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Traineeship Application

Sprint Report

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## VERSIONS HISTORY

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Date	Version	Description	Author
10/3/2025	0.1	Created use cases/Use Case diagram	Chalaidopoulos M.
16/4/2025	0.2	Addition of the package diagram	Chalaidopoulos M.
20/5/2025	1.0	Addition of the rest of the design	Chalaidopoulos M.
24/5/2025	1.1	Final Changes	Hliakhs Hlias

## 1 Introduction

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This document provides information concerning the project.

### 1.1 Purpose

The purpose of the report is to give a rough schedule and the concept behind the creation of the traineeship manager web app, it also contains information about its design

### 1.2 Document Structure

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The rest of this document is structured as follows. Section 2 describes out Scrum team and specifies this Sprint's backlog. Section 3 specifies the main design concepts for this release of the project.

## 2 Scrum team and Sprint Backlog

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### 2.1 Scrum team

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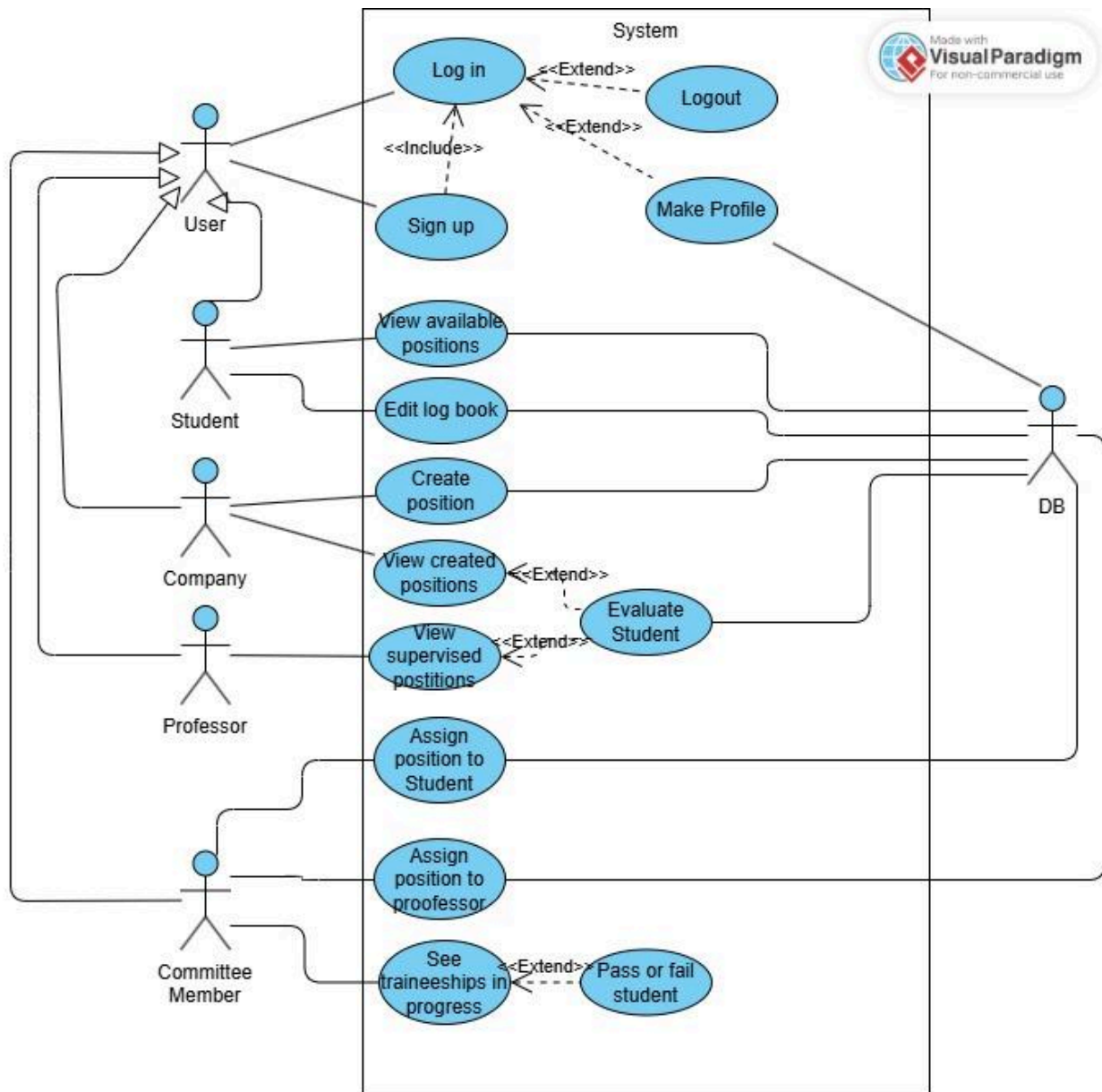
<b>Product Owner</b>	—
<b>Scrum Master</b>	Chalaidopoulos Miltiadhs
<b>Development Team</b>	Chalaidopoulos Miltiadhs, Hliakhs Hlias

