



Bilkent University - 2024/2025 Spring

CS 319 - Object-Oriented Programming

TA Management System Project

Section 1

Team 9

Deliverable 2

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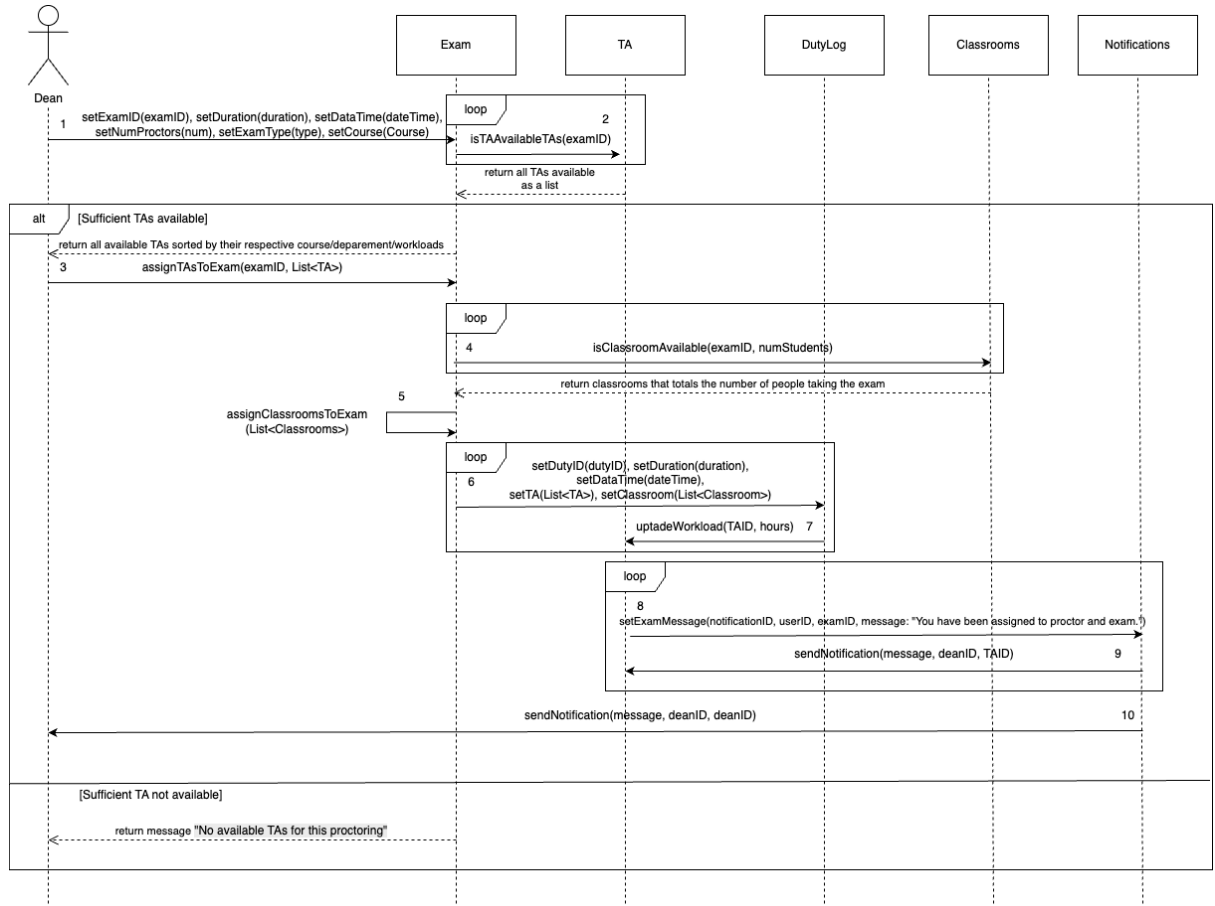
Emre Uçar - 22203675

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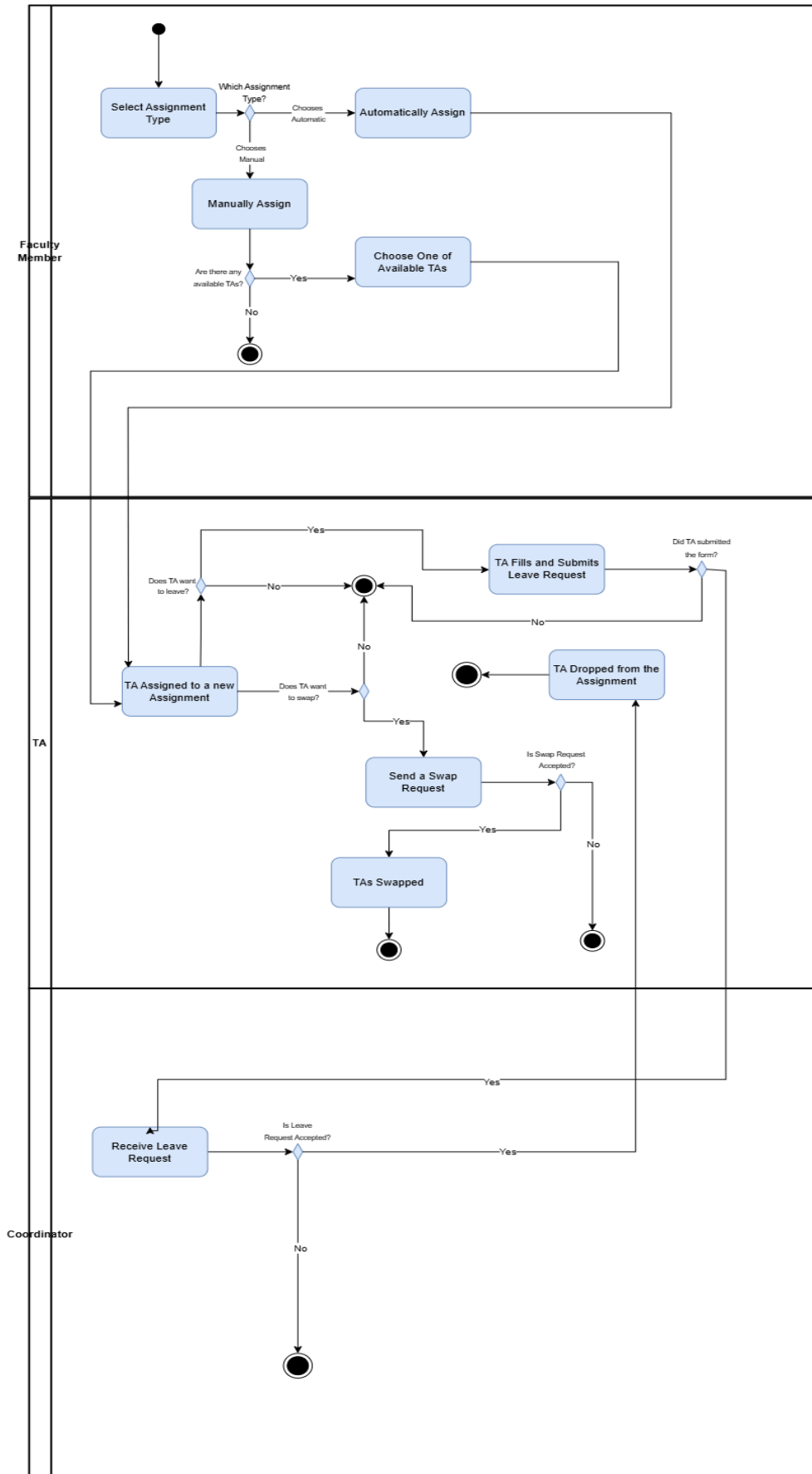
1. Sequence Diagram

