SUMMER TRAINING REPORT EVALUATION SYSTEM

Requirement Analysis Report

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Table of Contents

1.   Introduction

Summer Training Report Evaluation System is a software designed for Bilkent University Faculty of Engineering students that are currently taking summer training courses and faculty staff that consist of graders, teaching assistants, administrative assistants, and summer training coordinators. This application is developed for handling the process of the evaluations of summer training reports that are written after the summer training. Our hope is to ease the evaluation process and decrease the paperwork which is done by administrative assistants, graders, students, and summer training coordinators.

Administrative assistants can upload the company evaluation forms and enter the grades to corresponding students. Students will be able to upload their summer training reports to the system, where graders and teaching assistants can give feedback to them. After the feedback, students will upload their revised reports to the system with a message informing them where the changes were made. When the reports are considered adequate, instructors will be able to fill out the evaluation form through the interface. Additional features will enable students to see the steps of their reports.

All these processes can be observed by admins, administrative assistants and summer training coordinators. They will be able to make announcements to all users. Moreover, administrative assistants can observe the overall progress and send reminders to graders if necessary. Furthermore, privileged users which are admins and administrative assistants can manage the overall process of the system.

Additionally, when all processes are completed, with the help of the statistics system, admins and coordinators can see the finalized statistics.

2. Current System

- The administrative assistant assigns instructors as graders to each student. Each grader has different Google Drive folders and they only see the reports and company evaluation forms of their assigned students.

- Students upload their summer training reports to Moodle.

- Company evaluation forms are sent both digitally and as sealed hardcopy to the summer training coordinators. They send a digital copy of the forms to the administrative assistant, who uploads them to Google Drive.

- On Google Drive, there is an excel sheet and each instructor enters the final grades (as Satisfactory or Unsatisfactory) of their own students. Then the administrator assistant enters these grades to STARS.

- Students cannot track their submission evaluation progress and their partial grades until they are uploaded to STARS.

- There are many stages and platforms involved which require a lot of attention to ensure no mistakes are made. (Usage of Google Drive, E-mail, Microsoft Excel and distribution physical copies)

- If instructors ask for a revision, students use email and Moodle with a new submission form to update their submissions to the revised version.

3. Proposed System

3.1 Overview

Summer Training Report Evaluation System will be designed as a web application in order to ease the process of summer training report evaluation for Bilkent University Faculty of Engineering. The most important aim of the system is to minimize the necessary paperwork. The students of the Engineering Faculty will upload their summer training reports via this system. The system will be used for all operations of summer training report evaluation.

In the beginning of each semester administrative assistants will add students who are currently taking summer training courses depending on their department. Students will be distributed to graders as administrative assistants prefer. The system will send login information to all students. Students will submit their reports after logging in. If students satisfy necessary conditions to be eligible for grading depending on the evaluation form coming from the companies, the evaluation process begins. Before evaluation by graders begins, administrative assistants can assign teaching assistants to students for quality and format check. Moreover, if reports are seen as adequate, teaching assistants would approve the reports and students will be directed to their grader. Graders will start evaluating reports and can ask for revision together with feedback. Students will see their report status and be able to upload revised reports with a description which explains what they changed on the report. Graders will grade reports with an evaluation form which indicates whether reports meet evaluation criteria. Additionally, the system will send notifications to students in order to prevent them from missing deadlines. Graders, administrative assistants, summer training coordinators and admin will be able to make announcements when they want. These announcements will appear on the notifications page. The system will store statistics for different steps and show them as graphics. Users will have the ability to view them.

In conclusion, the evaluation of the summer training reports submitted by students enrolled in the Faculty of Engineering will be carried out using this system. Every stage will be completed online. The process of evaluating summer training reports will be made a great amount easier by the system.

3.2 Actors

As a result of requirements analysis and meetings that we did with academic personnel, we declared 6 different actors that can use and interact with the Summer Training application.

- **User:** Base actor type of all users. Users have all the common behaviors of all users. If a user is not attached to a role, as an abstract role, it will be assigned to the user. Also its access will be limited. Users can login the system by the password which will be sent to the user by the system via email, change account password, log out, view notifications and announcements.

- **Admin:** Manages the privileged actions of summer training application. By this role, the system can be ready to be used since functioning of the system depends on this role. By admin role, developers can make the system ready to be used since admin initializes the functioning of the application. Admins can add users, remove users, edit user roles, add new roles to users, assign users to their roles at the beginning.

- **Students:** The privileged actors, admins and administrative assistants, can assign students to this role by the excel sheet that is supposed to be given to them by administrative assistants which contain information of students. Students can upload their summer training reports to the system so that teaching assistants or graders can see it. Also they can edit and remove the uploaded report before the deadline. Students can upload their revised report with a description that they write the changes in the report. After they upload their reports, they can view their reports history where all their submissions and their feedback are stored. After the grader or teaching assistant gives feedback, students can view the feedback given. They can display highlighted reports with feedback and revision requests. Students can see their current status of reports as "submitted", "satisfactory", "unsatisfactory", "revision required", "under evaluation" and "pending company evaluation form". Like other roles, students can view their profiles and announcements.

- **Grader:** The privileged actors can assign students to the grader role in the system. Grader role has all of the traits of a user. Grader's main roles are uploading feedback to the reports, assigning due dates and filling the evaluation forms. Graders can upload feedback, upload highlighted reports with feedback,

send revision requests to students, view student list, student profiles, statistics for their own students, current status of students, students' reports, feedback histories, and fill summer training grade form. Graders also can find students in the list either by filtering or searching. They can update the current status of student reports. For the reports, they can upload their e-signatures and fill the summer training grade form. Also they can update the summer training grade form.

- **Teaching Assistant:** Teaching assistant roles can be assigned by privileged actors. They have all the traits of the user role. Teaching assistants can give format and quality checks to reports of assigned students, view feedback history, assigned students list, assigned students' profiles, current status of assigned students, assigned students' reports and send revision requests to the student. Also teaching assistants can search for students that are assigned to them and filter the search.

- **Administrative Assistants:** An administrative assistant can only be assigned by an admin. An administrative assistant extends the abilities and treats of the admin. An administrative assistant can assign students to the graders and edit it, upload company evaluation form for each student, view student list, view student profile, search students and filter the search, send reminders to graders for deadlines, view current status of students, make announcements to all the users, view statistics for all graders and students in their department, view company statistics and evaluation phases of grade forms.

- **Summer Training Coordinator:** A summer training coordinator can be assigned to this role by privileged roles. This role is able to do all the things the user role can do. Also they can make announcements to all users. This role is entitled to view announcements, statistics for all students, company statistics, grader statistics and evaluation phases of grade forms.

3.3   Functional Requirements

3.3.1 System Setup

Admin will add the administrative assistants from all departments to the system. Later on, administrative assistants will upload the excel sheets for each role (students, graders, teaching assistant) that will be provided from the school and all the accounts will be created based on the lists. The sheet will have the names, emails, departments, course codes and our system will generate random passwords to each user and send them to their Bilkent e-mail addresses. Moreover, class code for students will be taken. If a student is taking two courses at once, two separate profiles will be created. The password information will be sent by email to each user.

3.3.2 User Profiles

After successful authorization, users with more than one role will be redirected to a profile selection page. For example, if an instructor is a summer training coordinator at the same time and is assigned to students as a grader, that instructor will have to choose the role as "grader" or "summer training coordinator" and will be directed to that chosen profile. Similarly, if a student is taking two summer training courses at the same time, he/she will need to choose the profile. Also users who have multiple profiles can switch their profile inside the system and view the chosen profile.

3.3.3 Login

Every user will login to the system via the same login page. Users will enter their login credentials, that they received before via email, in the login page. If the user does not enter any of his/her login credentials, the system will warn the user to enter all of the login credentials and try again. If the entered login credentials do not match with any login credentials that were previously submitted to the system, the users will be informed that the login credentials they entered are incorrect. In that situation, the system will also prompt the user to try entering users login credentials again or if users forgot their password, they can click the forgot password button to go to the password recovery page.