### 2.2 Sprints

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Sprint No	Begin Date	End Date	Number of weeks	User stories US#
1	27/2/2025	3/3/2025	1	None
2	8/3/2025	16/3/2025	1	1,2,3
3	10/4/2025	29/4/2025	3	4,5,6,7,8,9,10,11,12,13,14,15
4	2/5/2025	16/5/2025	2	16,17,18,19,20,21

### 3 Use Cases



### 3.1 <Use Case 1> Register

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<b>Use case ID</b>	UC01
<b>Actors</b>	Student , Company ,Professor , Committee Member
<b>Pre conditions</b>	Actor doesn't have an account already
<b>Main flow of events</b>	<ol style="list-style-type: none"><li>1. Actor Clicks on register</li><li>2. Actor gives name and password</li><li>3. Actor chooses role</li><li>4. Actors clicks on register</li><li>5. System saves the new user with encrypted password</li></ol>
<b>Alternative flow 1</b>	If there is a user with new user's username a message is shown
<b>Alternative flow 2</b>	if user does not fill a password or username a message is shown
<b>Post conditions</b>	User created an account the he can log into

### 3.2 <Use Case 2> Login

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<b>Use case ID</b>	UC02
<b>Actors</b>	Student , Company ,Professor , Committee Member
<b>Pre conditions</b>	Actor already has an account
<b>Main flow of events</b>	<ol style="list-style-type: none"><li>1. Actor Clicks on register</li><li>2. Actor gives name and password</li><li>3. Actors clicks on register</li><li>4. Actor is redirected to his dashboard</li></ol>
<b>Alternative flow 1</b>	If password or username is incorrect a message is shown
<b>Alternative flow 2</b>	if user does not fill password or username a message is shown
<b>Post conditions</b>	User is browsing on the right dashboard

### 3.3 <Use Case 3> Logout

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<b>Use case ID</b>	UC03
<b>Actors</b>	Student , Company ,Professor , Committee Member
<b>Pre conditions</b>	Actor is already logged in
<b>Main flow of events</b>	<ol style="list-style-type: none"><li>1. Actor Clicks on logout</li><li>2. User exits his account</li></ol>
<b>Post conditions</b>	User is redirected to the main menu

### 3.4 <Use Case 4> Edit Profile

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<b>Use case ID</b>	UC04
<b>Actors</b>	Student , Company ,Professor
<b>Pre conditions</b>	User is logged into an account
<b>Main flow of events</b>	<ol style="list-style-type: none"><li>1. Actor Clicks on edit profile</li><li>2. Actor can edit the details of his profile according to what type of user he is</li><li>3. Actor clicks on Save</li><li>4. Systems saves actors profile and overrides previous data if they existed</li><li>5. User gets redirected back to the dashboard</li></ol>
<b>Alternative flow 1</b>	If the user doesn't want to save new data he can click back and go back to the dashboard
<b>Post conditions</b>	User created an account the he can log into

### 3.5 <Use Case 5> View Available Positions

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<b>Use case ID</b>	UC05
<b>Actors</b>	Student
<b>Pre conditions</b>	Actor is connected as a student

<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. Student Clicks on “View available positions”</li> <li>2. User gets redirected to a site with a list of the positions that are not taken</li> </ol>
<b>Alternative flow 1</b>	If there are no available positions an empty list is shown to the student
<b>Post conditions</b>	Student has seen the available traineeship positions

### 3.6 <Use Case 6> Update Logbook

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<b>Use case ID</b>	UC06
<b>Actors</b>	Student
<b>Pre conditions</b>	Student is already taking place in an traineeship
<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. Actor clicks on View log book</li> <li>2. Actor writes his progress</li> <li>3. Actor clicks on save</li> <li>4. The system updates the logbook for this traineeship</li> <li>5. The system displays the logbook as well as the date each entry was written</li> </ol>
<b>Alternative flow 1</b>	If the Student does not have a traineeship assigned to him a message is shown and he is unable to edit the log book
<b>Alternative flow 2</b>	If the user chooses to, he can delete the final entry or all the entries from his log book by pressing a button.
<b>Post conditions</b>	System has recorded the progress of said student

### 3.7 <Use Case 7> Set Internship Intention

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<b>Use case ID</b>	UC07
<b>Actors</b>	Student
<b>Pre conditions</b>	Actor is logged in as a student
<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. The student clicks on his profile</li> <li>2. The student clicks on the checkbox looking for traineeship</li> </ol>

	3. The student clicks on save 4. System updates the correct field with students choice
<b>Post conditions</b>	The looking for traineeship field is updated

### 3.8 <Use Case 8> Create Position

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<b>Use case ID</b>	UC08
<b>Actors</b>	Company
<b>Pre conditions</b>	Actor is logged in as a company
<b>Main flow of events</b>	1. Actor Clicks on add a new position 2. Actor enters information about the new position 3. Actor clicks on save 4. the System creates a new traineeship position with company's specifications
<b>Post conditions</b>	A new traineeship position is added to the database