1.1 Manual Exam Proctoring Sequence Diagram

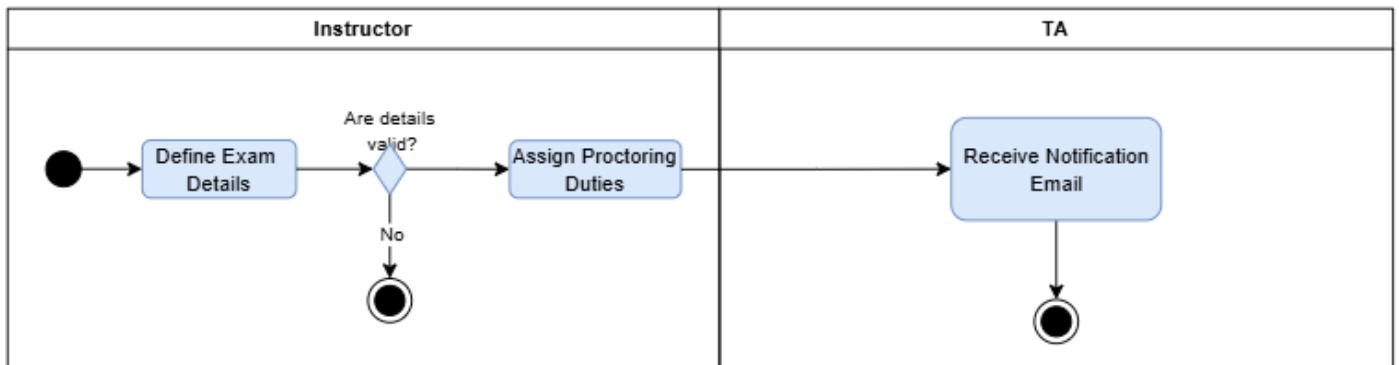


2. Activity Diagrams

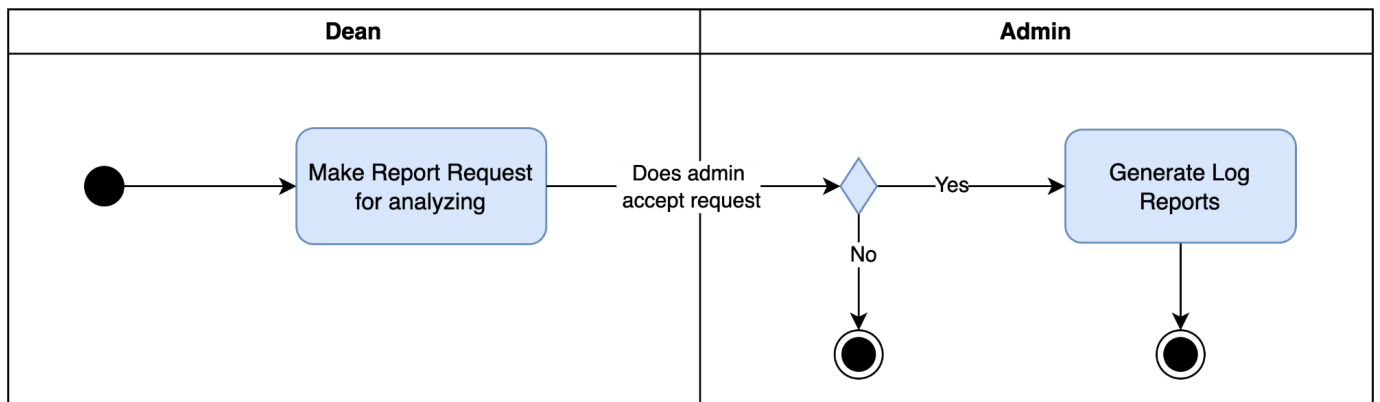
2.1 Proctoring Assignment Activity Diagram