If there exists a valid account with matching username and password, users will be redirected to a page. The page that they will be redirected to depends on their role in the system. For example, if the user is a student in the system, he/she will be redirected to his/her student page or if the user is a grader in the system, users will be redirected to his/her grader page. Also, all users will be able to get to the frequently asked questions page by clicking the 'FAQ' hyperlink under the login button.

3.3.4 Views

Users will be authorized to use a specific view, according to their role. All users will be able to view their own profile. However, not every user will be able to view all users' profiles. In their own profile, all users will be able to see their own name, e-mail address, institute name, department, profile picture, and their role. All users will also be able to see change password and edit profile buttons. Also, all users will have a sidebar on the left of their screen, which allows them to use their accounts' functionalities, according to their account type. All account types have Profile and Notifications on their sidebars. Also, not all users will have a view of every functionality (such as Report Submission, Statistics, Student List etc.). Details of these views for each actor will be described following in this section. Users can click on their name on the navigation bar to either logout or switch to their other accounts if there is any.

3.3.4.1 Admin View

In addition to all views and functionalities that have been mentioned at the beginning of the view section, admins will be able to view student list and manage users pages on their sidebar. In the student list page, admins will be able to view all students. In the manage users page, admins can search for every user in a users list, add a user, remove a user, edit a user's role and reassign a grader or a teaching assistant. For example, if a student is withdrawn from a summer training course admins can remove the student's profile for that course. Also, in the notifications page, admins can make announcements to all users.

3.3.4.2 Administrative Assistant View

Administrative assistant view will be so similar to admin view as administrative assistants are an extension for admins. Different from the admins, administrative assistants will have company forms, grader progress and statistics page on the sidebar. In the company forms page, administrative assistants can upload or view company grade forms of the students. In the grader progress page, administrative assistants can view the overall progress of the graders. In the statistics page, administrative assistants can view statistics for all students in their department.

3.3.4.3 Summer Training Coordinator View

In addition to all views and functionalities that have been mentioned at the beginning of the view section; on the sidebar, summer training coordinators will be able to view the users list, student list, statistics and grader progress page. In the student list page, summer training coordinators can view all students. In the users list, summer training coordinator will be able to view the list of all users in the system. In the statistics page, summer training coordinators can view statistics for all students in the system. In the grader progress page, summer training coordinators can see all graders' overall progress. Also, in the notifications page, summer training coordinators can make announcements to all users in their department.

3.3.4.4 Grader View

In addition to all views and functionalities that have been mentioned at the beginning of the view section, graders will be able to view their department, number of students that have been assigned to them and overall evaluation progress for the reports of their students, on their own profile. Also, on the sidebar, graders will see report evaluation, assigned student list and statistics page. In the report evaluation page, graders will be able to grade reports and give feedback to reports. In the student list, graders will be able to reach their own students' profiles. In the statistics page, graders will be able to view statistics for total number of submitted training forms and which days of the week these forms have been submitted (for their own students), total number of students that have been completed each stage (again, for their own

students) and grade status of their students' reports. Also, in the notifications page, graders can make announcements to their assigned students.

3.3.4.5 Teaching Assistant View

Teaching assistant view will be similar to a graders view. Teaching assistants will be able to view their department, overall evaluation progress of the students that have been assigned to them and number of students that have been assigned to them, on their own profile. Also, similar to the grader view, Teaching assistants will have report evaluation and student list on their sidebar. In the report evaluation page, teaching assistants will be able to grade reports and give feedback to reports. In the student list, teaching assistants will be able to reach their assigned students' profiles.

3.3.4.6 Student View

In addition to all views and functionalities that have been mentioned at the beginning of the view section, students will be able to view their department, instructor name, instructor mail, course taken, report status and report progress on their own profile. Also, students will have access to two more pages on their sidebars, which are specific to the student role. These pages are reports page and file submission page. Students can submit their reports to the latest submission that has been created by the system with the revision request of their grader/teaching assistant. In the reports page, students will be able to view their uploaded reports history, instructors overall feedback for a submission and feedback for the previous submitted report. If a student is taking both summer training courses at the same time, they can click on their name on the top-right of their screen and select any of their student profiles. Each profile will have only one course written in the Course Taken section.

3.3.5 Assigning Users to Roles

First, we need to initialize an admin account and insert it on the system since only administrative assistants and admins are authorized to add roles to the users. We need to insert an admin account to add the other roles.

All of the accounts will automatically have the user role since it is an abstract role type with utilizations that every Summer Training Report Evaluation System user will have.

Based on the excel sheets that will be uploaded by administrative assistants; administrative assistants, student, grader, teaching assistant, summer training coordinator roles will be given to the users separately. Since the summer training type will be indicated in the excel sheet with the summer training course codes, the students will be assigned to different summer training types by using the excel sheets.

Teaching assistant, grader and summer training coordinator roles will also be assigned to the users by admin or administrative assistants.

3.3.6 Assigning Students to Graders and Teaching Assistants

Administrative assistants or admins manually assign students to graders and teaching assistants. As administrative assistants or admins decide how many or which students will be assigned to every single grader and teaching assistant, they can assign graders or teaching assistants to any student. In addition, administrative assistants or admins can assign students to graders and teaching assistants.

3.3.7 Reports and Grade Forms

3.3.7.1 Uploading/Viewing Reports

All submissions of the summer training reports that are uploaded by students and highlighted reports with the feedbacks uploaded by graders or teaching assistants will be stored in the database. Except the first submission, in each submission along with the report file students must also submit a revision note which explains the revision made. Users giving feedback to reports, graders and teaching assistants, also must attach a feedback note along with the highlighted report file.

Students can access, view and download their report submissions, highlighted reports with feedback via report history part of their reports page.

Graders or teaching assistants can access students' reports and give feedback through searching them in the Student List part and viewing their profile. Also graders can see the company evaluation forms uploaded to the system by the administrative assistants of the departments. Those company evaluation forms are not visible to

students since they are confidential. They are only visible to graders and administrative assistants.

3.3.7.2 Feedbacks/Grade Forms

Teaching assistants, if they exist, are responsible for format quality checks of the reports for the students they are assigned. At first, if a student is assigned to a teaching assistant, the teaching assistant will check the reports and will provide feedback on whether the quality of the report is satisfactory or not. If the teaching assistant decides the format quality of the report is satisfactory, students will be passed to their grader.

After the teaching assistant passes the student to grader, revised report submissions are handled by only graders. A grader can view the company evaluation form containing the company grade, all submitted reports with their revision notes, highlighted reports along with the feedback notes, and also previous grade forms which are unsatisfactory for a chosen student. Starting from where the last grade form remained, the grader will fill the grade form for the last unexamined submission. If revision is needed, the grader will assign a due date for the next submission, submit a feedback note and send a revision request to the student. After the revision is requested and the next submission due date is entered, the next submission will be created automatically by the system. After the grader fills the grade form their e-signature, name, surname and date will be added to form and they will be stored in the grade form history.

3.3.7.3 Status of the Reports

Students can view the current status of their reports in their reports page. A report can be "submitted", "assigned to grader", "under evaluation", "revision required", "satisfactory", "unsatisfactory" or "pending company evaluation form".

3.3.8 Statistics

Graders, admins, administrative assistants and summer training coordinators can view statistics for the users they are related to.

Graders can view the statistics for the students they are assigned such as number of report submissions, average number of report submissions per student, number of unsatisfactory students, number of satisfactory students and average point of grade forms.

Administrative assistants and summer training coordinators can view the statistics for companies and for all students in their department such as number of report submissions, average number of report submissions, number of unsatisfactory students, number of satisfactory students and average point of grade forms, number of students in a company, average point of grade forms for the students in a company and number of satisfactory/unsatisfactory students in a company.