### 3.9 <Use Case 9> View Created Positions

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<b>Use case ID</b>	UC09
<b>Actors</b>	Company
<b>Pre conditions</b>	Actor is logged in as a company
<b>Main flow of events</b>	1. Actor Clicks on "View available position" or "View assigned positions" 2. User gets redirected to a new web page with a list of the traineeship positions of his company <div style="margin-left: 40px;"> 2.1. If he clicked on View available position the list contains the positions of his company that are yet to be assigned to a Student  2.2. If he clicked on View assigned positions the list contains the positions that are already assigned to a Student </div>
<b>Post conditions</b>	The company can see the positions that they have created

### 3.10 <Use Case 10> Evaluate Student

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<b>Use case ID</b>	UC10
<b>Actors</b>	Company ,Professor
<b>Pre conditions</b>	A student is already assigned to a position
<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. Actor clicks on evaluate in a traineeship position from the list of traineeships</li> <li>2. Actor fills in the form of the evaluation</li> <li>3. Actor clicks on save</li> <li>4. The evaluation is saved by the system</li> </ol>
<b>Post conditions</b>	An evaluation for the student is created and saved

### 3.11 <Use Case 11> View Supervised Positions

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<b>Use case ID</b>	UC11
<b>Actors</b>	Professor
<b>Pre conditions</b>	Actor is logged in as a Professor
<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. Actor Clicks on View supervised positions</li> <li>2. The list of supervised positions is shown to the professor</li> </ol>
<b>Alternative flow 1</b>	If the professor has no supervised positions assigned to him an empty list is shown
<b>Post conditions</b>	The professor can see the traineeship positions that he supervises

### 3.12 <Use Case 12> Assign Position to Student

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<b>Use case ID</b>	UC12
<b>Actors</b>	Committee Member
<b>Pre conditions</b>	Actor is logged in as a traineeship committee member
<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. Actor Clicks on “Show students looking for traineeship”</li> <li>2. The system redirects him to a web page with all students looking for traineeship</li> <li>3. Actor clicks on “recommended positions” for a specific student</li> </ol>

	<ol style="list-style-type: none"> <li>4. The system redirects him to a page with traineeships positions that the student can be assigned to. The positions are sorted with the most suitable at the top and the list suitable at the bottom</li> <li>5. Actor chooses one of the positions</li> <li>6. The system does the necessary changes so that the position is assigned to the student</li> </ol>
<b>Post conditions</b>	The student has a traineeship position assigned to him

### 3.13 <Use Case 13> Assign Professor To Traineeship

<b>Use case ID</b>	UC13
<b>Actors</b>	Committee Member
<b>Pre conditions</b>	Actor is logged in as a traineeship committee member
<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. Actor Clicks on “Assign professors”</li> <li>2. The system redirects him to a web page with all the professors</li> <li>3. Actor clicks on “Find Traineeship” for a specific professor</li> <li>4. The system redirects him to a page with traineeship positions that the professor can supervise. The positions are sorted with the most suitable at the top and the list suitable at the bottom</li> <li>5. Actor chooses one of the positions</li> <li>6. The system does the necessary changes so that the position is assigned to the professor</li> </ol>
<b>Post conditions</b>	The professor now supervises a traineeship position

### 3.14 <Use Case 14> See Traineeships in progress

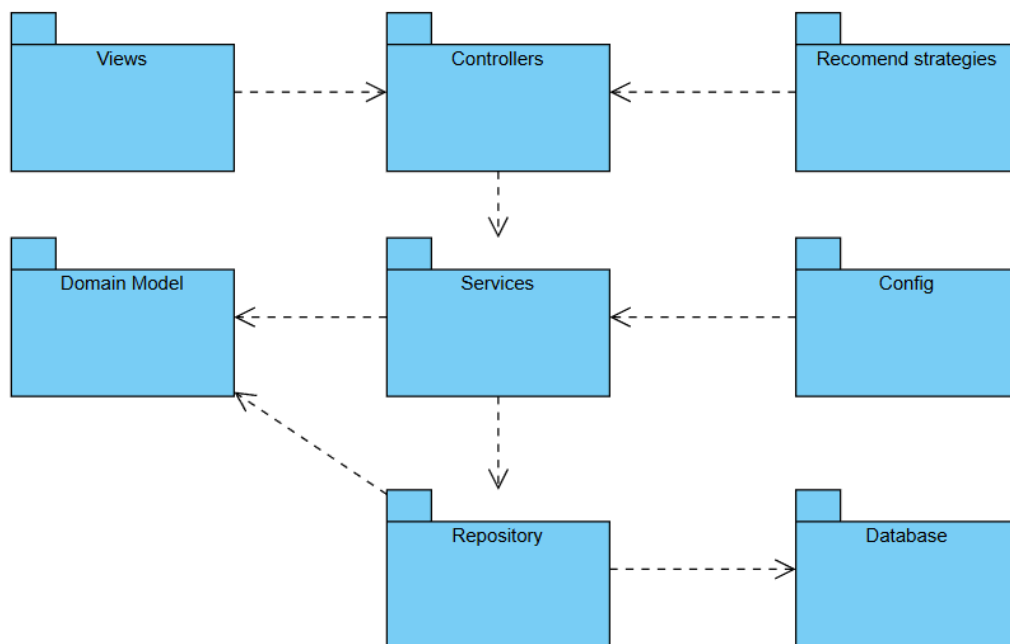
<b>Use case ID</b>	UC14
<b>Actors</b>	Committee Member
<b>Pre conditions</b>	Actor is logged in as a traineeship committee member
<b>Main flow of events</b>	<ol style="list-style-type: none"> <li>1. Actor Clicks on “show in progress traineeships”</li> <li>2. The system redirects him to a list of active traineeships</li> </ol>
<b>Post conditions</b>	User is able to see all the traineeship positions that are currently active