2.2 Exam Definition Activity Diagram

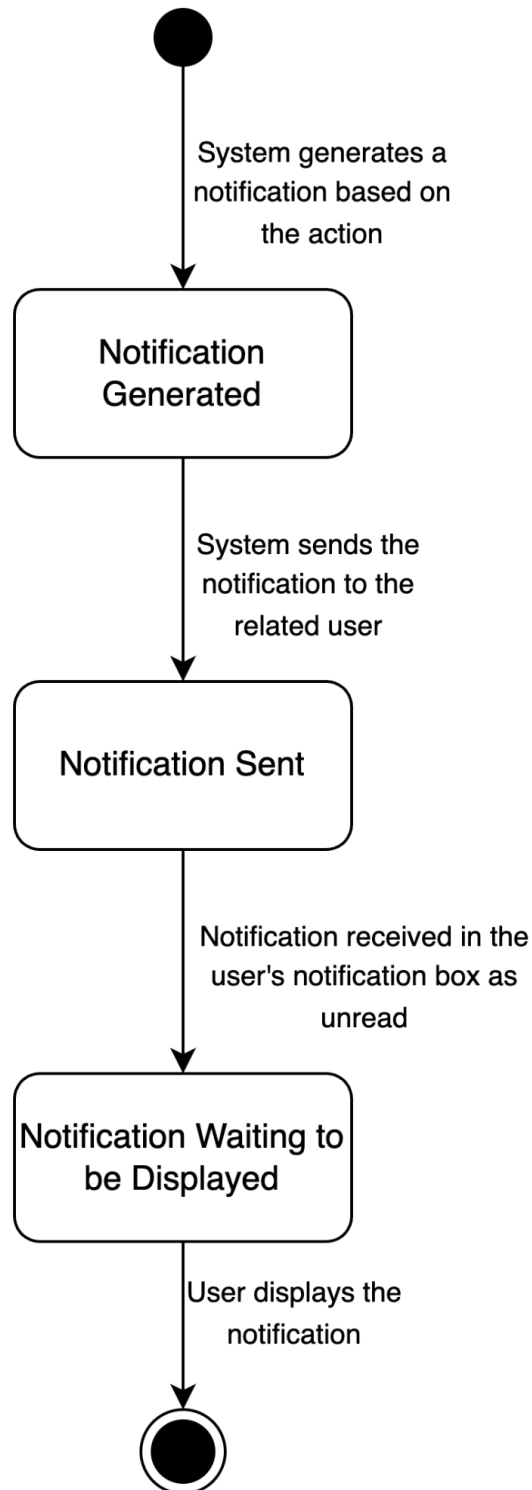


2.3 Report Request Activity Diagram

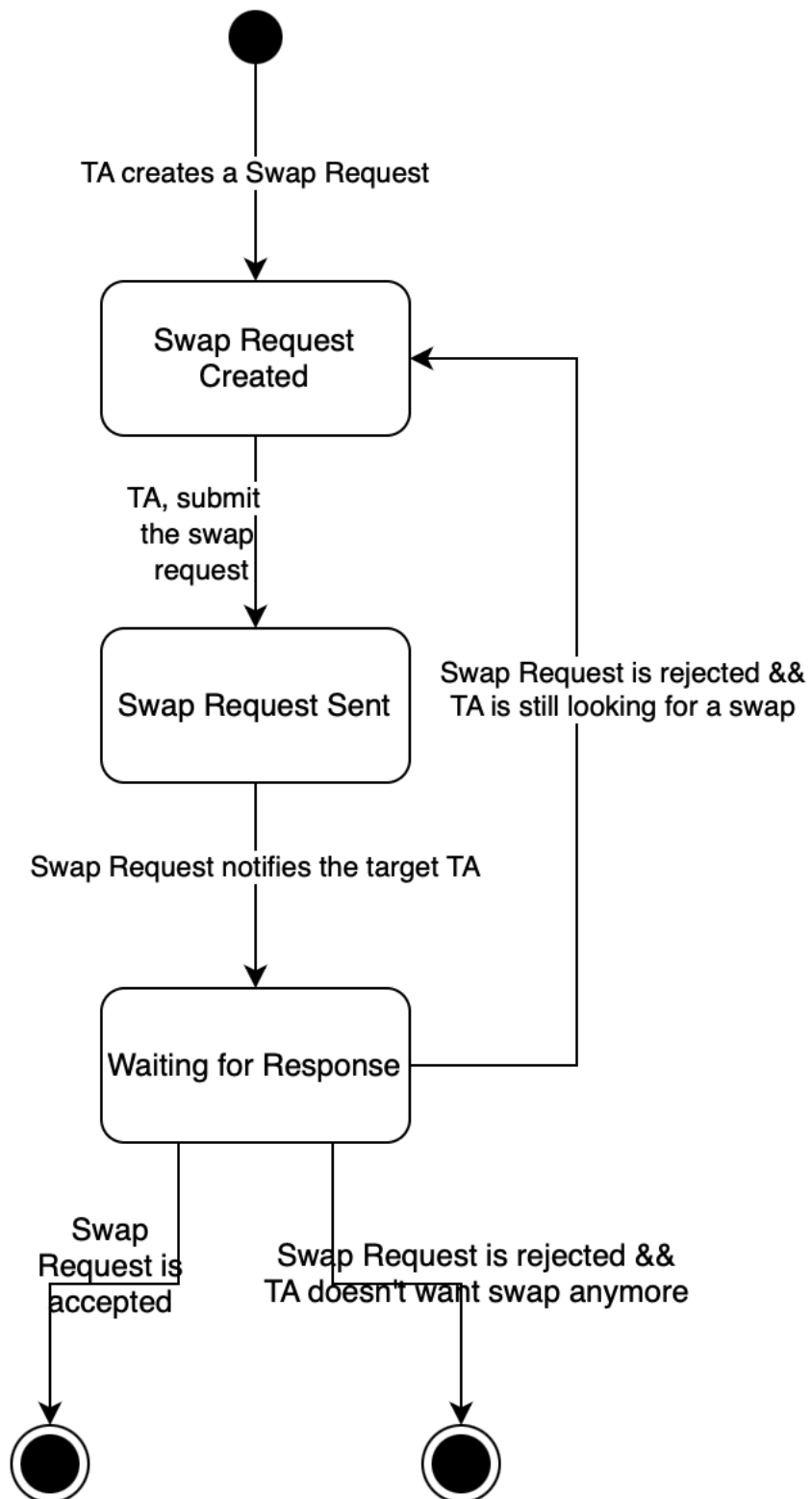


3. State Diagrams

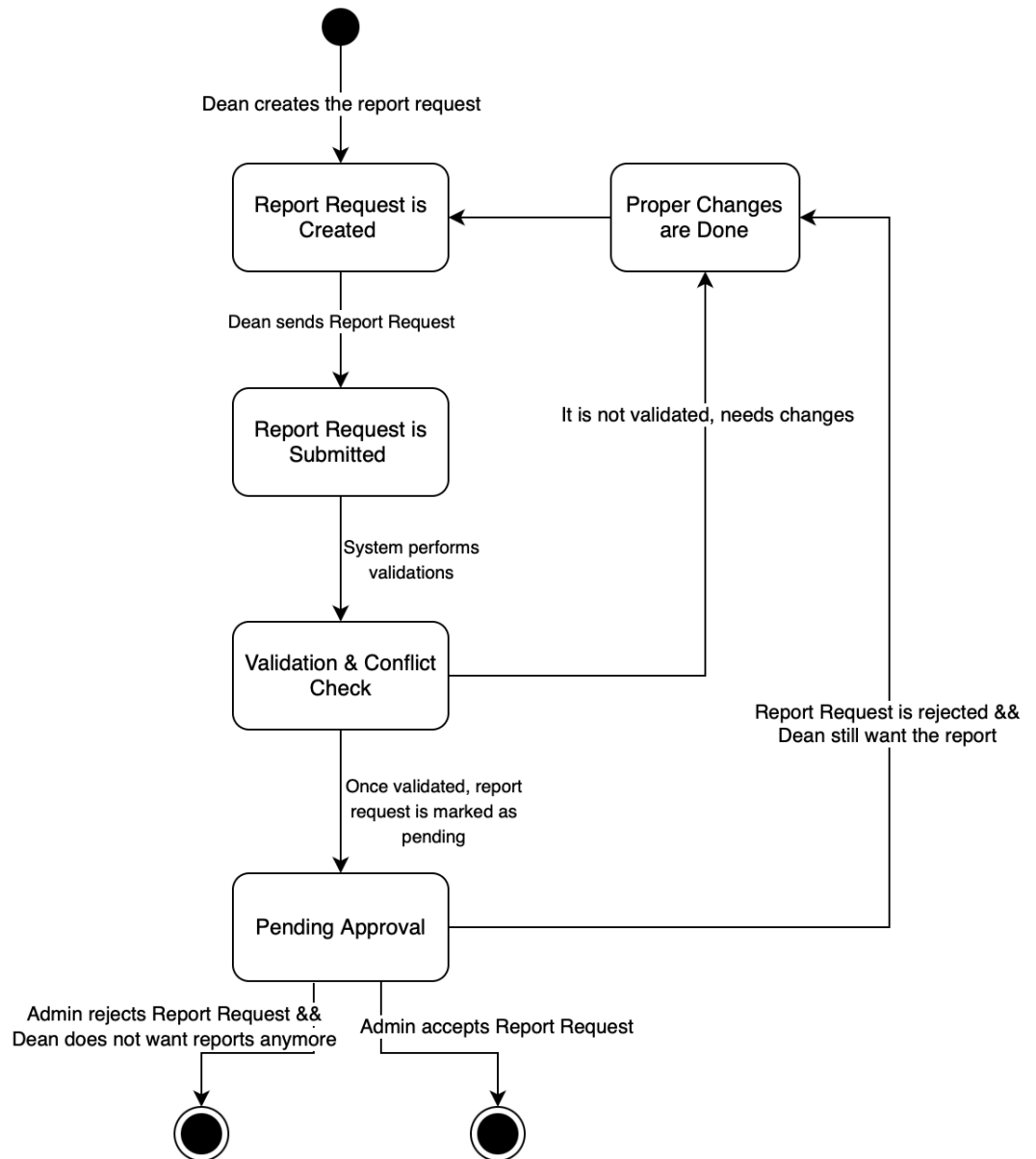
3.1 Notification State Diagram



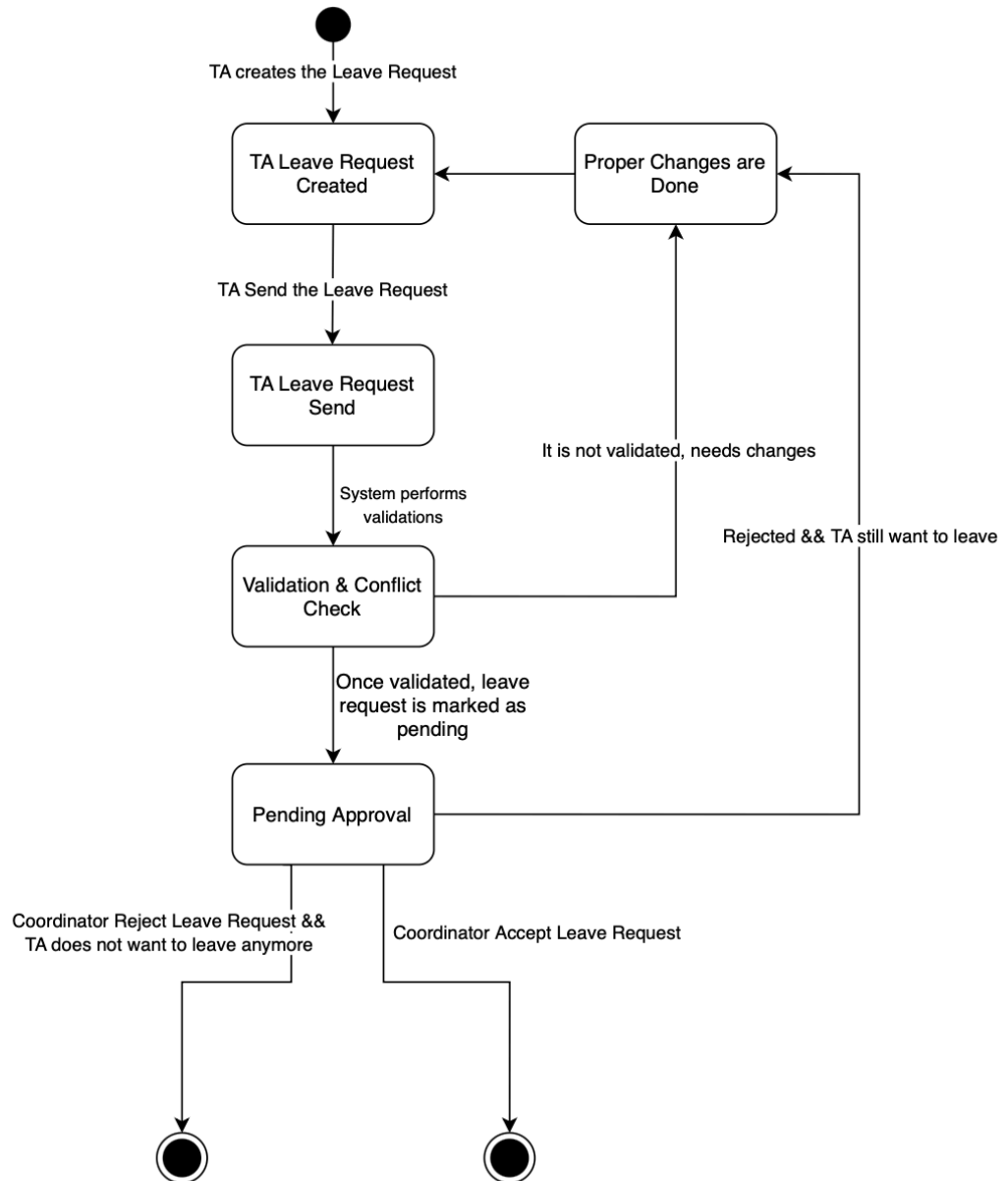
3.2 Swap Request State Diagram



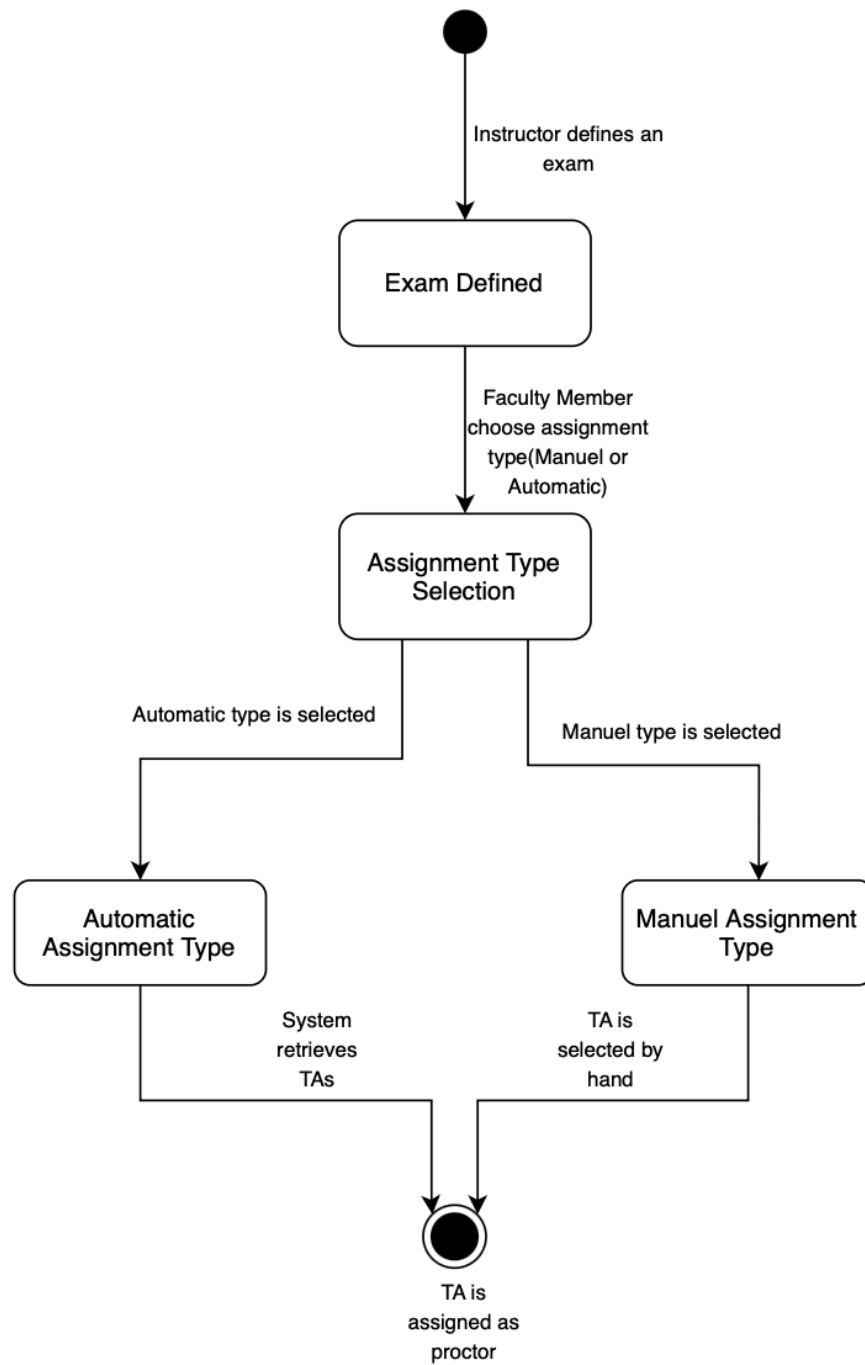
3.3 Report Request State Diagram



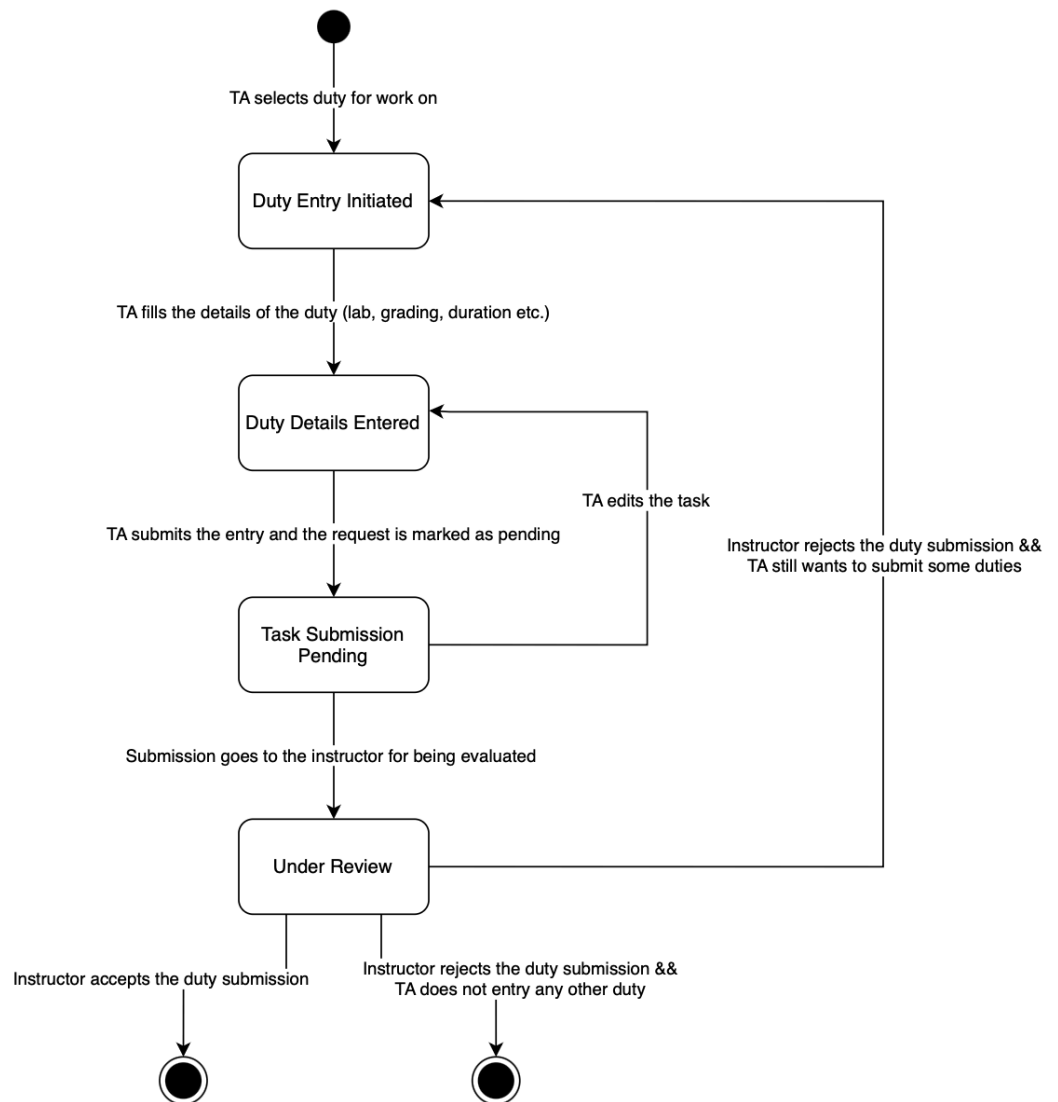
3.4 Leave Request State Diagram



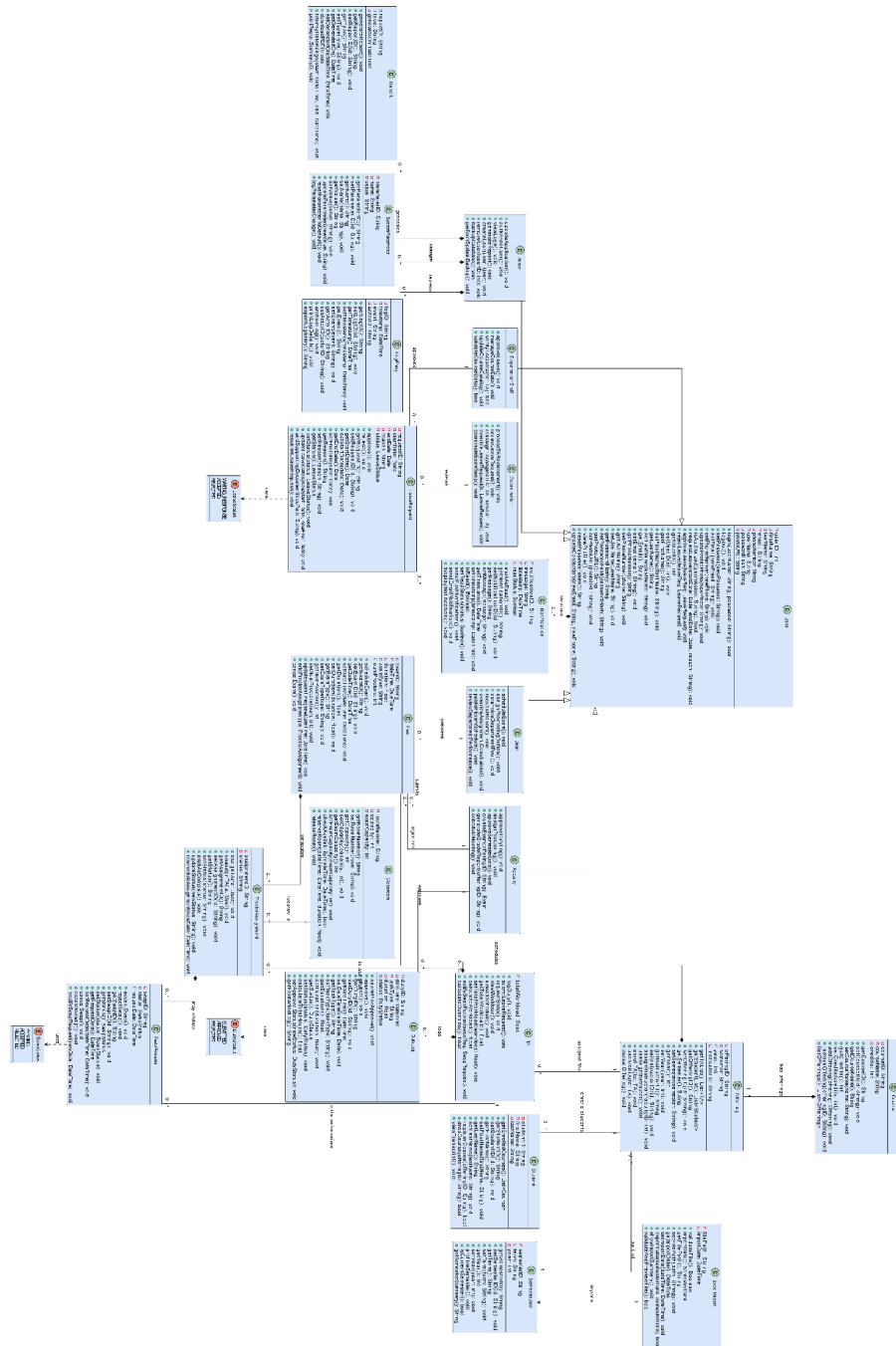
3.5 Proctor Assignment State Diagram



3.6 TA Task Submission State Diagram



4. Class Diagram



Generated by PlantUML code using draw.io

¹ See the Deliverable 2 folder in our Github for a high resolution class diagram.

5. Non-Functional Requirements

Quality Requirements:

5.1 Usability:

- TAs, faculty, department chairs, and admins should be able to access any key functionality (such as TA duty logging, proctoring assignments, or leave requests) within 3 clicks from the main dashboard, ensuring a smooth and intuitive user experience.

5.2 Reliability:

- In case of a system failure or crash, no data should be lost. The system must implement automated backups (daily or at least weekly) to enable full data recovery within 30 minutes.

5.3 Performance:

The application must support a range of device screen sizes: mobile devices (minimum 320x480 pixels), tablets (600x800 pixels), and desktops (1280x720 pixels or higher), ensuring a responsive design.

All pages and dashboards should load within 3 seconds under normal operating conditions.

The backend must handle at least 100 simultaneous requests—especially during peak periods when multiple TAs and faculty members interact with the system.

Critical backend operations (such as TA duty submissions or proctoring updates) should have response times under 2000 milliseconds.

Constraints or Pseudo Requirements:

5.4 Implementation:

- The system must be compatible with modern web browsers, including the latest versions of Chrome, Firefox, Safari, and Microsoft Edge.
- The TA MANAGEMENT SYSTEM is to be built using the specified technology stack: Spring Boot for the backend, React for the frontend, and MySQL for the database. It should run on Linux servers with Apache2.

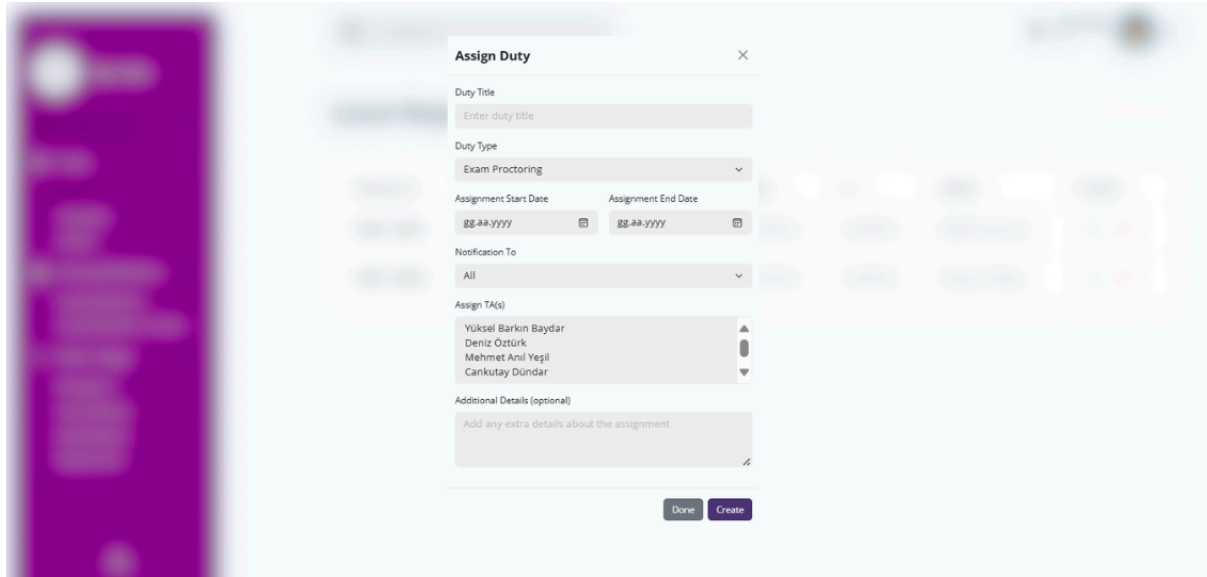
5.5 Legal:

A cookie consent banner must be displayed to obtain user consent before storing any non-essential cookies.

The application must comply with GDPR and other relevant data protection regulations by allowing users to request data deletion and providing clear information regarding data usage.

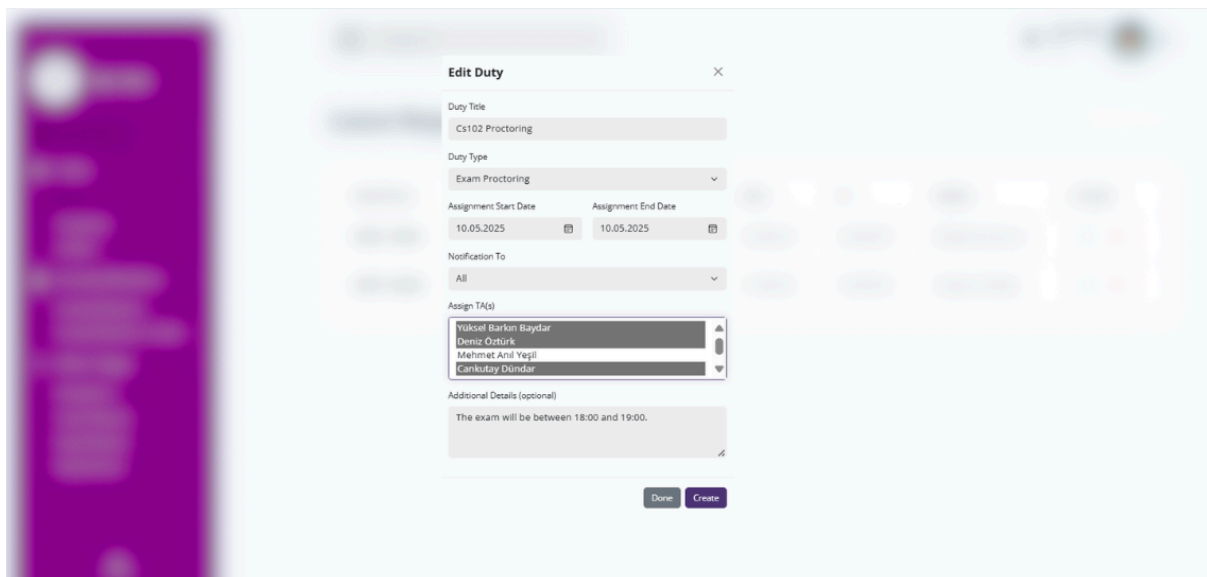
6. Mock-Up Screens

6.1 Assigning Duties such as proctoring, homeworks etc... :



The 'Assign Duty' modal form is used for creating new duty assignments. It includes fields for Duty Title, Duty Type (set to Exam Proctoring), Assignment Start and End Dates (both set to 00-00-YYYY), Notification To (set to All), and Assign TA(s) (a list of names: Yücel Barkın Baydar, Deniz Öztürk, Mehmet Anıl Yeşil, Cankutay Dündar). There is also an optional field for Additional Details (optional) with a placeholder text 'Add any extra details about the assignment'. The form has 'Done' and 'Create' buttons at the bottom.