3.3.9 Announcements & Notifications

All users can view their notifications and graders, admins, administrative assistants and summer training coordinator can view and make announcements about the summer training report evaluation process.

Students and graders will be notified about approaching due dates in order to prevent missing deadlines. Students can view notifications about approaching due dates, revision requests and published feedback through the notifications page.

Graders, administrative assistants, admins and summer training coordinator can make announcements to related audiences.

Graders can only make announcements to students they are assigned. Administrative assistants and summer training coordinators can make announcements to all students, all graders, all teaching assistants or to all users in their department.

Admins can make announcements to all students, all graders, all teaching assistants or to all users in the system.

3.4 Non-functional Requirements

3.4.1 Usability

The user interface is the most important component of the program since it is the point of initial user interaction. The objective of the system is to develop a straightforward user interface while retaining the usability and functionality of the system in order to make a good first impression and keep it.

- All types of users will be able to learn how to use the system at most two usages.
- Switching between pages will be provided through the sidebar on the left.
- Main features of the program will be utilized after clicking two or three times from the sidebar.
- While uploading summer training reports, the system will only accept pdf format. This will prevent students uploading different format types mistakenly.
- Statistics will be seen as well-organized graphics.
- Dark mode option will be provided to users in order to improve user experience.

3.4.2 Maintainability

Maintainability is an essential factor while creating any kind of software because of continually changing needs and software technologies.

- Object-oriented programming will be used to create the system in order to obtain features and facilitate simple OOP usage. Using OOP, we will not run into significant issues with maintaining the entire application, adding new features, or fixing bugs.
- To make maintenance and debugging simpler, the code will be written in a clean, concise manner utilizing consistent coding principles and clearly specified naming conventions.
- To make maintenance and future development easier, the system will be completely documented, including both internal and external documentation. The source code will be traceable through the source control system Git.

3.4.3 Reliability

Reliability is one of the most crucial aspects of the system. The system will be consistent and prevent users from losing any kind of data.

- The system must operate successfully in 95 percent of use cases per semester.
- There will be 5ms delay for maintenance or upgrades, and the system will always be usable.
- Database backup will be taken every 24 hours to prevent data loss.

3.4.4 Performance

The software should run quickly, be responsive, have short load times, and have little latency. Users should have uninterrupted access to the application and the ability to execute tasks.

- The program will send login credentials in less than 1 minute.
- Users can login to and log out from the system in at most 5 seconds.
- Uploading and downloading files will take less than 10 seconds.
- Switching between screens will take less than 3 seconds.

3.4.5 Security

The system contains sensitive user data that needs to be kept confidential and shielded from unauthorized intrusions.

- Every person will not be able to sign up to this program. Administrative assistants will decide whomever has an account. Their login information will be sent to users.
- Just necessary information about users will appear on their profile page.
- The system will have role-based access so that only related users will be able to control important functionalities.

3.5   Pseudo Requirements

- The project should be implemented as a web application to reduce the paperwork to minimum.
- The project should support Object-Oriented Programming (OOP) for the scope of the CS319 Object-Oriented Software Engineering course.
- Source code should be trackable via a source control system. For this reason GitHub and Git are the tools used.

3.6   System Models

3.6.2. Use Case Model

https://online.visual-paradigm.com/share.jsp?id=323234343632302d38

https://drive.google.com/drive/folders/1D2sMDG9ngB4ZGsbNSgo9xKlnbgLEcMWZ?usp=sharing

3.6.2 Use Case Textual Descriptions

Name: View uploaded reports

Participating Actor: Student

Entry Condition: Being a student and clicking on the "Reports" page.

Exit Condition: Navigating to another page.

Flow of Events:

- Student wants to view his/her previously uploaded summer training report.
- Student clicks on the "Reports" page on the sidebar.
- If student has not uploaded a report before but clicks on the "Reports" page,
    - "Report Not Found" message is displayed.
- Else, from the opened "Reports" page, the student can see the previously uploaded report and the evaluation progress of it

Name: View revision requests

Participating Actor: Student

Entry Condition: Being a student that has an unsatisfactory grade on his/her previous report and clicking the "Notifications" or "Reports" page.

Exit Condition: Navigating to another page.

Flow of Events:

- Student has submitted an insufficient report before.
- Grader has asked for a revised version of the report.
- Student clicks on the "Notifications" page and sees that the instructor has sent a revision request.
- Student can also see that a revision is requested on the "Reports" page.
- This use-case involves "View Uploaded Feedbacks" and "View Highlighted Reports".

Name: View uploaded feedback

Participating Actor: Student

Entry Condition: Being a student with a previously graded report and clicking on the "Reports" page.

Exit Condition: Navigating to another page

Flow of Events:

- Grader has uploaded feedback for the student's submission.
- Student wants to view his/her summer training report feedback.
- Student clicks on the "Reports" page and sees the grader's feedback under the submission details.

Name: View highlighted reports

Participating Actor: Student

Entry Condition: Being a student with a previously graded report and clicking on the highlighted report on his/her "Reports" page.

Exit Condition: Navigating to another page.

Flow of Events:

- Student wants to view his/her previously submitted summer training report.
- Grader has made changes on the report and uploaded a highlighted version of it with the feedback.
- Student clicks on the "Reports" page on the sidebar and sees the grader has uploaded a highlighted report.
- Student clicks on that report to view it.

Name: View current status of the report

Participating Actor: Student

Entry Condition: Being a student and having uploaded a summer training report.

Exit Condition: Navigating to another page.

Flow of Events:

- Student has uploaded a summer training report before and wants to check its evaluation progress.
- Student clicks on the "Reports" page and sees the evaluation status for Part A, Part B and Part C for the lastly submitted report.

Name: Upload summer training report

Participating Actor: Student

Entry Condition: Being a student and clicking on the "File Submission" page.

Exit Condition: Canceling the submission, editing the submission, uploading the submission or navigating to another page.

Flow of Events:

- Student wants to upload a summer training report.
- Student navigates to the "File Submission" page.
- If student is allowed to upload a new report, he/she uses the drop zone or the uploading screen to submit a new report.

Name: Edit last uploaded report

Participating Actor: Student

Entry Condition: Being a student and clicking the "File Submission" page.

Exit Condition: Canceling the edit screen or navigating to another page.

Flow of Events:

- Student has uploaded a summer training report before and wants to edit the submission.
- Student clicks on the "File Submission" page.
- Student sees the previous submission file and clicks "Edit".
- Student can edit the submission or cancel the request to terminate the editing process.

Name: Remove last uploaded report

Participating Actor: Student

Entry Condition: Being a student and clicking the "File Submission" page.

Exit Condition: Canceling the remove screen or navigating to another page.

Flow of Events:

- Student has uploaded a summer training report before and wants to remove the submission.
- Student clicks on the "File Submission" page.
- Student sees the previous submission file and clicks "Remove submission".
- Student can confirm the removal request or cancel it to terminate the process.

Name: Upload revised report with description

Participating Actor: Student

Entry Condition: Being a student and clicking the "File Submission" page.

Exit Condition: Canceling the submission screen or navigating to another page.

Flow of Events:

- Student has submitted an insufficient report before.

- Grader has asked for a revised version of the report.

- Student clicks on the "File Submission" page.

- Student chooses the revised file to upload and adds a description about changes to the revised version of his/her report.

- Student can confirm the submission or cancel it to terminate the process.

Name: Upload company evaluation form for each student

Participating Actor: Administrative Assistant

Entry Condition: Being an administrative assistant and clicking on the "Company Forms" on the sidebar.

Exit Condition: Navigating to another page.

Flow of Events:

- Administrative assistant wants to upload a company form for a student

- Administrative assistant clicks on the "Company Forms" page on the sidebar.

- Administrative assistant selects the corresponding company form and uploads it to the dropzone area.

