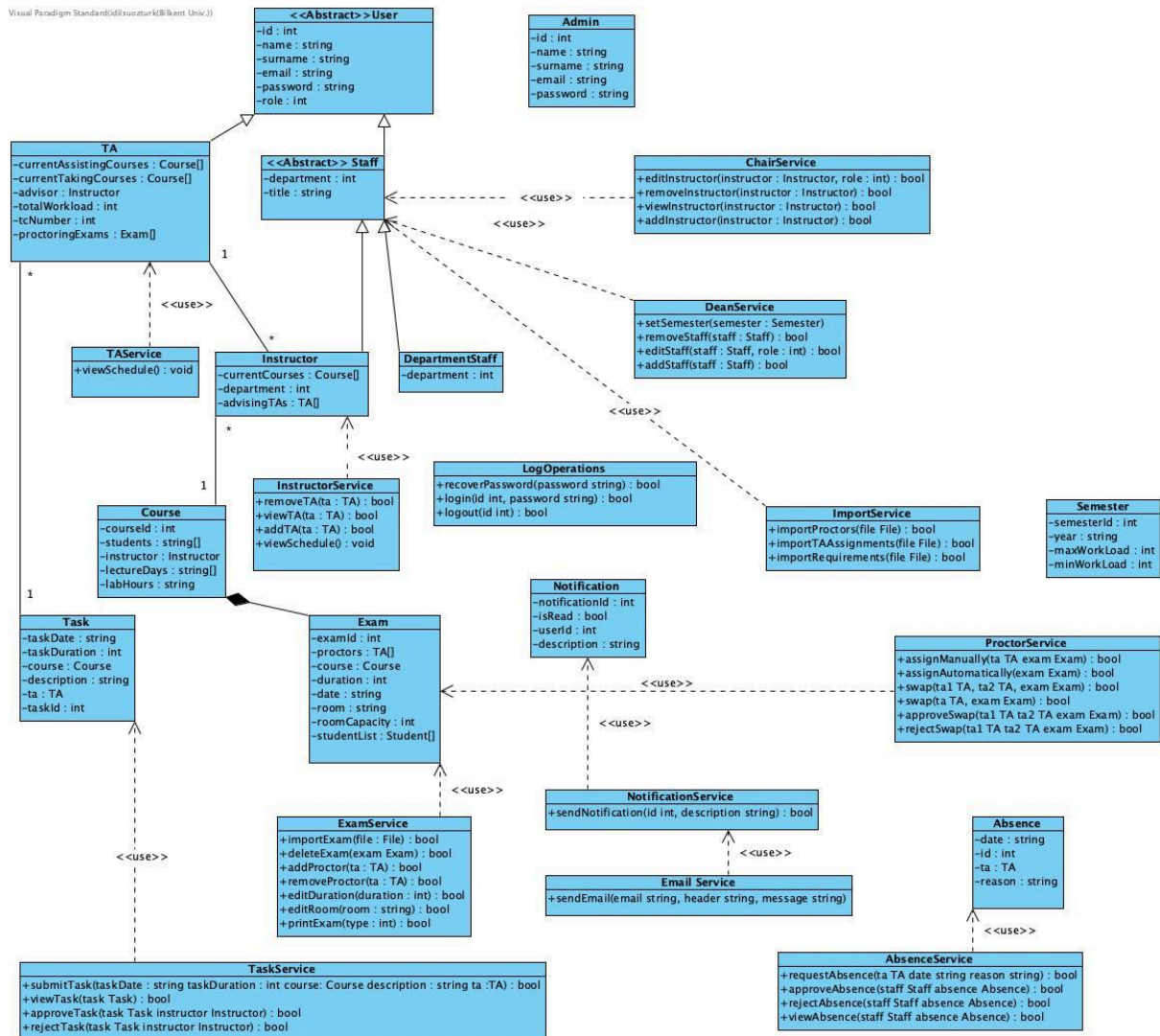
2.4 Instructor/Department Staff Activity Diagram(DC is written next to functionalities which can also be done by Department Chair, D is written next to functionality which can also be done by the Dean):



3.2 Task Request State Diagram:



4. CLASS DIAGRAM



5. NON-FUNCTIONAL REQUIREMENTS

Quality Requirements:

Usability: The system should be quite intuitive and easy to navigate through, ensuring that users (TAs, Instructors, Department Chairs, Department Staff and Dean's Office) can efficiently complete all of their tasks. The interface should be structured in a way that key functionalities, such as task approval, assignment viewing, and scheduling, can be accessed from the top bar.