6.2 Edit Duties such as proctoring, homeworks etc... :



The 'Edit Duty' modal form is used for editing existing duty assignments. It includes fields for Duty Title (set to Cs102 Proctoring), Duty Type (set to Exam Proctoring), Assignment Start and End Dates (both set to 10.05.2025), Notification To (set to All), and Assign TA(s) (a list of names: Yücel Barkın Baydar, Deniz Öztürk, Mehmet Anıl Yeşil, Cankutay Dündar). There is also an optional field for Additional Details (optional) with a placeholder text 'The exam will be between 18:00 and 19:00.'. The form has 'Done' and 'Create' buttons at the bottom.

6.3 Swapping Duties such as proctoring, homeworks etc... :

The screenshot shows a 'Swap Request' modal form. It includes a 'Current Assignment' dropdown set to 'CS202 Proctoring'. Below it is a 'Select Replacement TA' dropdown with 'Yüksel Barkın Baydar' selected. A text area for 'Reason for Swap (optional)' contains the text: 'Swap request for CS202 Proctoring duty during final exam week due to a conflict with a lab session. Please review and approve if possible.' There are 'Start Time' and 'End Time' pickers set to '09:00' and '11:00' respectively. An instructor dropdown is set to 'Eray Tüzün'. A 'Details' text area is at the bottom. 'Cancel' and 'Submit Swap Request' buttons are at the bottom right.

6.4 Home Dashboard:

The dashboard features a purple sidebar on the left with a 'My-Task' header and a home icon. The sidebar menu includes: Dashboard, Tasks (with sub-items: Tasks, Timesheet, Leaders), Faculty Members (with sub-items: Faculty Members, Faculty Member's Profile), and Other Pages (with sub-items: Attendance, Leave Request, Swap Request, Departments). The main content area has a search bar and a user profile for 'Anıl Yeşil' (TA Profile). Below this is a 'My Tasks' section with tabs for 'All Tasks', 'Started', 'Approval', and 'Completed'. The tasks are displayed as cards:

- CS101 - Introduction to Computer Science**
TA: Laboratory Management
Progress: 35 Days Left
- CS202 - Data Structures & Algorithms**
TA: Homework Grading
Progress: 15 Days Left
- CS303 - Operating Systems**
TA: Exam Proctoring
Progress: 25 Days Left
- CS404 - Computer Networks**
TA: Course Coordination
Progress: 2 Month

Each task card shows a progress bar, a list of attachments, and a list of members. For example, 'TA: Laboratory Management' has 5 Attachments, 4 Month duration, 5 Members, and 10 messages.

6.5 Task Status: Started | Pending Approval | Completed:

The screenshot shows the 'My Tasks' dashboard. On the left is a purple sidebar with a 'My-Task' header and a list of menu items: Dashboard, Tasks, Faculty Members, and Other Pages. The main area has a search bar and a user profile for 'Anil Yeşil'. Below the search bar, there are tabs for 'All', 'Approval', and 'Completed'. Two task cards are displayed:

- TA: Laboratory Management** (CS101 - Introduction to Computer Science): 5 Attach, 4 Month, 35 Days Left.
- TA: Homework Grading** (CS202 - Data Structures & Algorithms): 4 Attach, 1 Month, 15 Days Left.

Each card has a progress bar and a 'Progress' label.

6.6 Course Instructors:

The screenshot shows the 'Course Instructors' dashboard. On the left is a purple sidebar with a 'My-Task' header and a list of menu items: Dashboard, Tasks, Faculty Members, and Other Pages. The main area has a search bar and a user profile for 'Anil Yeşil'. Below the search bar, there is a table of course instructors:

LEADER NAME	COURSE	TOTAL TASK	EMAIL	PROJECT ASSIGNED	ASSIGNED STAFF	STATUS	ACTIONS
Eray Tüzün	Distributed Systems	5 Task	eraytuzun@bilkent.edu.tr	23/02/23		Working	Check Delete
Eray Tüzün	Computer Networks	8 Task	eraytuzun@bilkent.edu.tr	14/04/23		Working	Check Delete
Selim Aksoy	Artificial Intelligence	2 Task	saksoy@bilkent.edu.tr	18/03/23		Working	Check Delete

6.7 Employee - People Page:

My-Task

Dashboard

Tasks

Timesheet

Leaders

Faculty Members

Faculty Members

Faculty Member's Profile

Other Pages

Attendance

Leave Request

Swap Request

Departments

Search

Anıl Yeşil TA

Employee

Cankutay Dündar

TA

Responsible for assisting in teaching, supporting professors, and facilitating student learning experiences.

10 12

Deniz Öztürk

Faculty Member

Experienced in academic research, curriculum development, and student mentorship.

8 9

Barkın Baydar

Dean

Provides visionary leadership, oversees academic programs, and ensures excellence in education and research.

7 10

Anıl Yeşil

TA

Manages administrative operations and supports daily departmental functions to ensure a seamless academic environment.

6 11

Emre Uçar

Faculty Member

6.8 Employee Profile Page:

My-Task

Dashboard

Tasks

Timesheet

Leaders

Faculty Members

Faculty Members

Faculty Member's Profile

Other Pages

Attendance

Leave Request

Swap Request

Departments

Search

Anıl Yeşil TA

Employee Profile

Cankutay Dündar

Cs102 TA

Evaluating assignments, labs, and quizzes while providing constructive feedback to help students improve.

+90 0538 036 0365

cankutay.dundar@ug.bilkent.edu.tr

07/01/2003

Bilkent 81/82. Dormitory

Third Year Computer Science Student

Employee Id : 22103284

Current Work Project

Lab Work

5 Attach

5 Members

4 Month

10

35 Days Left

TA Homework Grading

3 Attach

3 Members

2 Month

5

20 Days Left

6.9 Departments Page:

My-Task

Dashboard

Tasks

Tasks

Timesheet

Leaders

Faculty Members

Faculty Members

Faculty Member's Profile

Other Pages

Attendance

Leave Request













Swap Request

Departments

Search

Prof. Dr. Barbaros Çetin
Dean Office

Departments

#	DEPARTMENT HEAD	DEPARTMENT NAME	EMPLOYEE UNDERWORK	ACTIONS
1	 Cankutay Dündar	Computer Engineering	40	 
2	 Deniz Öztürk	Electrical and Electronics Engineering	48	 
3	 Barkın Baydar	Industrial Engineering	15	 
4	 Anıl Yeşil	Mechanical Engineering	39	 

6.10 Leave Request Page:

My-Task

Dashboard

Tasks

Tasks

Timesheet

Leaders

Faculty Members

Faculty Members

Faculty Member's Profile

Other Pages

Attendance

Leave Request







Swap Request

Departments

Search

Eray Tüzün
Instructor

Leave Request

EMPLOYEE ID	EMPLOYEE NAME	LEAVE TYPE	FROM	TO	REASON	ACTIONS
#EMP : 00001	 Deniz Öztürk	Medical Leave	12/03/2021	14/03/2021	Medical Check-up	 
#EMP : 00038	 Barkın Baydar	Casual Leave	11/04/2021	12/04/2021	Going to Holiday	 

0/index.html

6.11 TA Task Completion Status Page:

TA Task Completion Status Page

TA NAME	COURSE	DATE	STATUS
Deniz Öztürk	CS319	2025-04-01	Present
Mehmet Anıl Yeşil	CS101	2025-04-01	Half day
Cankutay Dünder	CS202	2025-04-01	Absent

6.12 Leave Request Page:

Leave Request

Add Leave Request

Select Leave type
Medical Leave


Leave From Date: gg.aa.yyyy
Leave to Date: gg.aa.yyyy

Leave Reason

Done sent

TO	REASON	ACTIONS
14/03/2021	Going to Holiday	<input checked="" type="checkbox"/> <input type="checkbox"/>
12/04/2021	Going to Holiday	<input checked="" type="checkbox"/> <input type="checkbox"/>

6.13 Add Department Page:

 My-Task

Dashboard

Tasks

Timesheet

Leaders













Faculty Members

Other Pages

Search

Anıl Yeşil
TA

Departments

#	DEPARTMENT HEAD	Department Add	EMPLOYEE UNDERWORK	ACTIONS
1	 Cankutay Dünya	Department Name	40	 
2	 Deniz Öztürk	Department Head	48	 
3	 Yarkın Baydar	Employee UnderWork	15	 
4	 Anıl Yeşil		39	 

Done Add

6.14 Edit Department Page:

The screenshot shows the 'Edit Department' page. On the left is a purple sidebar with a 'My-Task' icon and a list of navigation items: Dashboard, Tasks, Tasks, Timesheet, Leaders, Faculty Members, Faculty Members, Faculty Member's Profile, and Other Pages. The main content area has a search bar and a user profile for 'Anıl Yeşil TA'. Below this is a 'Departments' section with a table. A 'Department Edit' modal is open, showing fields for 'Department Name' (Computer Engineering), 'Department Head' (Selim Aksoy), and 'Employee UnderWork' (40). The table lists four departments with their respective heads and employee counts. The modal has 'Done' and 'Save' buttons.