- Then, a student list pops up and the administrative assistant chooses the corresponding student and presses the upload.
  - If they try to press upload without selecting a student, a "Student Not Selected" message is displayed.

Name: Send reminder to graders

Participating Actor: Administrative Assistant

Entry Condition: Being an administrative assistant and clicking on the "Grader Progress" on the sidebar.

Exit Condition: Navigating to another page.

Flow of Events:

- Administrative assistant wants to remind a graders that are behind schedule to evaluate the reports
- Administrative assistant clicks on the "Grader Progress" page on the sidebar.
- Administrative assistant observes the overall progress rates of the graders and press the reminder button for those are behind

Name: Assign students to graders

Participating Actor: Administrative Assistant

Entry Condition: Being an administrative assistant, clicking on the "Student list" on sidebar and choosing assign grader option

Exit Condition: Navigating to another page , pressing the approve or cancel button.

Flow of Events:

- Administrative assistant wants to assign a grader to a student
- Administrative assistant clicks on the "Student list" page on the sidebar.
- Administrative assistant selects presses the option icon for the corresponding student and choose assign grader option
- Then, a reassign page appears and the administrative assistant chooses a grader from the list for the corresponding student.
- After grader is selected, system will enable a approve button and administrative assistants will press it to save the assignment to the system

Name: Edit assigned students to graders

Participating Actor: Administrative Assistant

Entry Condition: Being an administrative assistant , clicking on the "Student list" on sidebar and choosing assign grader option

Exit Condition: Navigating to another page, pressing save or cancel button.

Flow of Events:

- The administrative assistant wants to reassign a grader to a student

- The administrative assistant clicks on the "Student list" page on the sidebar.
- The administrative assistant selects presses the option icon for the corresponding student and choose reassign grader option
- Then, a reassign page appears and the administrative assistant chooses a grader from the list for the corresponding student.
- After grader is selected, system will enable a approve button and administrative assistants will press it to save the assignment to the system
  - If they try to assign a grader which is already assigned, system will give "Grader Already Assigned" message

Name: Add user

Participating Actor: Admin

Entry Condition: Being an admin, clicking on the "Manage Users" on the sidebar pressing the add button.

Exit Condition: Navigating to another page, pressing cancel or addbutton.

Flow of Events:
- Admin wants to add a new user to the system.
- Admin clicks on the "Manage Users" page on the sidebar.
- Admin presses the add button and selects the new user option
- Admin fills the information for the new user.
- Then, the system pops up a message including the choices of approve or cancel.
  - If they try to press upload and another user with the same information is found in the system, "User Already Exists" message is displayed.

Name: Remove user

Participating Actor: Admin

Entry Condition: Being an admin, clicking on the "Manage Users" on the sidebar and choosing the remove user option.

Exit Condition: Navigating to another page , pressing the remove or cancel button.

Flow of Events:
- Admin wants to add a new user to the system.
- Admin clicks on the "Manage Users" page on the sidebar.
- Admin presses the option icon for the corresponding user and selects remove user.

- Then, the system pops up a message including the choices of approve or cancel.
- If they try press approve user is deleted from the system

Name: Add User Data Sheet

Participating Actor: Admin

Entry Condition: Being an admin , clicking on the "Manage Users" on the sidebar and choosing add user list option.

Exit Condition: Navigating to another page.

Flow of Events:
- Admin wants to add a new user to the system.
- Admin clicks on the "Manage Users" page on the sidebar.
- Admin presses the add button and selects add user list option
- Admin uploads the list and selects the role (student, grader or teaching assistant) they want to assign to them
- Then, system pops up a message including the choices of approve or cancel
  - If they have not chosen a role, the system gives a "Role Not Selected" message.
  - Else, all the users in the sheet are added to the system

Name: Edit user

Participating Actor: Admin

Entry Condition: Being an admin, clicking on the "Manage Users" on the sidebar and choosing edit user option.

Exit Condition: Navigating to another page , pressing cancel or approve button.

Flow of Events:
- Admin wants to edit a user in the system.
- Admin clicks on the "Manage Users" page on the sidebar.
- Admin presses the option icon for the corresponding user and selects edit user option.
- In the edit user page, admin can assign a new role to the user, change their role, change user information.
  - If they try to assign the same role again, the system gives the "Role Is Already Assigned" message.

○ If no changes are made and Admin hits the approve button, the system gives a "No Changes" message.

Name: Handle Report Process

Participating Actor: Grader

Entry Condition: Being a grader, clicking on the "Student List" on the sidebar, choosing a student in the list and clicking on the student's name to navigate to the student's page.

Exit Condition: Navigating to another page or pressing to cancel button or pressing to save button

Flow of Events:
- Grader wants to send revision request to the student, update the status of the student's report, assign due dates for the student.
- Grader clicks on the "Student List" page on the sidebar.
- Grader searches for a student in the search bar.
- Grader presses the student's name for the corresponding student and navigates to the student's page.
- In this page, grader can send revision request to student, update the status of the student's report and assign due dates for the student.
    - If the grader tries to assign an invalid due date, the system gives the "Due Date Not Applicable" message.
    - If no changes are made for the status of the student's report and the grader hits the approve button, the system gives a "No Changes" message.

Name: Handle Grade Forms

Participating Actor: Grader

Entry Condition: Being a grader, clicking on the "Student List" on the sidebar, choosing a student in the list, clicking on the student's name to navigate to the student's page and clicking on the fill grade form button if there is a report which is not evaluated.

Exit Condition: Navigating to another page or pressing to cancel button or pressing to save button

Flow of Events:
- Grader wants to fill a summer training grade form for the student, upload e-signature, view uploaded summer training grade forms, update summer training grade form of the student.

- Grader clicks on the "Student List" page on the sidebar.
- Grader searches for a student in the search bar.
- Grader presses the student's name for the corresponding student and navigates to the student's page.
- In this page, grader fills a summer training grade form for the student, upload e-signature, view uploaded summer training grade forms, update summer training grade form of the student.

Name: Evaluate report

Participating Actor: Grader

Entry Condition: Being a grader, clicking on the "Student List" on the sidebar, choosing a student in the list, clicking on the student's name to navigate to the student's page and clicking on the fill grade form button if there is a report which is not evaluated.

Exit Condition: Navigating to another page or pressing to cancel button or pressing to approve or decline buttons

Flow of Events:
- Grader wants to approve the summer training report of a student, or decline and ask for revision of the report and upload a feedback, or fail the student.
- Grader clicks on the "Student List" page on the sidebar.
- Grader searches for a student in the search bar.
- Grader presses the student's name for the corresponding student and navigates to the student's page.
- In this page, after the grader fills a summer training grade form for the student, if the grade form is satisfactory, student's report will be approved or if the grade form is unsatisfactory and grader can fail the student or grader can upload a highlighted version of the report and a feedback note for the student and ask for revision.
  - If the grader leaves the feedback note empty an error message "Feedback note cannot be empty!" will be displayed.

Name: Manage Grader Announcement

Participating Actor: Grader

Entry Condition: Being a grader, clicking on the "Notifications" on the sidebar, clicking on the make an announcement button or edit icon for an existing announcement.

Exit Condition: Navigating to another page or pressing to publish button or cancel button or save the changes button

Flow of Events:

- Grader wants to make an announcement or to edit an announcement to student of his/her own or to delete an announcement
- Grader clicks on the "Notifications" page on the sidebar.
- Grader clicks on the "Make an announcement" button.
- Grader writes the announcement and publishes it.
- Grader click on the edit icon next to an already existing announcement published by the same grader to edit this announcement.
- Grader makes the changes in the announcement and either clicks on save changes button or cancel button.
- Grader click on the waste bin icon next to an already existing announcement published by the same grader to delete this announcement.
- Grader either approves the deletion or declines it by clicking on yes or no buttons on the pop-up window.

