Requirements engineering - Group 15a

Defining the domain structure

We have decided to split our domain into the following subdomains:

User
- Lecturer
- Student
    - Candidate TA
    - TA

Course
Management
- Admin access

Authentication

Functional requirements

Must Have

As a user, I want to be able to authenticate myself with a NetID and a password.
As a student, I can browse through all the courses I have passed.
As a lecturer, I can browse through my courses.
As a student, I want to be able to candidate myself as a TA for a course I have passed.
As a lecturer, I want to be able to examine the data of candidate TA's such as name, NetId, grades and previous TA experience including number of times they have TAed before.
As a lecturer, I want to be able to select TAs for my courses.

As a student, I want to receive a TA working contract containing the course name, total working hours, and additional information regarding main duties when selected to be a TA.

Should Have

As a TA, I want to declare the hours I work.
As a TA, I cannot declare more hours than the contract states.
As a lecturer, I want to approve the declared hours of a TA.
As a lecturer, I want to see the amount of TAs necessary for a course.
As a student, I want to be notified about the selection results when they login to the system.
As a TA, I should be able to sign up for at most 3 courses per quarter to keep my workload realistic.

As a lecturer, I want recommendations for a list of candidate TA's to choose from the candidate pool.
As a lecturer, I want to be able to rate the TA's that have worked for my course.
As a lecturer, I want to
be able to see the average rating received for previous experiences.

Could Have

As a student, I can candidate myself no later than three weeks before the start of the course.
As a lecturer, I should not be able to see the list of candidate TAs for courses that I'm not a lecturer of.
As a student, I want to be able to withdraw myself as a candidate before the lecturer has proceeded to the selection procedures.
As a student, I want to be able to see the average total worked hours of previous TAs in order to gauge the workload for a specific course.

As an admin, I want to be able to enter a course into the system for TA hiring.

Won't Have

The system will have a Graphical User Interface.

Non-functional requirements

The system shall be written in Java 11.
The system shall be built using Spring Boot(Spring Framework) and Gradle and have no GUI.
The system shall handle all interactions through the RESTful APIs.
The system shall be built in a way to be easily extendable and allow for integration with other systems.
User passwords shall be stored safely using Spring Security.
The system will be implemented using the microservices architecture.
The system will be built to be scalable and easily extendable.