- The whole system should be reliant on both the website and its data centre, where all the information is kept and calculated.
- Once entered into the website, a dashboard should be available for each user regardless of their role, displaying the necessary functionalities and buttons immediately once the login procedure is complete.

- The system should support multiple filters, such as sorting by date, task type, and status, to help users efficiently manage their workload.
- A search functionality should allow users to quickly locate tasks, schedules, and personnel information.
- Notifications should be implemented in a way that makes them aware of the pending approvals, task rejections, and schedule updates in real-time, both in the website and email form.

Reliability: System stability is crucial to avoid problematic timings in the website's performance, particularly during peak usage times such as exam scheduling periods.

- There should be a specific Admin role to ensure the proper history of changes and flow of work.
- If necessary, the log files may be accessed offline from the Admin's desktop.
- The system should handle concurrent requests efficiently to prevent delays in critical operations, such as TA duty approvals or proctoring assignments.

Database Usability: The database should be structured to provide easy access to important information without unnecessary complexity for all of its users.

- Department Chairs and authorized staff should be able to see the forms summarizing TA workloads and pending approvals and leave requests in formats on the website.
- Role-based access should be implemented to ensure that each user can only view or edit relevant data, maintaining security while promoting efficiency.

Constraints or Pseudo Requirements:

Mobility of Implementation: Each department operates differently in terms of handling TA responsibilities, proctoring assignments, and workflow approvals. The system must be flexible enough to accommodate these variations without requiring extensive reconfiguration.


- Some departments may require automated proctoring assignment mechanisms, while others rely on manual selections by department staff or instructors.
- The system should allow departments to the most efficient way they prefer
-

Security: Given the sensitivity of academic records and personnel data, there needs to be clear definitions of the information each role can see on their screens.

- All user actions, such as task approvals, rejections, and leave request modifications, should be logged to maintain accountability.
- Basic data encryption should be applied both at rest and in transit to safeguard user information against unauthorized access.

6. MOCK UP

6.1 Login Page






TA MANAGEMENT SYSTEM LOGIN

BİLKENT ID:

PASSWORD:

LOGIN

6.2 Home Page

[SCHEDULE](#)[TASKS](#)[COURSES](#)[SETTINGS](#) TA ▼

SCHEDULE

MON	TUE	WED	THU	FRI	SAT	SUN
			1	2	3	
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31


ANNOUNCEMENTS

(No announcements have been posted yet.)

TIMELINE

- Monday, 17 March 2025, CS223 Proctoring
- Tuesday, 18 March 2025, CS223 Lab Section

6.3 Schedule Page





SCHEDULE

TASKS

COURSES


SETTINGS

TA ▼

MARCH

MON	TUE	WED	THU	FRI	SAT	SUN
				1	2	3
4	5 PROJECT	6	7	8	9	10
11	12	13	14 PROCTORING	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

6.4 All Tasks View





SCHEDULE

TASKS

COURSES

SETTINGS

TA ▼

INCOMING TASKS

PROCTORING FOR CS223

PROCTORING FOR CS315

PREVIOUS TASKS

CS202 HOMEWORK GRADING

CS223 LAB ASSISTING

ENTER TASK

TITLE:

DURATION:

DESCRIPTON:

SUBMIT

6.5 Proctoring Information Page

The screenshot shows a web interface with a top navigation bar containing a home icon, 'SCHEDULE', 'TASKS' (highlighted), 'COURSES', and 'SETTINGS'. On the right, there is a notification bell with a red '1', a user profile icon, and the text 'TA' with a dropdown arrow. The main content area is divided into three sections: 'INCOMING TASKS' on the left, a central modal, and 'ENTER TASK' on the right. The 'INCOMING TASKS' section lists two tasks: 'PROCTORING FOR CS223' and 'PROCTORING FOR CS315'. The central modal, titled 'PROCTORING FOR CS223', displays the following information: 'DATE: 23.04.2025', 'TIME: 18.00', 'DURATION: 120 Mins.', and 'CLASSROOM: BZ04'. At the bottom of the modal is a 'SWAP' button. The 'ENTER TASK' section contains three input fields: 'TITLE:', 'DURATION:', and 'DESCRIPTON:', followed by a 'SUBMIT' button.

6.6 Swap Proctoring Request for Specific Exam View

The screenshot shows the same web interface as in 6.5, but with a different modal open. The 'INCOMING TASKS' section remains the same. The central modal, titled 'SELECT AN EXAM', is titled 'PREVIOUS TASKS' and lists three exam options: 'CS319 EXAM, 23.05.2025, 130 MINS', 'CS102 EXAM, 25.05.2025, 100 MINS', and 'CS121 EXAM, 28.05.2025, 120 MINS'. At the bottom of the modal is a 'NEXT' button. The 'ENTER TASK' section remains the same.

6.7 Select Swaping TA View

INCOMING TASKS

PROCTORING FOR CS223

PROCTORING FOR CS315

PREVIOUS TASKS

CHOOSE A PROCTOR

TA NAME

TA NAME

TA NAME

TA NAME

TA NAME

SWAP

ENTER TASK

TITLE:

DURATION:

DESCRIPTON:

SUBMIT

6.8 Completed Swap Request View

INCOMING TASKS

PROCTORING FOR CS223

PROCTORING FOR CS315

PREVIOUS TASKS

Your swap request has been successfully sent.

CLOSE

ENTER TASK

TITLE:

DURATION:

DESCRIPTON:

SUBMIT

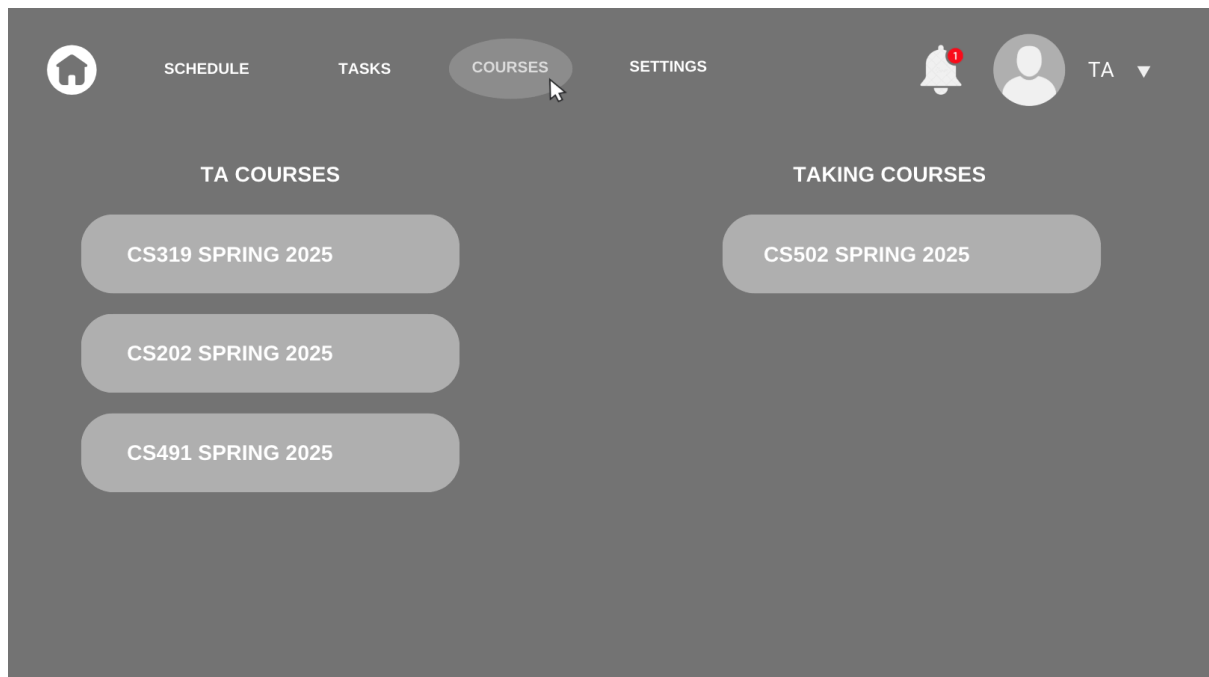
6.9 Task Grading Approval

The screenshot shows a web application interface for task management. At the top, there is a navigation bar with a home icon, 'SCHEDULE', 'TASKS' (highlighted), 'COURSES', and 'SETTINGS'. On the right, there is a notification bell with a red '1', a user profile icon, and the text 'TA' with a dropdown arrow. The main content area is divided into three sections. On the left, 'INCOMING TASKS' lists two items: 'PROCTORING FOR CS223' and 'PROCTORING FOR CS315'. In the center, a modal window titled 'CS202 HOMEWORK GRADING' displays the following information: 'DATE: 20.03.2025', 'DURATION: 180 Mins.', and 'STATUS: Approved by the instructor.' with a 'CLOSE' button at the bottom. On the right, the 'ENTER TASK' section contains input fields for 'TITLE:', 'DURATION:', and 'DESCRIPTON:', followed by a 'SUBMIT' button.

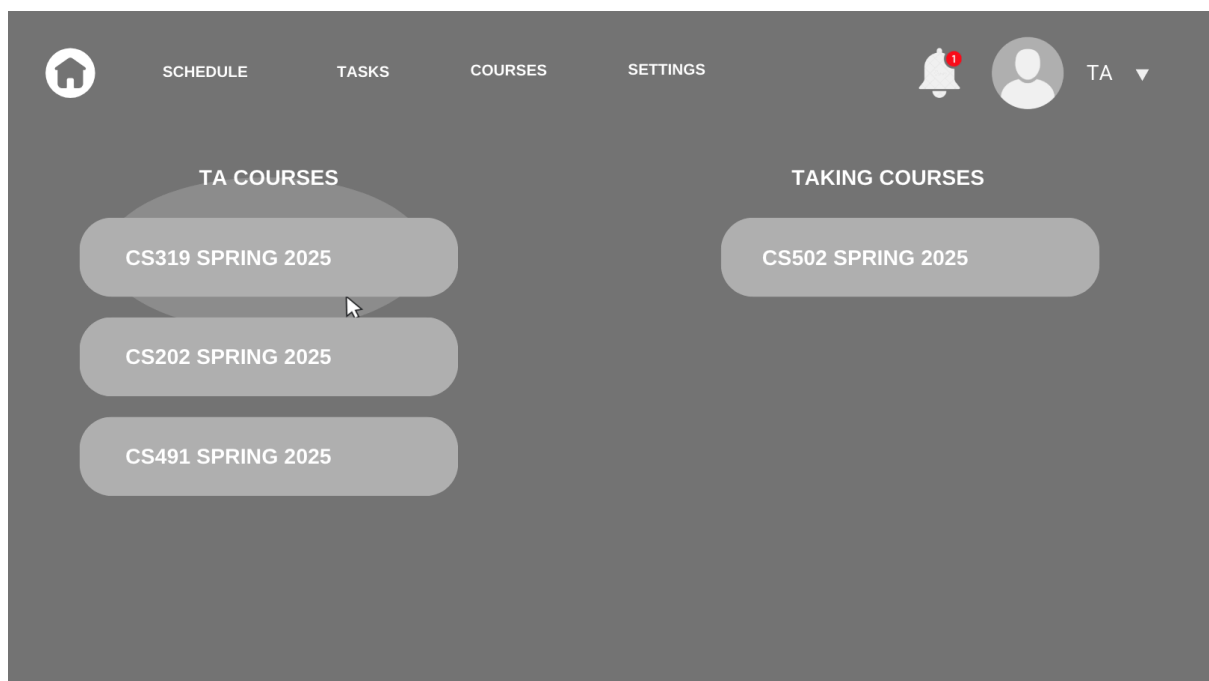
6.10 Task Editing Page

The screenshot shows the same web application interface as above, but with a different modal window open. The modal is titled 'CS223 LAB ASSISTING' and displays: 'DATE: 14.02.2025', 'DURATION: 240 Mins.', and 'STATUS: Waiting for approval'. At the bottom of this modal are three buttons: 'EDIT', 'DELETE', and 'CLOSE'. The 'INCOMING TASKS' section on the left remains the same. The 'ENTER TASK' section on the right is also visible, showing the 'TITLE:', 'DURATION:', 'DESCRIPTON:', and 'SUBMIT' fields.

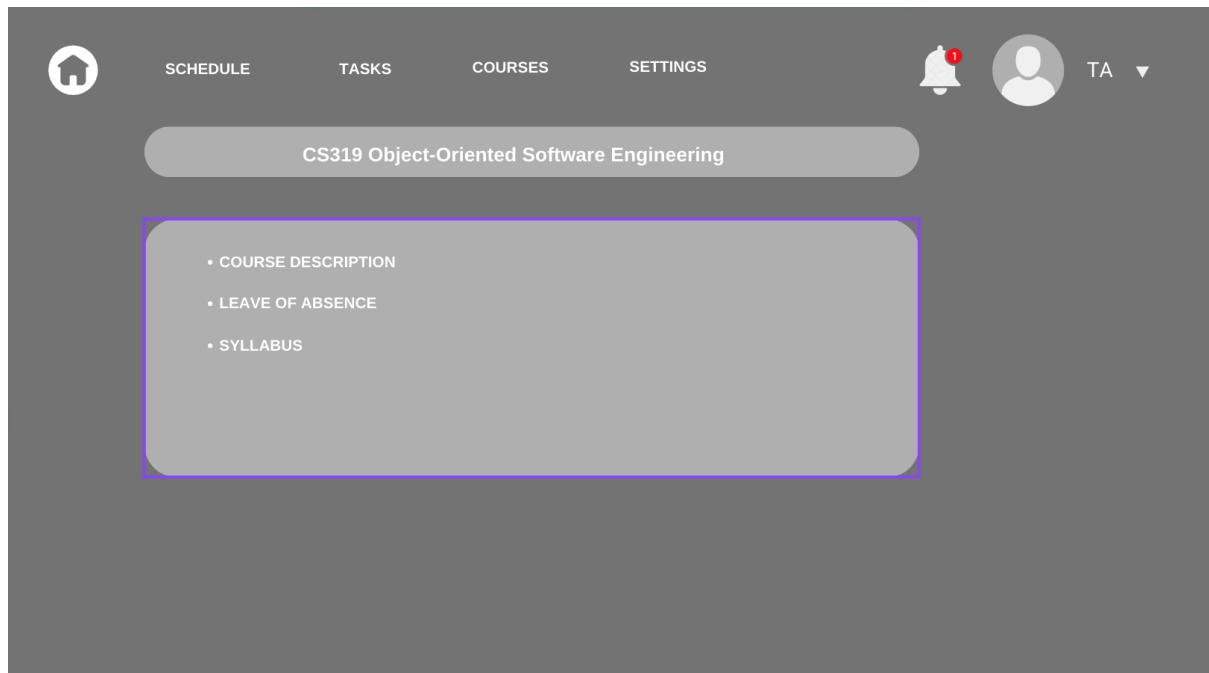
6.11 All Courses View



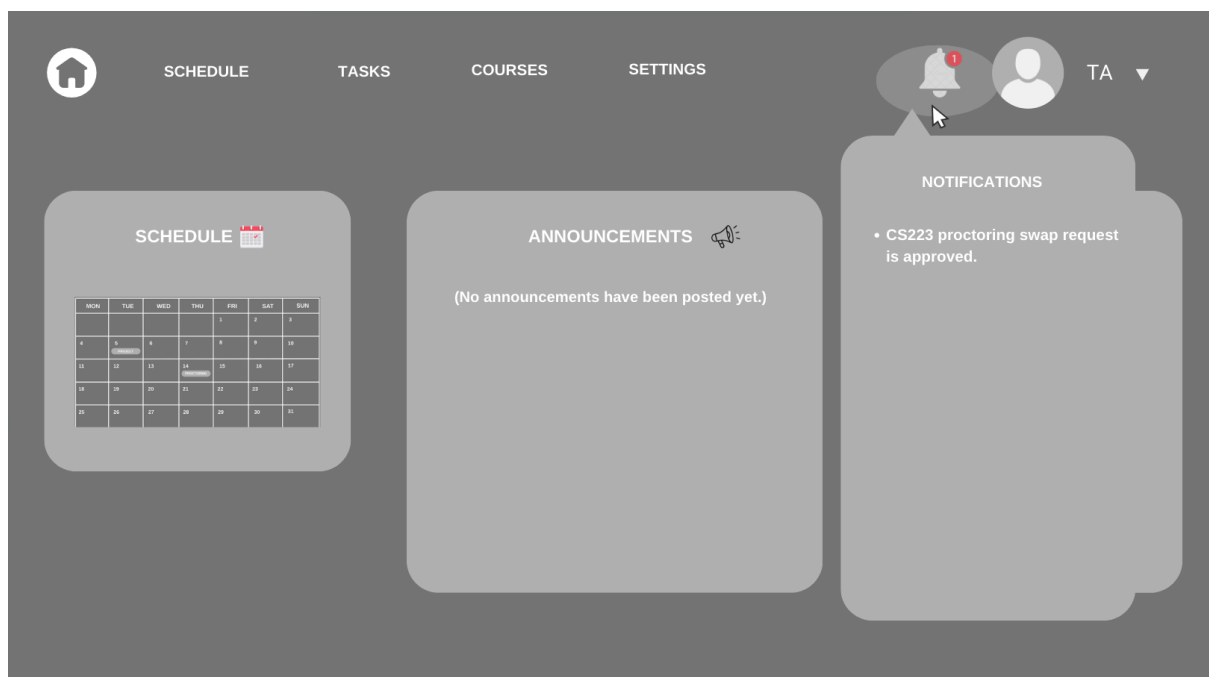
6.12 TA Courses View



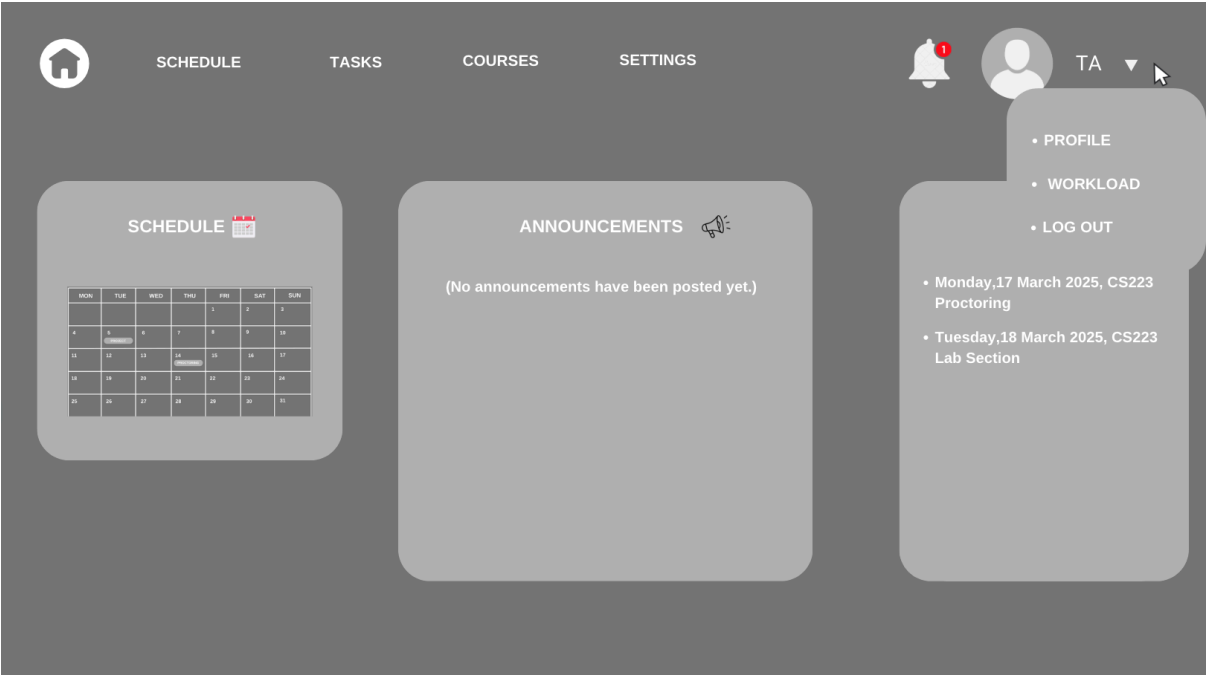
6.13 TA Course Information Page



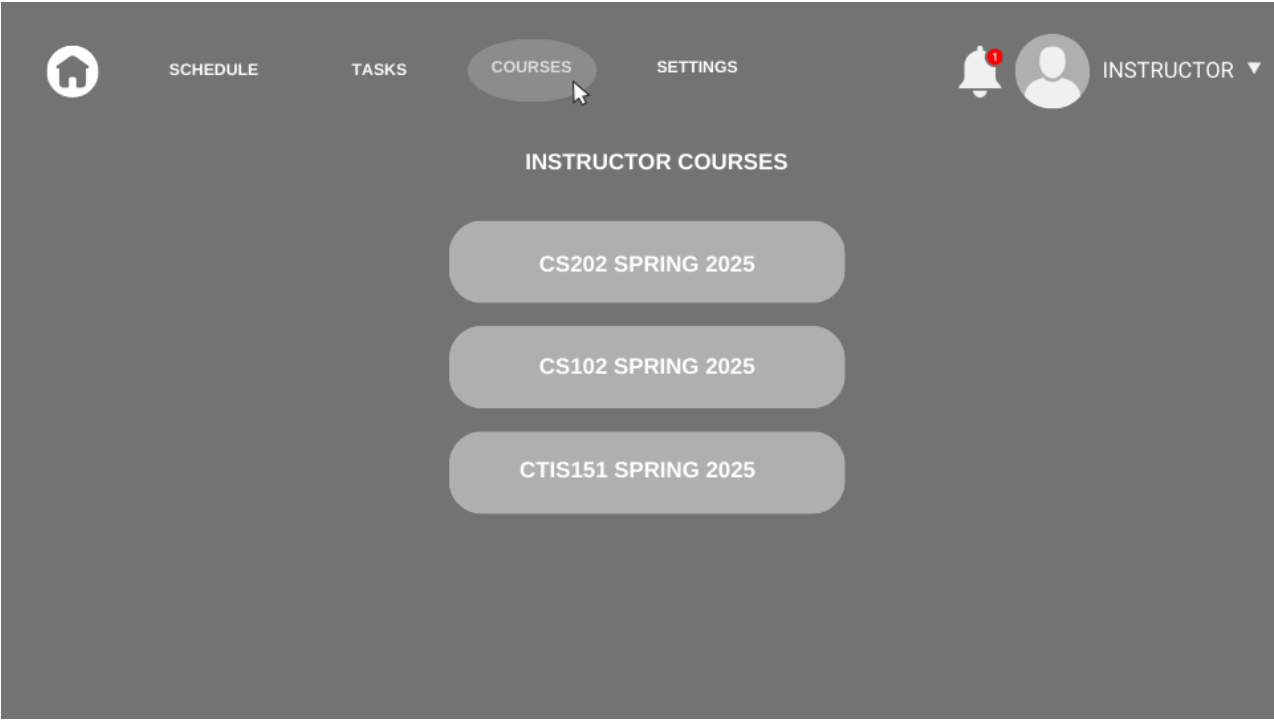
6.14 TA Notifications View



6.15 Profile Information Box View



6.16 Instructor's Courses Page



6.17 Instructor's Notification View