Name: Manage Admin/Coordinator Announcement

Participating Actor: Admin, Coordinator, Administrative Assistant

Entry Condition: Being an admin, a coordinator or an administrative assistant, clicking on the "Notifications" on the sidebar, clicking on the make an announcement button.

Exit Condition: Navigating to another page or pressing to cancel button or pressing to approve or decline buttons

Flow of Events:

- User wants to make an announcement to users in the system or to edit an announcement or to delete an announcement.
- User clicks on the "Notifications" page on the sidebar.
- User clicks on the "Make an announcement" button.
- User writes the announcement, chooses the type of audience, all users or all students or all graders, and publishes it.
- User clicks on the edit icon next to an already existing announcement published by the same grader to edit this announcement.

- User makes the changes in the announcement and either clicks on save changes button or cancel button.
- User clicks on the waste bin icon next to an already existing announcement published by the same grader to delete this announcement.
- User either approves the deletion or declines it by clicking on yes or no buttons on the pop-up window.

Name: View assigned users' profile

Participating Actor: Grader, Teaching Assistant

Entry Condition: Clicking "Student List" on the sidebar, then clicking on a students name

Exit Condition: Navigating to another page or a profile

Flow of Events:
- Grader or teaching assistant wants to view the assigned users' (who are students) profiles.
- Grader or teaching assistant clicks on the "Student List" on the sidebar.
- Grader or teaching assistant clicks on the name of the Student which they want to view the profile of.

Name: View all users' profile

Participating Actor: Admin, Administrative Assistant, Summer Training Coordinator

Entry Condition: Clicking on any users name

Exit Condition: Navigating to another page

Flow of Events:
- Admin, administrative assistant or summer training coordinator wants to view the profile of a user.
- Admin or administrative assistant clicks on the "Manage Users" on the sidebar, summer training coordinator clicks on the "Users List" on the sidebar.
- Admin, administrative assistant or summer training coordinator clicks on the name of the user that they want to view the profile of, from the list that opens after they click the according buttons.

Name: Manage All Lists

Participating Actor: Administrative Assistant

Entry Condition: Clicking on "Manage Users" on the sidebar

Exit Condition: Navigating to another page or a profile

Flow of Events:

- Administrative assistant wants to view all the lists.
- Administrative assistant clicks on "Manage Users" on the sidebar.
- Administrative assistant clicks on the small triangle on the right of "Role", which is at the top of the list of all users.
- Administrative assistant chooses the role of which they wanted to view the list.

Name: Manage Restricted Lists

Participating Actor: Grader, Teaching Assistant

Entry Condition: Clicking "Student List" on the sidebar

Exit Condition: Navigating to another page or a profile

Flow of Events:

- Grader or teaching assistant wants to view assigned students' list
- Grader or teaching assistant clicks on "Student List" on the sidebar

Name: List Actions

Participating Actor: Administrative Assistant, Grader, Teaching Assistant

Entry Condition: Clicking "Manage Users" as Administrative Assistant or clicking "Student List" as a Grader or a teaching assistant on the sidebar

Exit Condition: Navigating to another page

Flow of Events:

- Administrative assistant, grader or teaching assistant wants to take one of the list actions, which are Filter, Search and View List
- Administrative assistant clicks on "Manage Users" on the sidebar, grader or teaching assistant clicks on "Student List" on the sidebar.
  - If administrative assistant, grader or teaching assistant wants to take Filter action, they click on the small triangle near one of the column names on the list.
  - If administrative assistant, grader or teaching assistant wants to take Search action, they click on the empty search bar and enter the name they want to search for.

       ○ If Administrative assistant, grader or teaching assistant wants to take View List action, they can apply a filter on the list in a way that they see wanted data on it.

Name: View Evaluation Phases of the Grade Forms

Participating Actor: Summer Training Coordinator, Administrative Assistant

Entry Condition: Clicking "Grader Progress" on the sidebar

Exit Condition: Navigate to another page or a profile

Flow of Events:

- Summer training coordinator or administrative assistant wants to view the Evaluation Phases of the Grade Forms.
  Summer training coordinator or administrative assistant clicks on "Grader Progress" on the sidebar.
- Summer training coordinator or administrative assistant views the overall progress of each grader on the Progress column.

Name: Manage Admin / Coordinator Statistics

Participating Actor: Administrative Assistant, Summer Training Coordinator

Entry Condition: Clicking submitted summer training forms or grade status or number of students that completed each stage on the "Statistics" page

Exit Condition: Navigating to any page or profile

Flow of Events:

- Administrative assistant or summer training coordinator wants to view submitted summer training forms or grade status or number of students that completed each stage of all students
- Administrative assistant or summer training coordinator clicks "Statistics" on the sidebar
- Administrative assistant or summer training coordinator clicks submitted summer training forms or grade status or number of students that completed each stage on the "Statistics" page
- Administrative assistant or summer training coordinator views submitted summer training forms or grade status or number of students that completed each stage of all students

Name: Manage Grader Statistics

Participating Actor: Grader

Entry Condition: Clicking submitted summer training forms or grade status or number of students that completed each stage on the "Statistics" page

Exit Condition: Navigating to any page or profile

Flow of Events:

- Grader wants to view submitted summer training forms or grade status or number of students that completed each stage of assigned students
- Grader clicks "Statistics" on the sidebar
- Grader clicks submitted summer training forms or grade status or number of students that completed each stage on the "Statistics" page
- Grader views submitted summer training forms or grade status or number of students that completed each stage of assigned students on the "Statistics" page

Name: Quality and Format Check

Participating Actor: Teaching Assistant

Entry Condition: Being teaching assistant, clicking student list, finding the student and clicking on it if the report is submitted before

Exit Condition: Navigating to another page or a profile, giving pass to the student and clicking on send to grader button, giving feedback and clicking send to student button, clicking on cancel button

Flow of Events:

- Teaching assistant wants to do a quality and format check on submitted report of an assigned student
- Teaching assistant clicks on "Student List" on sidebar
- Teaching assistant clicks on a student name which uploaded its report
- Sidebar changes to "Report Evaluation" from "Student List"
- Teaching assistant gives feedback to assigned students' reports and ask for iterations for assigned students' reports if the student couldn't pass the check and clicks the send to student button,
- Teaching assistant clicks on send to the grader if the student could pass the test.

Name: Give Feedback to Assigned Students' Reports

Participating Actor: Teaching Assistant

Entry Condition: Being teaching assistant, clicking student list, finding the student and clicking on it if the report is submitted before

Exit Condition: Navigating to another page or a profile, clicking on sent to student button after writing a feedback, clicking on cancel button

Flow of Events:

- Teaching assistant comes to the Quality and Format Check page after clicking on student name
- Teaching assistant comments on the report and sends it to the student if report cannot pass, by clicking send to student button

Name: Ask for Iterations for Assigned Students' Reports

Participating Actor: Teaching Assistant

Entry Condition: Being teaching assistant, clicking student list, finding the student and clicking on it if the report is submitted before

Exit Condition: Navigating to another page or a profile, clicking on sent to student button after understanding the student couldn't pass the check and writing a feedback based on it, clicking on cancel button

Flow of Events:

- Teaching assistant comes to the Quality and Format Check page after clicking on student name
- Teaching assistant comments on the report, gives feedback and sends it to the student if report cannot pass, by clicking send to student button

Name: Handle Reports

Participating Actors: Grader and Teaching Assistant

Entry Condition: Being teaching assistant or grader, clicking on "Student List" on the sidebar

Exit Condition: Navigating to another page, clicking cancel button

Flow of Events:

- Teaching assistant or grader wants to handle the reports
- Teaching assistant or grader clicks on "Student List" on the sidebar
- Teaching assistant or grader can view student status here

- Teaching assistant or grader clicks on a student which uploaded it's report before
- Sidebar changes to "Report Evaluation" from "Student List"
- Teaching assistant or grader can view recently uploaded student report, student's reports history, feedback history here