### 3.15 <Use Case 15> Pass or Fail Student

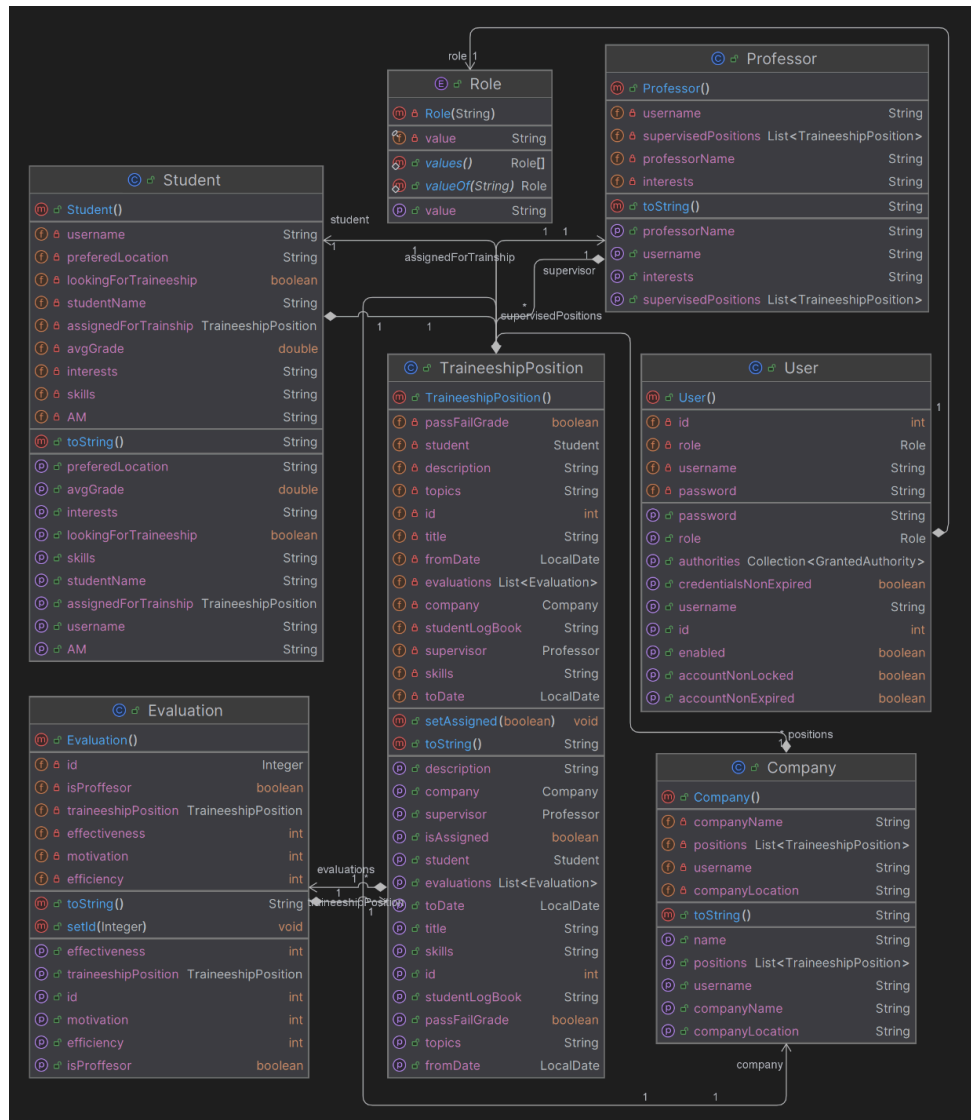
<b>Use case ID</b>	UC15
<b>Actors</b>	Committee Member
<b>Pre conditions</b>	Committee Member is at the traineeships page
<b>Main flow of events</b>	<ol style="list-style-type: none"><li>1. Actor Clicks on “more” for a specific in progress traineeship</li><li>2. The system redirects him to a new page with more details about the traineeship</li><li>3. The Committee Member sees the evaluations of the student and his logbook and determines whether or not he passed or failed by clicking on one of the checkboxes</li><li>4. Users clicks save</li><li>5. The system saves the grade of the student and informs him about it</li></ol>
<b>Post conditions</b>	The traineeship has been completed