#	DEPARTMENT HEAD	DEPARTMENT NAME	EMPLOYEE UNDERWORK	ACTIONS
1	Cankutay I	Computer Engineering	40	<input checked="" type="checkbox"/> <input type="checkbox"/>
2	Deniz Öztü	Computer Engineering	48	<input checked="" type="checkbox"/> <input type="checkbox"/>
3	Yarkın Bay	Computer Engineering	15	<input checked="" type="checkbox"/> <input type="checkbox"/>
4	Anıl Yeşil	Computer Engineering	39	<input checked="" type="checkbox"/> <input type="checkbox"/>

6.15 Add Employee Page:

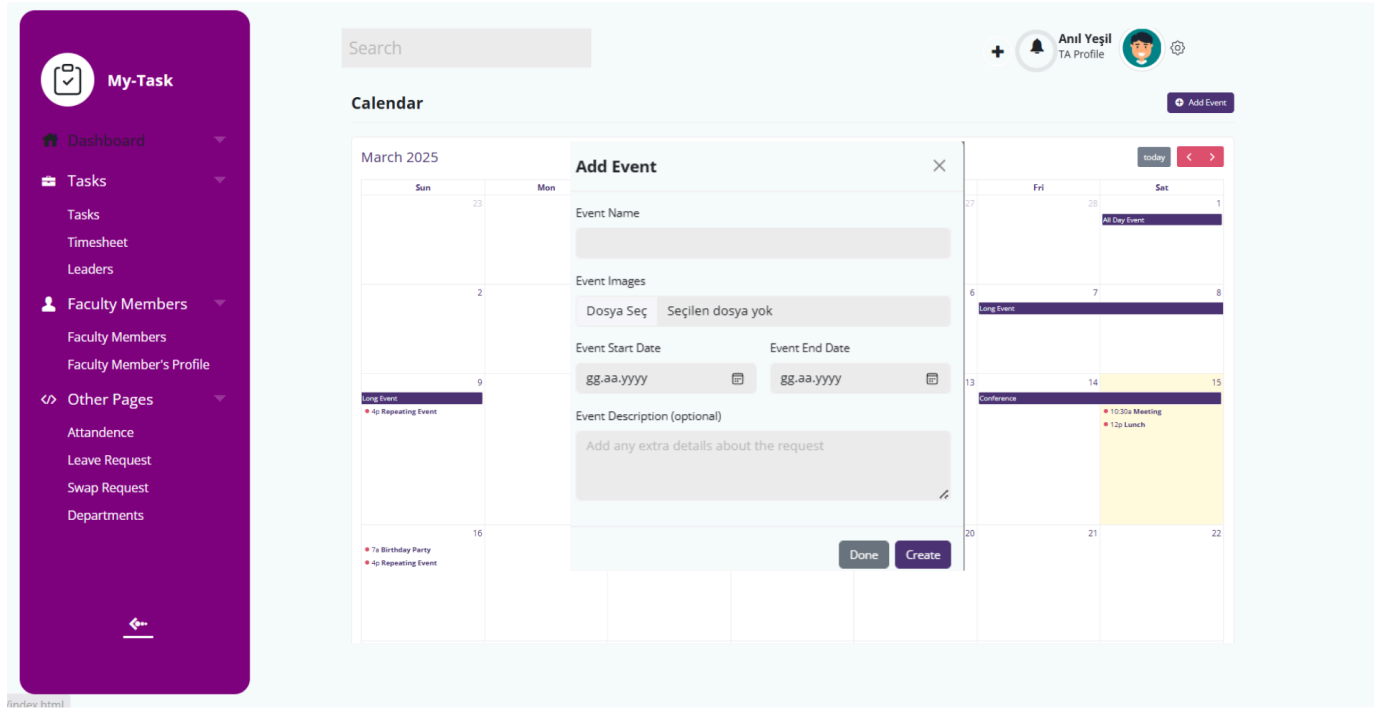
The screenshot shows the 'Add Employee' page. On the left is a purple sidebar with a 'My-Task' icon and a list of navigation items: Dashboard, Tasks, Tasks, Timesheet, Leaders, Faculty Members, Faculty Members, Faculty Member's Profile, and Other Pages. The main content area has a search bar and a user profile for 'Anıl Yeşil TA'. Below this is an 'Employee' section with a 'Add User' modal. The modal has fields for 'User Name', 'User Department', 'User ID', 'User Email', 'User Password', 'User Phone', and 'User Name'. It also has a 'Department' dropdown and a 'Description (optional)' text area. The modal has 'Done' and 'Create' buttons. To the right of the modal are two employee profiles: 'Deniz Öztürk Faculty Member' and 'Anıl Yeşil TA'. Below the modal is a partial view of another employee profile: 'Emre Uçar Faculty Member'.

Deniz Öztürk
Faculty Member
Experienced in academic research, curriculum development, and student mentorship.

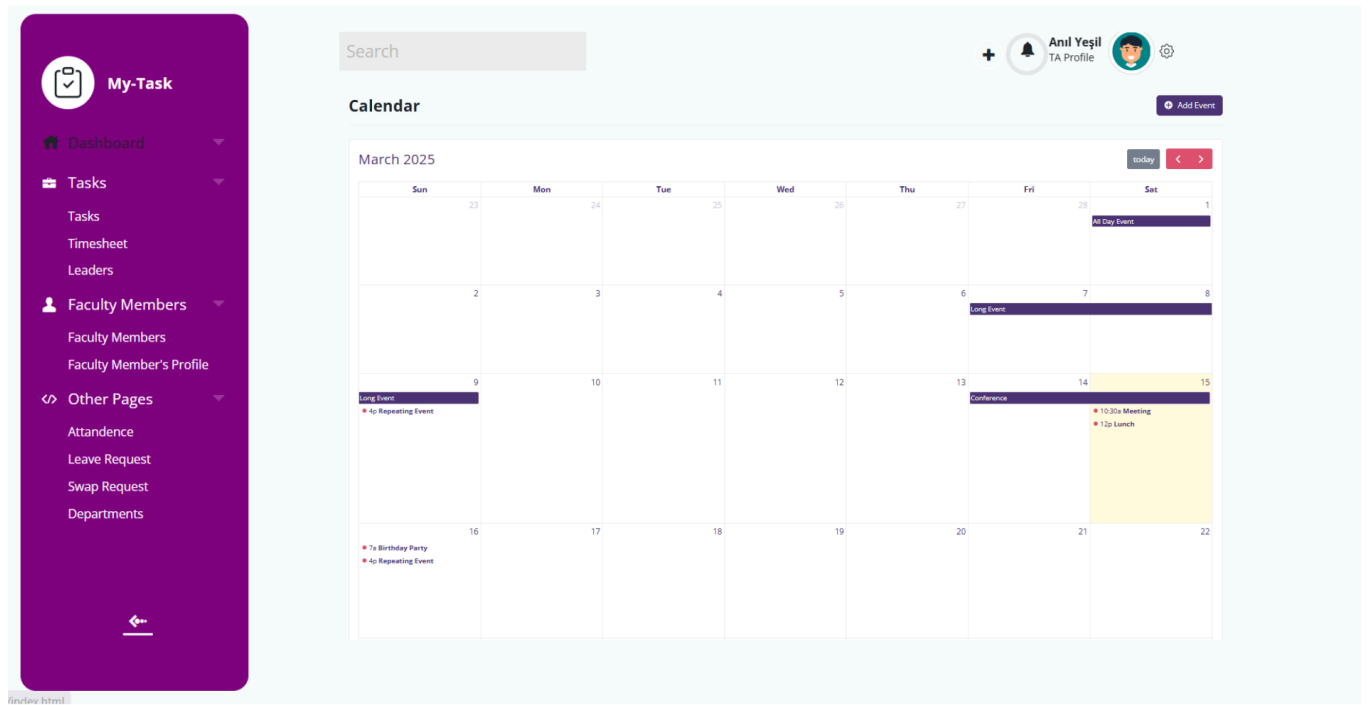
Anıl Yeşil
TA
Manages administrative operations and supports daily departmental functions to ensure a seamless academic environment.