Name: View Students' Reports History and Feedback History

Participating Actors: Grader and Teaching Assistant

Entry Condition: Being teaching assistant or grader, clicking on "Student List" on the sidebar, clicking on a student

Exit Condition: Navigating to another page

Flow of Events:

- Teaching assistant or grader want to view students' reports history and feedback history
- Teaching assistant or grader clicks on "Student List" on the sidebar
- Teaching assistant or grader clicks on a student which uploaded it's report
- Sidebar changes to "Report Evaluation" from "Student List"
- Teaching assistant or grader can see the reports and feedback history on this page

Name: View Students' Reports

Participating Actors: Grader and Teaching Assistant

Entry Condition: Being teaching assistant or grader, clicking on "Student List" on the sidebar, clicking on a student

Exit Condition: Navigating to another page

Flow of Events:

- Teaching assistant or grader wants to view students' reports
- Teaching assistant or grader clicks on "Student List" on the sidebar
- Teaching assistant or grader clicks on a student which uploaded it's report
- Sidebar changes to "Report Evaluation" from "Student List"
- Teaching assistant or grader can see the recently uploaded student report

Name: View Current Status of an Assigned Student

Participating Actors: Grader and Teaching Assistant

Entry Condition: Being teaching assistant or grader, clicking on "Student List" on the sidebar

Exit Condition: Navigating to another page

Flow of Events:

- Teaching assistant or grader wants to view current status of an assigned student
- Teaching assistant or grader clicks on "Student List" on the sidebar
- Teaching assistant or grader can see the current status of assigned students on this page

3.6.3. Object and Class Model

https://online.visual-paradigm.com/share.jsp?id=323234343632302d39

https://drive.google.com/drive/folders/1D2sMDG9ngB4ZGsbNSgo9xKlnbgLEcMWZ?usp=sharing
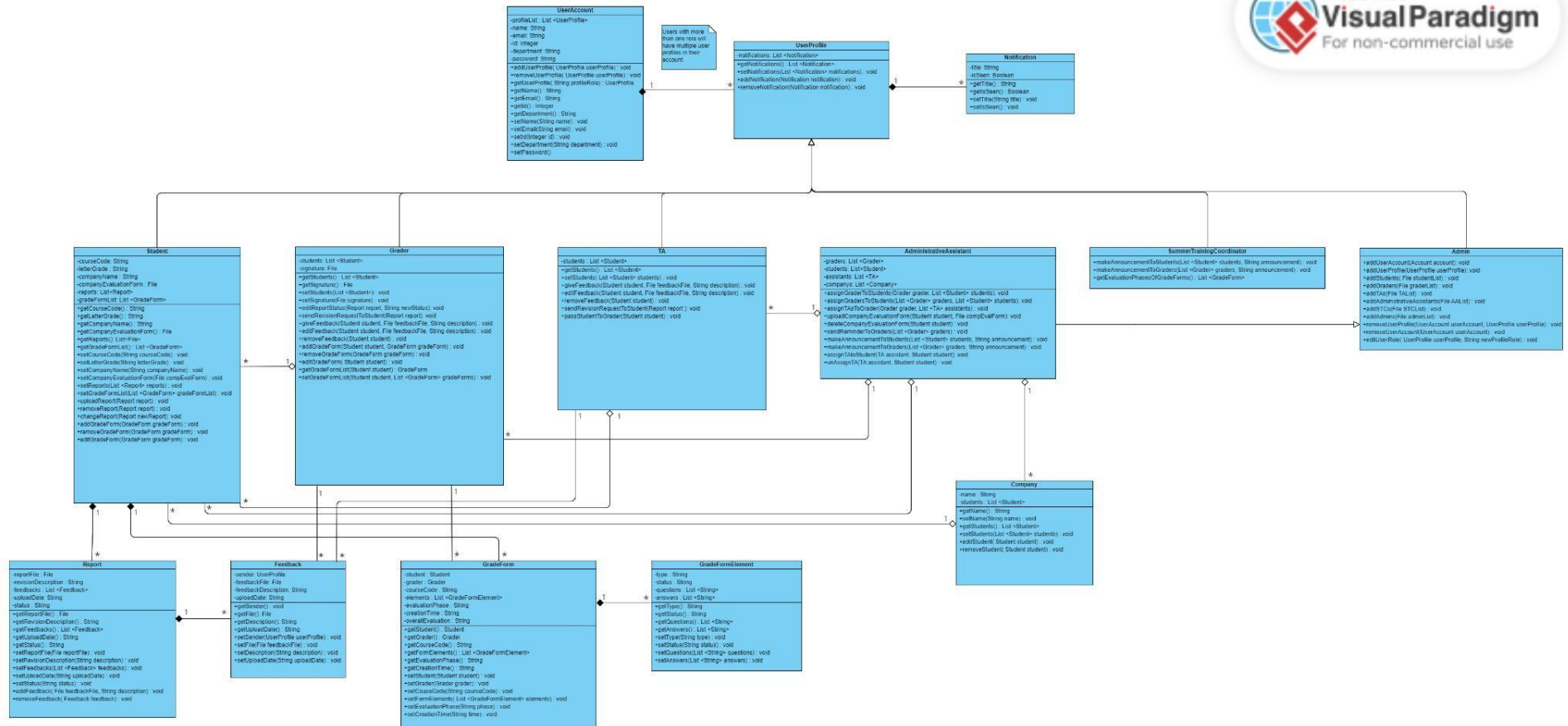
3.6.4. Dynamic Models

3.6.4.1 Activity Diagrams

i) Assignment of graders and teaching assistants to students by the administrative assistant
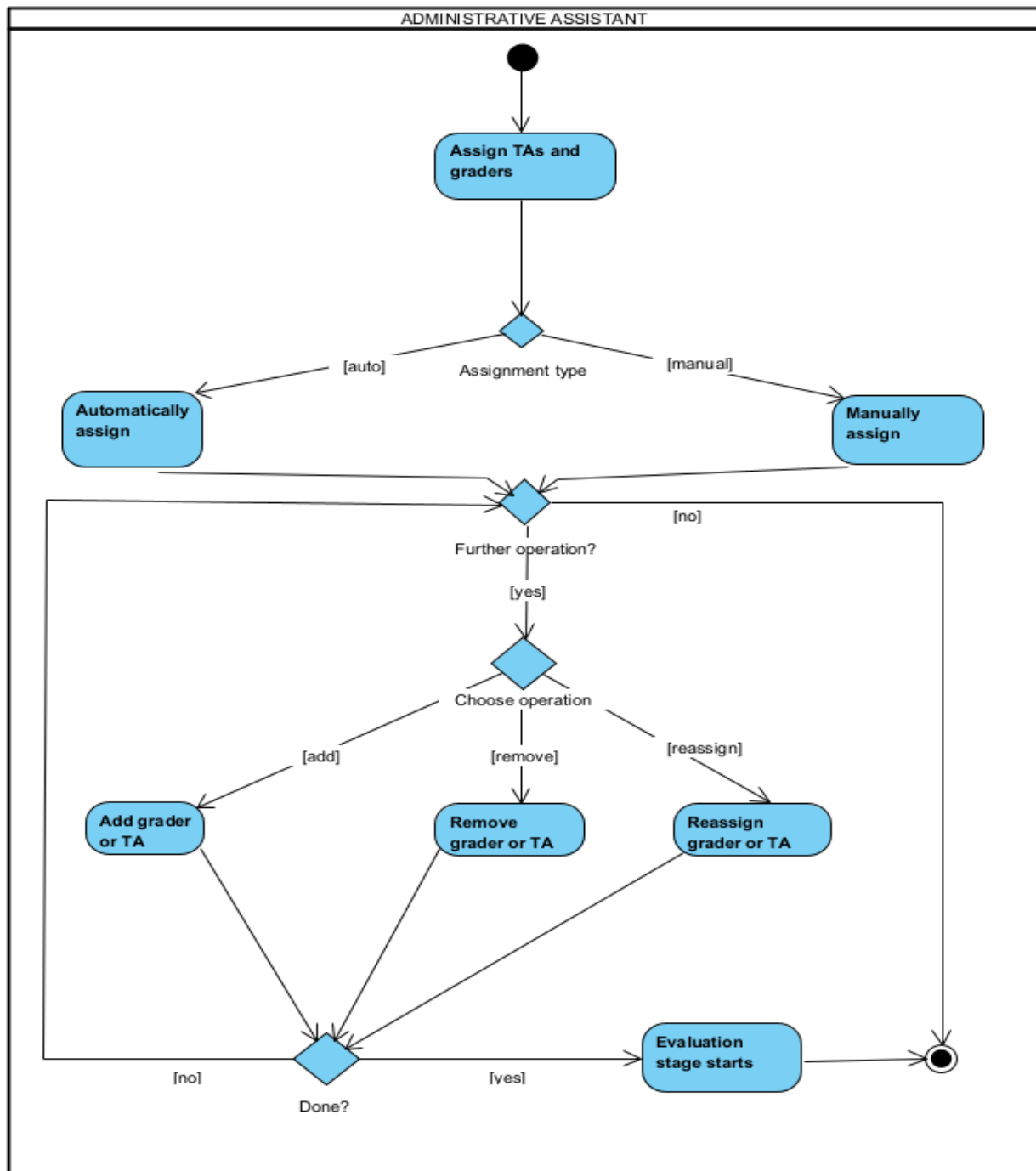
ii) Company evaluation form grading process
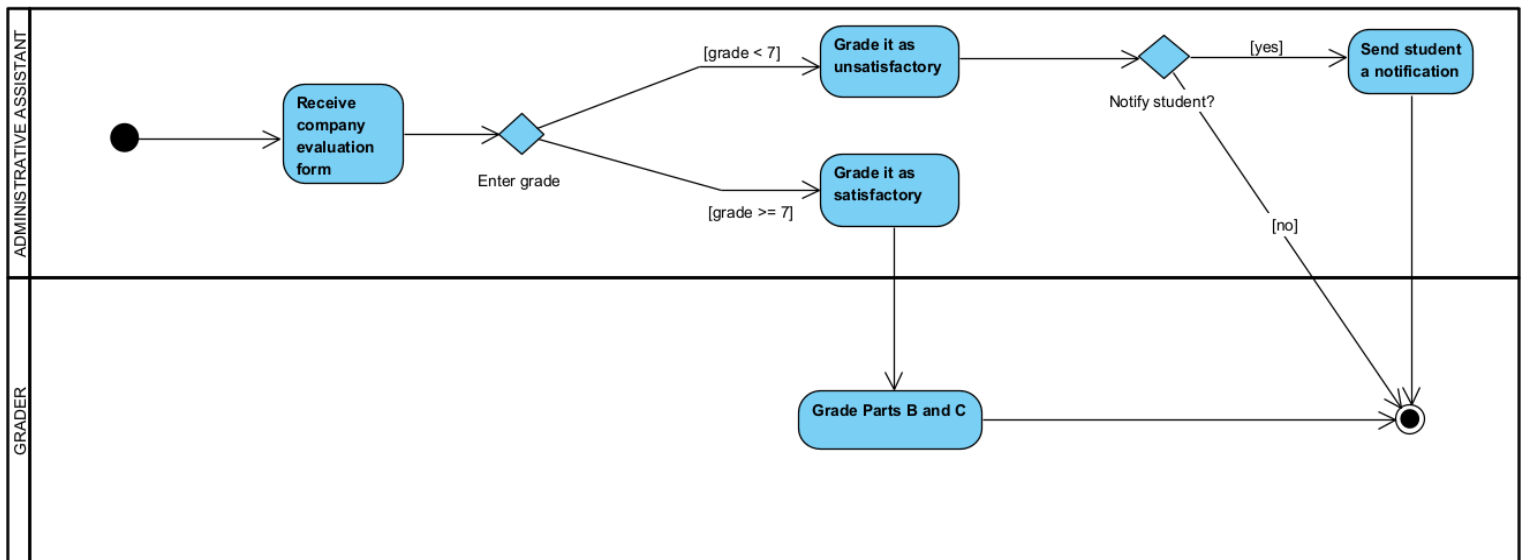
After the administrative assistants receive company evaluation forms, they will enter the grades as "Satisfactory" or "Unsatisfactory" depending on the grade. If the student gets a grade less than 7 in their form, they fail Part A resulting in an unsatisfactory grade. The administrative assistant may choose to inform the student of this or fail them from the course. If the student gets a satisfactory grade, the grader will proceed with evaluating Parts B and C.

iii) Submission and Evaluation Process

3.6.4.2 State Diagrams

https://online.visual-paradigm.com/share.jsp?id=323434323430392d34
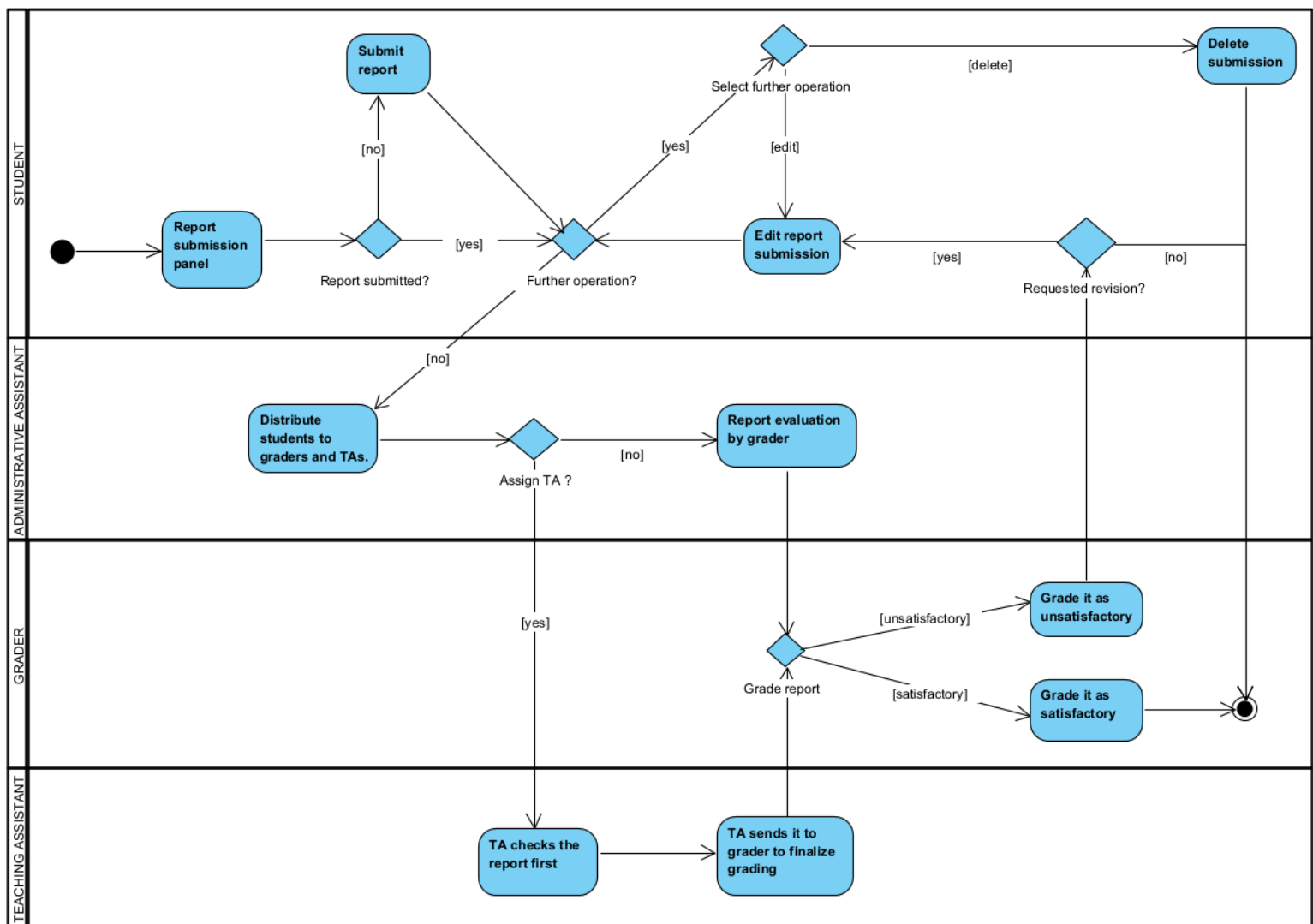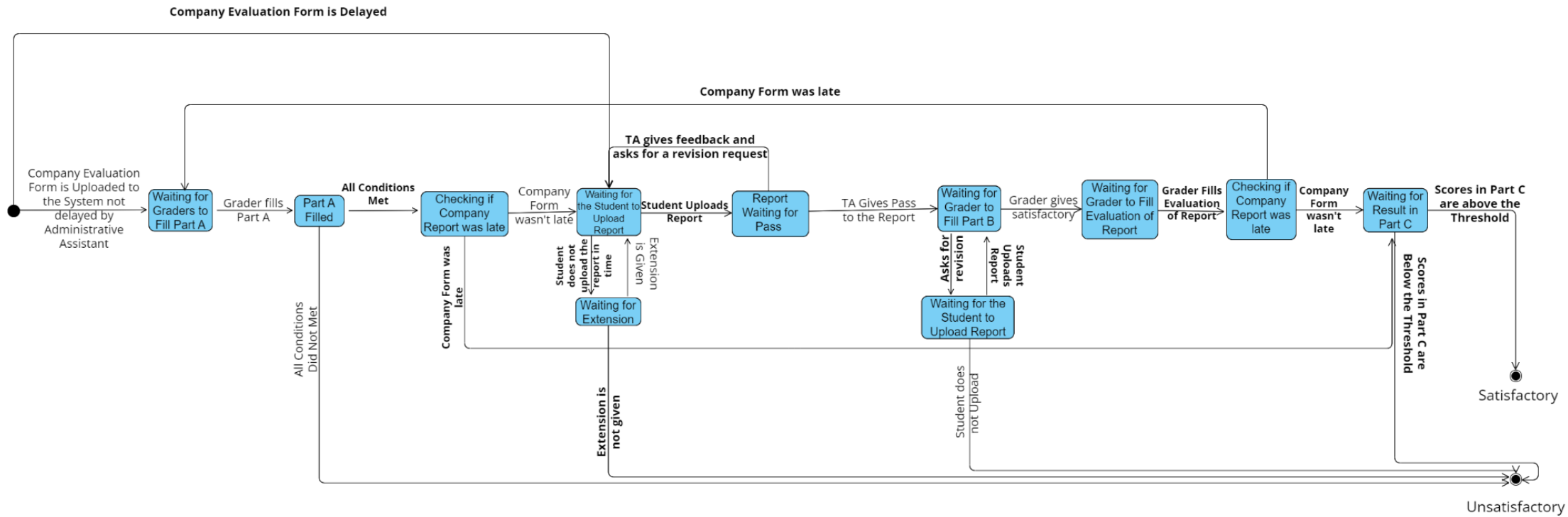
If the company evaluation form is uploaded to the system by administrative assistants on time, the report and grade form waits for graders to fill part A. Grader fills part A. If all the conditions in part A are met the student directly passes part A, else the student fails part A. Also, if the company result was late (part B was done before part A), the next procedure step is part C. If the company result was not late (part B was not done before part A) and after completing part A successfully, the system waits for the student to upload a report for Part B within the given deadline. If the student does not upload the report until the due date, the student can wait for an extension. If the teaching assistant does not extend the due date for the report, the student directly gets an unsatisfactory grade. When the report is uploaded before the deadline, the report waits for a quality and format check by the teaching assistant to pass. If it does not fulfill the format criteria, teaching assistants can ask for revision, give feedback and wait for the student to fix the issues stated in the feedback. If a teaching assistant gives a passing grade, the grade form waits for the grader to fill part B. If the grader asks for revision, the student needs to upload the report again. If the student does not upload, the student fails directly. After the student uploads the report again and the grader gives satisfactory grade, the system checks whether company form was delayed or not again. If the company form was delayed, the next step of the procedure is part A instead of part C. If the company evaluation form is not delayed, students will be waiting for results in part C. If scores in part C are above the minimum grade (threshold) needed to pass, the report is satisfactory, otherwise it is unsatisfactory.

3.6.5 User Interface

Login page for all users

Bilkent University Internship Management System

User Login

E-mail: E-mail...

Password: Password...

Forgot password?

LOGIN

For questions and information: FAQ

Password Recovery page for all users

Bilkent University Internship Management System

Forgot Your Password?

We will send you a link to recover your account via email.

E-mail: E-mail...

Recover Password

Know your login info? →Login page

User profile page

Reports page for students

File submission pages for students

Deniz Sun

Profile
Reports
File Submission
Notifications

Upload your internship report here

Drag and Drop Files to Upload
Or
Select Files

İdil Atmaca

Profile
Reports
File Submission
Notifications

Upload your internship report here

report_İdil_Atmaca.docx

Please enter your message here

Paragraph   **B** *I*

Type your submission notes here....

Cancel   Upload

Notifications for students

Publish announcements page for graders, administrative assistants, summer training coordinators and admin

Student list and status page for graders

Name	Class	Part	Status
İdil Atmaca	CS299	A	Waiting Company Form
Deniz Sun	CS299	B	Feedback is requested
Berkay Akkuş	CS399	B	Pending feedback
Melih Güven	CS299	C	Pending evaluation form
Emre Kantaş	CS399	C	Pending evaluation form
Yusuf Özyer	CS299	A	Waiting Company Form

Reports evaluation page for graders PART A POP UP, PART C SONU İMZA

Viewing for your student: Deniz Sun

Uploaded Reports History

DenizSunReportRevision1.docx

The grade distribution of previous submission:

Grade for Part A: Satisfactory
Grade for Part B: 9/60
Grade for Part C: ?/10

Overall progress:
Unsatisfactory. Waiting for revision.

Your overall feedback for this submission

Your report is insufficient. Try to emphasize your experiences and (...)

Upload a revised version.

Progress and your feedback for this student's CS299 summer training report

Part A
Status: Company form uploaded.

Check student's grade here: Company Evaluation Form   Enter grade: 8/10

Company has approved the student's training with a grade of 8.

Part B
Status: Revision Required

Grade: -/60

The report is insufficient in these parts:(...)
Please revise and resubmit it.

Part C
Status: Under Evaluation

Enter grade: -/10

Waiting for revision.

Student list page for administrative assistants

Statistics page for administrative assistants, summer training coordinators and graders

Manage users page for administrative assistants and admin

Reassign graders page for administrative assistants and admin

Add users page for administrative assistants and admin

Remove users page for administrative assistants and admin

Report checking and feedback page for teaching assistants

Grader progress page for administrative assistant, summer training coordinators and admin

Company form evaluation pages for administrative assistants

Edit User for Admin/Administrative Assistant
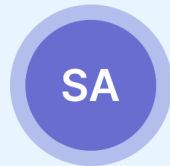

User Profile for Graders

Account selection for instructors with 2 roles

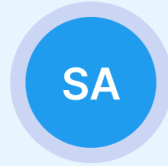WELCOME, *SELİM AKSOY*

PLEASE CHOOSE A ROLE TO CONTINUE

SA

SA

GRADER   **COORDINATOR**