## 4 Design

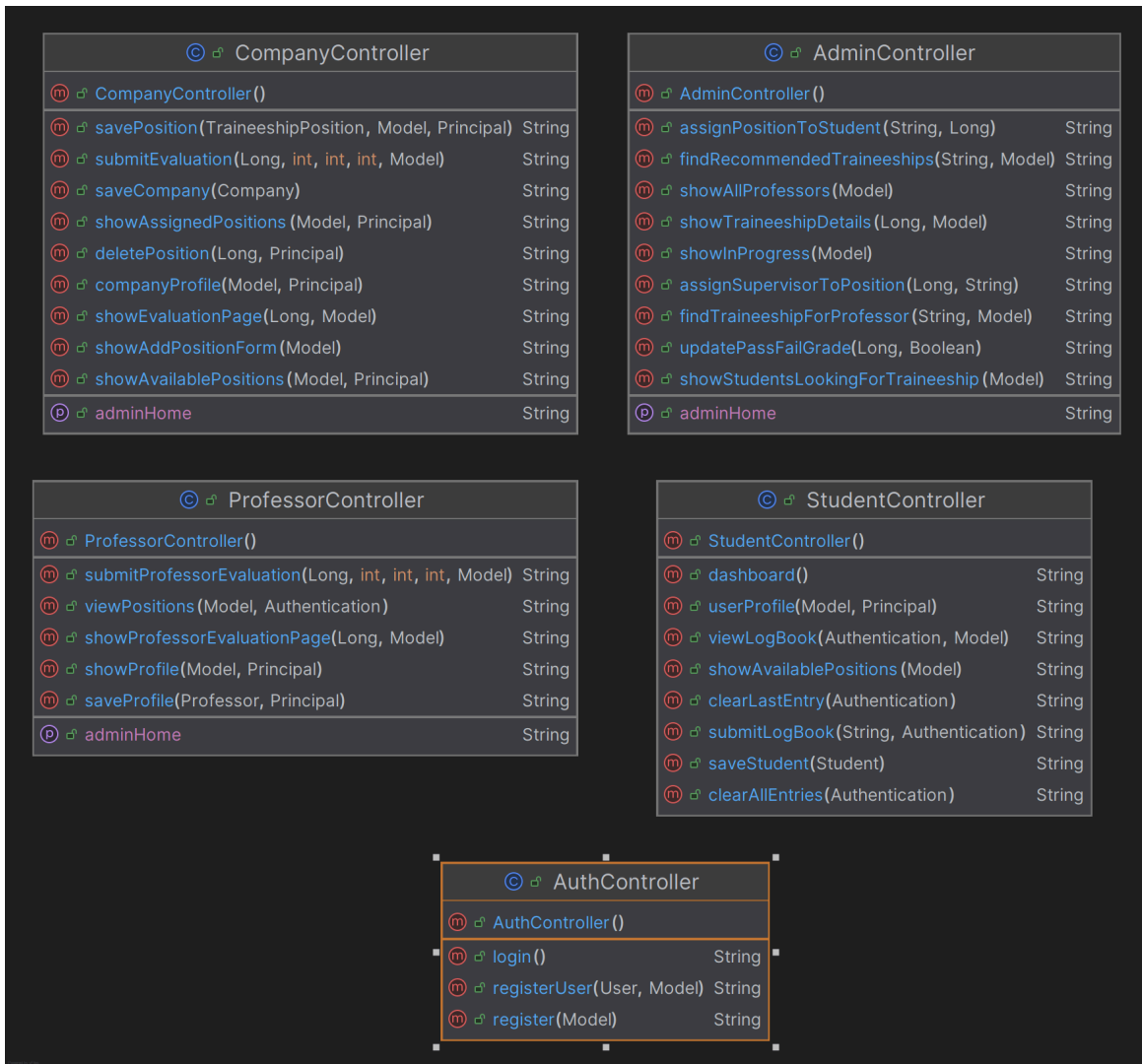
### 4.1 Architecture - Package diagram



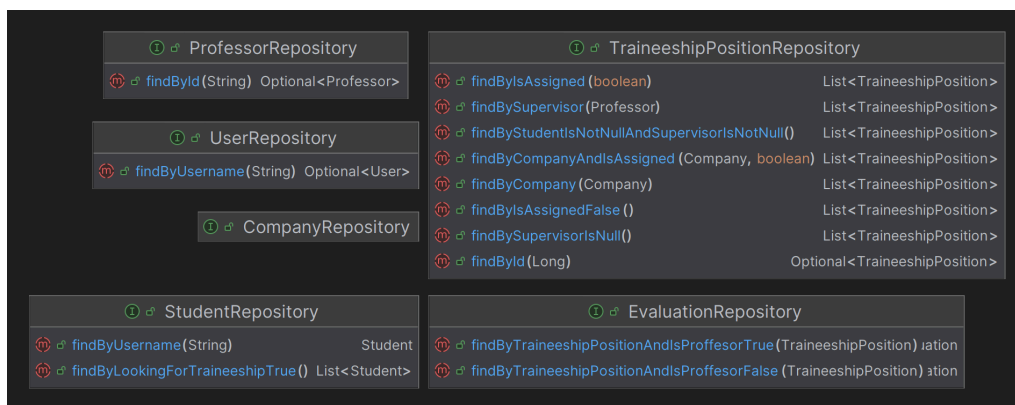
## 4.2 Design



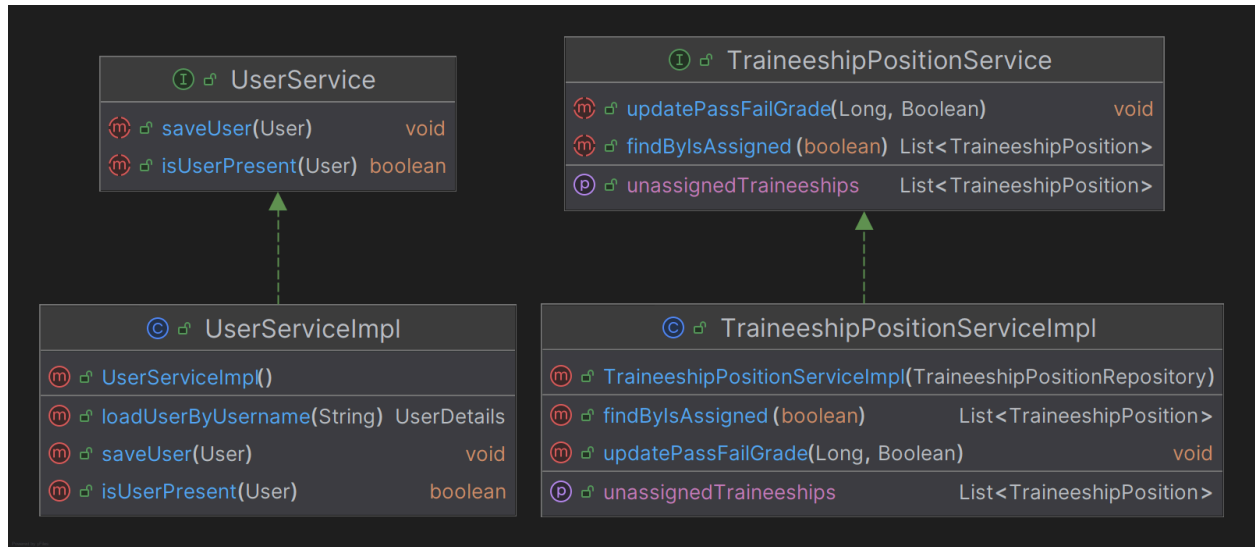
Domain model package diagram



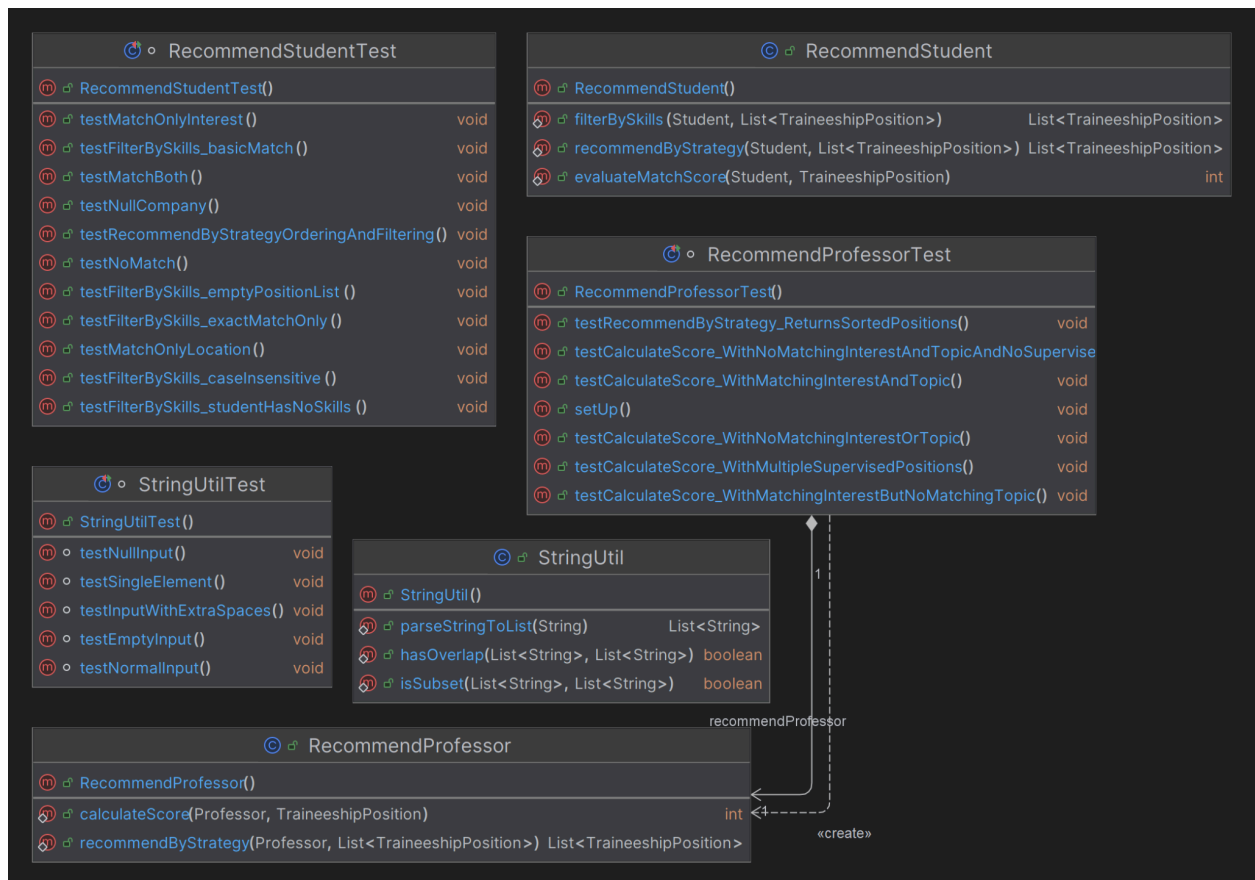
### Controllers package



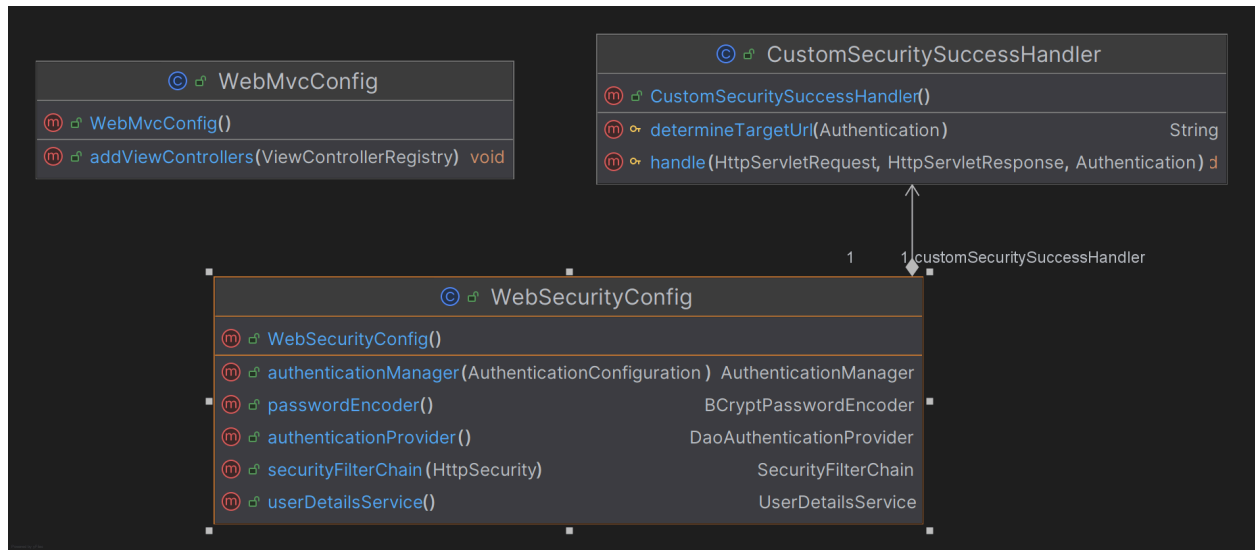
### Repository Package



Service package



recomend strategies package



Config Package

Class Name: Student	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Creating student Objects</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>TraineeshipPosition</li> </ul>

Class Name: Professor	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Creating professor objects</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>TraineeshipPosition</li> </ul>

Class Name: Company	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Creating company objects</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>TraineeshipPosition</li> </ul>

Class Name: User	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Creates different types of users</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>Role</li> </ul>

Class Name: Traineeship Position	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Creates traineeship positions for the students</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>Professor</li> <li>Company</li> <li>Student</li> <li>Evaluation</li> </ul>

Class Name: StudentRepository	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Executes queries for Student</li> <li>Finds students by username</li> <li>finds students who look for traineeship</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>Student</li> <li>Jpa Repository</li> </ul>

Class Name: CompanyRepository	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Executes queries for company</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>Company</li> <li>Jpa Repository</li> </ul>

Class Name: ProfessorRepository	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Executes queries for Professor</li> <li>Finds professor by username</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>Professor</li> <li>Jpa Repository</li> </ul>

Class Name: TraineeshipPositionRepository	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>Executes queries for Trainee. position</li> <li>Searches based on Company</li> <li>Searches based on Supervisor</li> <li>Searches based on Id</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>TraineeshipPosition</li> <li>Company</li> <li>Professor</li> <li>Student</li> </ul>



	<ul style="list-style-type: none"> <li>▪ JpaRepository</li> </ul>
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<b>Class Name: UserRepository</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Executes queries for user</li> <li>▪ Finds users by username</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ User</li> <li>▪ Jpa Repository</li> </ul>

<b>Class Name: EvaluationRepository</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Executes queries for Evaluation</li> <li>▪ Find's Evaluations based on if they were done by a professor</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ Evaluation</li> <li>▪ TraineeshipPosition</li> <li>▪ JpaRepository</li> </ul>

<b>Class Name: StudentController</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Show's students dashboard</li> <li>▪ Edit's student profile</li> <li>▪ Shows available positions</li> <li>▪ Edit's student logbook</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ StudentRepository</li> <li>▪ TraineeshipPositionRepository</li> <li>▪ Html pages from /templates/user</li> </ul>

<b>Class Name: ProfessorController</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Show's professors dashboard</li> <li>▪ Edit's professor's profile</li> <li>▪ Show's supervising positions</li> <li>▪ Makes Position's evaluations</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ ProfessorRepository</li> <li>▪ TraineeshipPositionRepository</li> <li>▪ EvaluationRepository</li> <li>▪ Html pages from /templates/professor</li> </ul>

<b>Class Name: CompanyController</b>	
<b>Responsibilities:</b>	<b>Collaborations:</b>

<ul style="list-style-type: none"> <li>▪ Show's Company's dashboard</li> <li>▪ Edit's company's profile</li> <li>▪ Makes new Traineeship positions</li> <li>▪ Show's Company's positions</li> <li>▪ Deletes positions</li> <li>▪ Evaluates Students</li> </ul>	<ul style="list-style-type: none"> <li>▪ CompanyRepository</li> <li>▪ TraineeshipPositionRepository</li> <li>▪ EvaluationRepository</li> <li>▪ Html pages from /templates/company</li> </ul>
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<b>Class Name: AdminController</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Shows committee's dashboard</li> <li>▪ Show's students looking for traineeship</li> <li>▪ Assigns students to traineeship</li> <li>▪ Assigns supervising professors</li> <li>▪ Show's ongoing traineeships</li> <li>▪ Let's committee grade a student</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ StudentRepository</li> <li>▪ ProfessorRepository</li> <li>▪ TraineeshipPositionRepository</li> <li>▪ TraineeshipPositionService</li> <li>▪ RecommendStudent</li> <li>▪ RecommendProfessor</li> <li>▪ Html pages in /template/admin</li> </ul>

<b>Class Name: AuthController</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Show's login page</li> <li>▪ Show's sign up page</li> <li>▪ Saves new users</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ UserService</li> <li>▪ User</li> <li>▪ Html pages from /templates/auth</li> </ul>

<b>Class Name: TraineeshipPositionServiceImpl</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Implements TraineeshipPositionService</li> <li>▪ Finds unassigned traineeships</li> <li>▪ Updates grade</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ TraineeshipPositionRepository</li> <li>▪ TraineeshipPosition</li> </ul>

Class Name: TraineeshipPositionService (interface)	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Interface of TraineeshipPositionServiceImpl</li> <li>▪ Finds unassigned traineeships</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ TraineeshipPosition</li> <li>▪ TraineeshipPositionServiceImpl</li> </ul>

Class Name: UserServiceImpl	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Saves new users with an encrypted password</li> <li>▪ Authenticates user with spring security</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ UserRepository</li> <li>▪ BCryptPasswordEncoder</li> <li>▪ UserService</li> <li>▪ User</li> </ul>

Class Name: UserService (interface)	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Interface of UserServiceImpl</li> <li>▪ Saves User</li> <li>▪ Checks if User is present</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ UserServiceImpl</li> <li>▪ User</li> </ul>

Class Name: StringUtil	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Converts String to list</li> <li>▪ Checks if one list contains the other</li> <li>▪ Checks for list overlap</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ None</li> </ul>

Class Name: RecommendStudent	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Filters positions by skills</li> <li>▪ Evaluates students position fitness</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ Student</li> <li>▪ TraineeshipPosition</li> </ul>

<ul style="list-style-type: none"> <li>▪ Recommends a selection strategy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Company</li> <li>▪ StringUtil</li> </ul>
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<b>Class Name: RecommendProfessor</b>	
<b>Responsibilities:</b> <ul style="list-style-type: none"> <li>▪ Evaluates supervisors position fitness</li> <li>▪ Recommends a selection strategy</li> </ul>	<b>Collaborations:</b> <ul style="list-style-type: none"> <li>▪ Professor</li> <li>▪ TraineeshipPosition</li> <li>▪ StringUtil</li> </ul>