Emre Uçar
Faculty Member

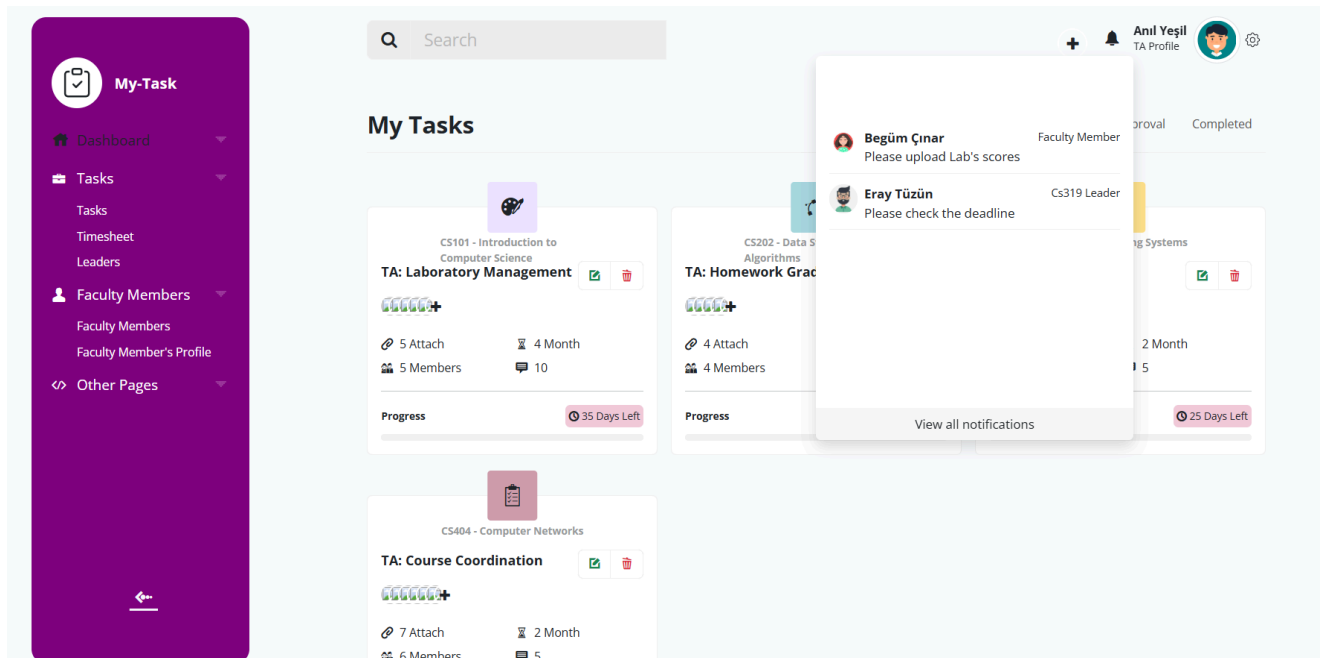
6.16 Add Event to Calendar Page:



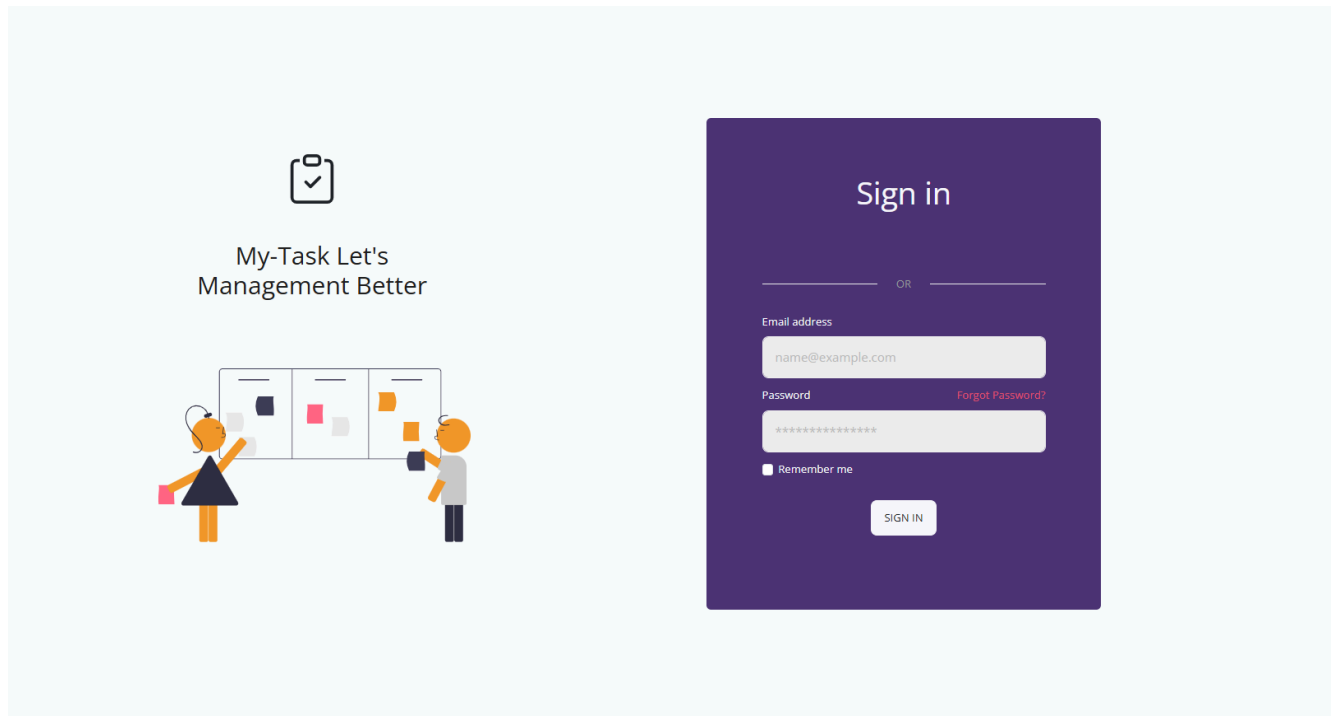
6.17 Calendar Page:



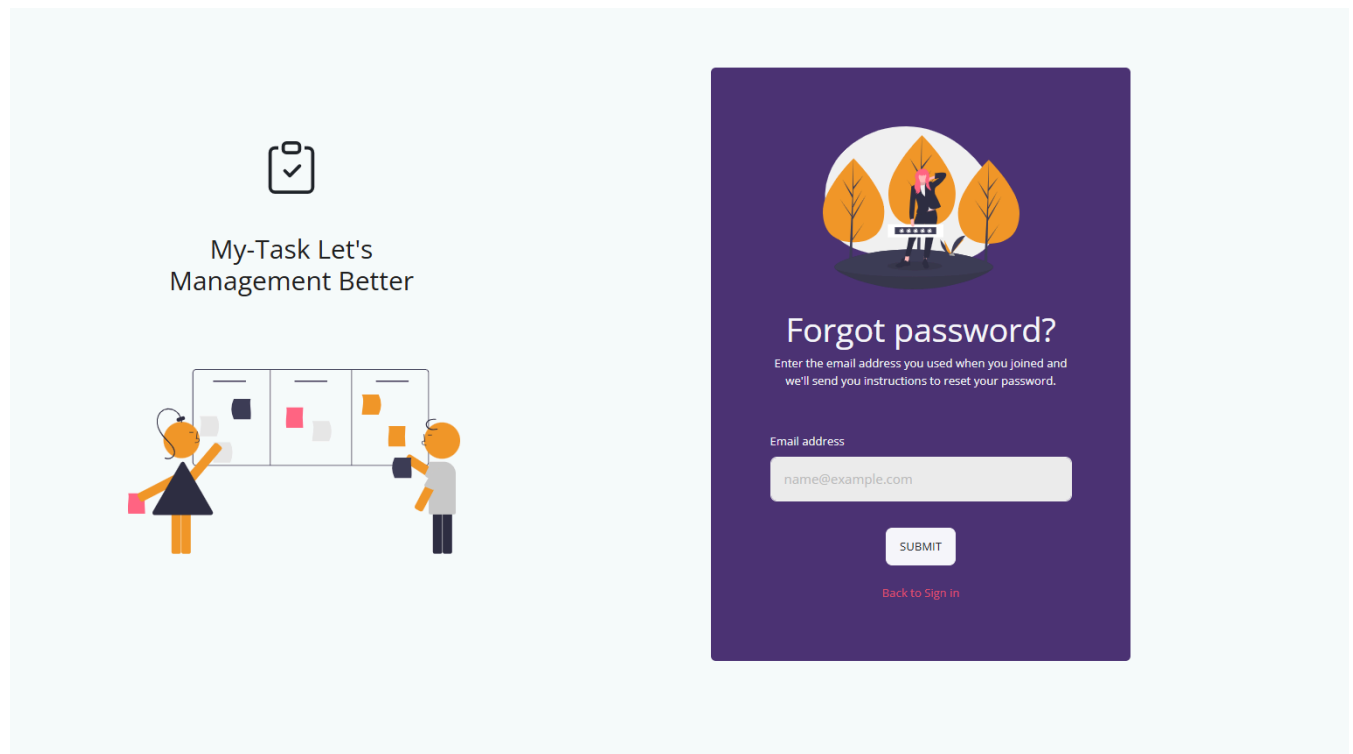
6.18 Notification Part:



6.19 Sign in Page:



6.20 Forgot Password Page:



6.21 Account Verification Page:

