



Thesis Manager

Requirement Document

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1. Introduction

This section will give an overview of requirement engineering document. Also, this document aims to describe and provide a list of abbreviations and definitions.

1.1 Purpose

This document aims to describe all functional and nonfunctional and requirements of the Thesis Management System. This is the first version of the Requirement Engineering document and this will be used as a reference for design and development ahead. This document will also be viewed by the development team, currently company staff and other stakeholders of the system. This is used to make sure all the stakeholders of the system will have a complete and clear understanding of all requirements of this system.

1.2 Scope

The ‘Thesis Manager’ is a web-based system that helps students, supervisors and coordinators to manage thesis activities at Linnaeus University for the department of Computer Science. The system does NOT assist in the creation of thesis. The application will digitalize the activities related to submission and reviewing the thesis and makes the processes involved more clear.

1.3 Definitions, acronyms, and abbreviations

- LNU: Linnaeus University.
- CS: Computer Science.
- F-U: Functional requirements of the user.
- F-ST: Functional requirements of the student.
- F-SU: Functional requirements of the supervisor.
- F-C: Functional requirements of the coordinator.
- F-R: Functional requirements of the reader.
- F-O: Functional requirements of the opponent.
- F-A: Functional requirements of the system administrator.
- F-GV: Functional requirements of the government.
- N-U: Non-functional requirements of the user.
- N-ST: Non-functional requirements of the student.
- N-SU: Non-functional requirements of the supervisor.
- N-C: Non-functional requirements of the coordinator.
- N-F: Non-functional requirements of all feedbacks.
- N-O: Non-functional requirements of the opponent.
- N-A: Non-functional requirements of the system administrator.
- N-SY: Non-functional requirements of the entire system.



2. Stakeholders & Actors

2.1 Stakeholders

A stakeholder is any person or group that affects or is affected by the project. These are listed in the table below.

Name	Description	Responsibility
Swedish Government (Ministry of Education and Research)	Board of the government that manages educative legislation.	Provide legislation that standardizes the educative system in Sweden.
LNU Board	Board of members in charge of the university.	Are appointed by the government. Responsible of the university faculties.
LNU Faculty of Technology	Board of members in charge of the Faculty of Technology.	Responsible of the university departments.
LNU CS Department	Board of members in charge of the courses and programs in computer science.	Responsible for the university courses and programs.
LNU CS Thesis coordinator	Head of the final thesis course project.	Coordinate, manage and grade the thesis projects.
LNU CS Thesis supervisor	Member of the CS department that follows a group of students during their thesis course.	To look after, inspect and give feedback to the group of students under his supervision.
LNU CS senior students	Students with a passing grade in 90hp in CS.	To complete the assignment required to pass the thesis course.
System administrator	LNU staff working in the administration office.	Managing users in the system.
Software engineer	Company technical staff.	Developing and maintaining the system.



2.2 Actors

An actor is a end-user of the system. These are shown in the table below.

Name	Description
Admin	A system administrator. Can add/remove users and assign roles to users.
Coordinator	Coordinates the whole thesis project and assigns grades to theses.
Supervisor	Supervises a set of students by providing feedback on their writings.
Student	A student who is writing a thesis.
Reader	A reader reads a number of theses submitted by students, and provides feedback to these.
Opponent	An opponent reads a students thesis and provides constructive criticism.



3. Preliminary Requirements

In this section, we will show a list of preliminary requirements produced by the team in the first research of the project. This requirement list will be analysed and may change and be refined during the process of development.

The requirements are organized by stakeholders.

3.1 Functional Requirements

User

F-U1. A user must be able to login into the system.

F-U2. A user must be able to log out of the system.

Student

F-ST1. A student must be able to submit a project description.

F-ST2. A student must receive a pass or fail grade for any project description.

F-ST3. After receiving a fail grade for the project description and before the deadline for the project description, a student must be able to submit another project description.

F-ST4. After receiving a passing grade for a project description, a student must be able to re-submit a project plan before the deadline for the project plan.

F-ST5. After receiving a passing grade for a project description, a student must be able to suggest a supervisor before the deadline for the project plan.

F-ST6. After receiving a fail grade for the project plan and before the deadline for the project plan, a student must be able to submit another project plan.

F-ST7. At the deadline of the project plan, if a student has not received a passing grade for the project plan, he/she can only see an exception message for the project plan and cannot access the functionalities of the system anymore.

F-ST8. After receiving a passing grade for a project plan, a student can submit his/her report during the permitted time slot.

F-ST9. A student must be able to view any submitted feedback on his/her report.

F-ST10. A student must be able to submit a final report during the permitted time slot.

Supervisor

F-SU1. A supervisor must be able to view the list of supervision requests from students each accompanied by a project plan.

F-SU2. A supervisor must be able to accept or reject a supervision request.

F-SU3. A supervisor must be able to give feedback to a project plan.

F-SU4. A supervisor must be able to view the evaluation of a project plan by the coordinator and, if passed, submit a final confirmation.

F-SU5. A supervisor must be able to view her students' reports and submit her assessment on them.

Coordinator

F-C1. A coordinator must be able to set deadlines for submitting project description, project plan, report, final report, bidding for reports by readers, feedback for report by readers, final evaluation for final report by readers, feedback for project plan by



supervisor, confirmation of supervision by supervisors, project report assessment by supervisors and feedback for report by opponents.

F-C2. A coordinator must be able to extend any previously set deadline.

F-C3. A coordinator must be able to assign Fail or Pass grades to project descriptions.

F-C4. A coordinator must see a list of all submitted project plans and their status: 1. Whether or not their requested supervisor has submitted feedback on them. 2. Whether or not he/she has confirmed the supervision.

F-C5. For any submitted project plan that has received feedback and an accepted answer from the respective supervisor, the coordinator must be able to submit a Pass or Fail grade.

F-C6. A coordinator must see a list of readers who have bid for a report and be able to accept or reject each bid.

F-C7. A coordinator must see a list of people who can be an opponent for a project. He/she must be able to assign opponents to any report that has been assigned readers.

F-C8. A coordinator must see a list of reports that have received final evaluation and be able to assign a grade to them.

Reader

F-R1. A reader must see a list of reports and be able to bid for as many of them as desired.

F-R2. A reader must see a list of reports assigned to him/her and be able to submit feedback before the deadline.

F-R3. A reader must see a list of final reports assigned to him/her and be able to submit a final evaluation before the deadline.

Opponent

F-O1. An opponent must see a list of reports assigned to him/her and be able to submit feedback for them before the deadline.

System Administrator

F-A1. A system administrator must be able to add new users to the system.

F-A2. A system administrator must be able to assign the role to users.

Government

F-GV1. The system has to follow the actual educative legislation.



3.2 Non-Functional Requirements

User

N-U1. A user will be automatically logged out if inactive for 30 minutes.

Student

N-ST1. A student can submit a Project Description only once per attempt.

N-ST2. A student should be able to submit a Project Description before the deadline.

N-ST3. A student can only submit a project description if there is not already a project description from that student waiting for a grade.

N-ST4. A student can not submit another project description after receiving a passing grade for a previous project description.

N-ST5. A student can only submit files in “zip” or pdf formats.

N-ST6. A student can only submit a project plan after receiving a passing grade on the project description.

N-ST7. After receiving a passing grade for a project description, a student must be able to suggest a supervisor before the deadline for the project plan.

N-ST8. A student can only submit a report before the deadline.

N-ST9. A student can only submit a report once.

N-ST10. A student can only submit a report after receiving a passing grade on the project plan.

N-ST11. A student can only submit a final report before the deadline.

~~**N-ST12.** A student can only submit a final report once.~~

~~**N-ST13.** A student cannot submit a final report before receiving feedback from the supervisor.~~

~~**N-ST14.** A student cannot submit a final report before receiving feedback from the readers.~~

~~**N-ST15.** A student cannot submit a final report before receiving feedback from the opponent.~~ Requirements modified.

Supervisor

N-SU1. A supervisor must be able to confirm the thesis proposal if it received a pass result.

N-SU2. A supervisor must be able to accept or reject a supervision request.

Coordinator

N-C1. The status that the coordinator sees of the submitted project plans' should include the supervisors' feedbacks and the supervision confirmation.

N-C2. The grade on the project plan must be a pass or fail grade.

N-C3. The coordinator can grade the project plan after it received positive feedback from a supervisor.

N-C4. The reply on the bid can be accepted or rejected.

N-C5. The report should have readers before assigning opponents.

N-C6. The grades on the final reports must be on the range from A to F.

Functional



N-F1. The feedback on the reports should be sent before the deadline.

N-F2. The final evaluation of the final reports should be sent before the deadline.

Opponent

N-O1. The feedback on the reports should be sent before the deadline.

System Administrator

N-A1. The roles that the system administrator can assign are student, supervisor, coordinator, opponent and reader.

System

N-SY1. The system should be testable.

N-SY2. The system must be a web application.

N-SY3. The system back-end must be created in Java.



4. Requirements Analysis

In order to analyse the requirements, we investigated the following questions for each requirement:

1. Premature design; does the requirement include a premature design or implementation information?
2. Combined requirements; could the description of a requirement be broken down into several different requirements?
3. Unnecessary requirements; is the requirement 'gold plating'? That is a cosmetic addition to the system which is not really necessary.
4. Use of non-standard hardware; does the requirement mean that non-standard hardware or software must be used?
5. Conformance with business goals; is the requirement consistent with the business goals defined in the introduction to the requirements document?
6. Requirements ambiguity; is the requirement ambiguous, i.e., could it be read in different ways by different people?
7. Requirements realism; is the requirement realistic given the technology which will be used to implement the system?
8. Requirements testability; is the requirement testable, that is, is it stated in such a way that test engineers can derive a test which can show if the system meets that requirement?
9. Requirement categorization; is the requirement categorized correctly?

The objective of this section is to improve the requirements by studying them in deep. The information gathered in this research, that is shown in the matrix below, will be used to create new and refined requirements.



4.1 Requirement analysis table

The result of the requirement analysis is shown in the table below.

Code	Requirements Questions								
	1	2	3	4	5	6	7	8	9
F-U1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-U2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-ST1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-ST2	Ok	Fail	Fail	Ok	Ok	Ok	Ok	Ok	Ok
F-ST3	Ok	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Fail
F-ST4	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-ST5	Ok	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Fail
F-ST6	Ok	Ok	Fail	Ok	Fail	Ok	Ok	Ok	Fail
F-ST7	Ok	Fail	Fail	Ok	Fail	Fail	Ok	Ok	Fail
F-ST8	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-ST9	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-ST10	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-SU1	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-SU2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-SU3	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-SU4	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-SU5	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-C1	Ok	Ok	Ok	Ok	Ok	Fail	Ok	Ok	Ok
F-C2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-C3	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-C4	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-C5	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-C6	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail



F-C7	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-C8	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-R1	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-R2	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-R3	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-O1	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok	Fail
F-A1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-A2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
F-GV1	Ok	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok
N-U1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST3	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST4	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST5	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST6	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST7	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST8	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST9	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST10	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST11	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST12	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST13	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST14	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-ST15	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-SU1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-SU2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok



N-C1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-C2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-C3	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-C4	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-C5	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-C6	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-F1	Ok	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok
N-F2	Ok	Ok	Fail	Ok	Ok	Ok	Ok	Ok	Ok
N-O1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-A1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-SY1	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-SY2	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
N-SY3	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok



5. Refined requirements

This is the list of requirements produced after going through requirements analysis. During the development process some requirements were modified or ignored due to modifications. The requirements that will be ignored will be marked with a strike but not deleted from this list.

5.1 Functional requirements

User

F-U1. A user shall be able to login into the system.

F-U2. A user shall be able to log out of the system.

Student

F-ST1. A student shall be able to submit a project description.

F-ST2. A student shall be able to view the grade on the project description.

F-ST3. A student shall be able to re-submit the project description.

F-ST4. A student shall be able to submit a project plan.

F-ST5. A student shall be able to re-submit the project plan.

F-ST6. A student shall be able to submit a supervisor request.

F-ST7. A student shall be able to submit a report.

F-ST8. A student shall be able to view any submitted feedback on the project description.

F-ST9. A student shall be able to submit a final report.

F-ST10. A student shall be able to view the grade of the final report.

F-ST11. A student shall be able to view any submitted feedback on the project plan.

F-ST12. A student shall be able to view any submitted feedback on the report.

Supervisor

F-SU1. A supervisor shall be able to view incoming supervision requests from students.

F-SU2. A supervisor shall be able to view the project description submitted by a student requesting supervision.

F-SU3. A supervisor shall be able to reply to a supervision request.

F-SU4. A supervisor shall be able to give feedback to a project plan.

F-SU5. A supervisor shall be able to view the evaluation of a project plan by the coordinator.

F-SU6. A supervisor shall be able to view her students' reports.

F-SU7. A supervisor shall be able to submit her assessment on a student's report.

Coordinator

F-C1. A coordinator shall be able to set a deadline for any submission.

F-C2. A coordinator shall be able to change any deadline.

F-C3. A coordinator shall be able to see a list of all submitted project plans.

F-C4. A coordinator shall be able to see all the submitted project plans' status.

F-C5. A coordinator shall be able to submit a grade on the project plan.

F-C6. A coordinator shall be able to see a list of readers who have made a bid for a report.



F-C7. A coordinator shall be able to assign readers to reports.

F-C8. A coordinator shall be able to see a list of people who can be an opponent for a report.

F-C9. A coordinator shall be able to assign opponents to any report.

F-C10. A coordinator shall be able to see the list of the final reports that have received the final evaluation.

F-C11. A coordinator shall be able to assign a grade to a submitted final reports.

F-C12. A coordinator shall be able to assign a grade to a submitted project description.

F-C13. A coordinator shall be able to view submitted project descriptions.

F-C14. A coordinator shall be able to view submitted project plans.

F-C15. A coordinator shall be able to view submitted final reports.

F-C16. A coordinator shall be able to see a list of all submitted project description.

Reader

F-R1. A reader shall be able to see a list of reports.

F-R2. A reader shall be able to bid for as many reports as desired.

F-R3. A reader shall be able to see a list of reports assigned to him/her.

F-R4. A reader shall be able to submit feedback on the report.

F-R5. A reader shall be able to see a list of final reports assigned to him/her.

F-R6. A reader shall be able to submit a final evaluation of the final reports.

Opponent

F-O1. An opponent shall be able to see a list of reports assigned to him/her.

F-O2. An opponent shall be able to submit feedback on the reports.

Administrator

F-A1. A system administrator shall be able to add new users to the system.

F-A2. A system administrator shall be able to assign roles to users.

5.2 Non-functional requirements

User

~~N-U1. A user shall be automatically logged out if inactive for a time.~~

N-U2. A user can only log in with a matching username and password.

~~N-U3. A password can only contain alphanumeric characters.~~

~~N-U4. A username can only contain alphanumeric characters.~~

~~N-U5. A password shall contain at least 6 characters.~~

N-U6. A user can only submit files in 'zip' or 'pdf' formats. (old N-ST5)

N-U7. A user can only submit files with a maximum size of 50MB.

N-U8. A user can only submit a feedback message smaller than 10000 characters.

Student

N-ST2. A student can only submit a project description if the deadline has not passed.

N-ST3. A student can only submit a project description if there is not already a project description from that student waiting for a grade.



- N-ST4.** A student can not submit another project description after receiving a passing grade for a previous project description.
- N-ST6.** A student can only submit a project plan after receiving a passing grade on the project description.
- N-ST7.** After receiving a passing grade for the project description, a student shall be able to suggest a supervisor before the deadline for the project plan.
- N-ST8.** A student can only submit a report before the deadline.
- N-ST9.** A student can only submit a report once.
- N-ST10.** A student can only submit a report after receiving a passing grade on the project plan.
- N-ST11.** A student can only submit a final report before the deadline.
- N-ST12.** A student can only submit a final report once.
- N-ST13.** A student cannot submit a final report before receiving feedback from the supervisor.
- N-ST14.** A student cannot submit a final report before receiving feedback from the readers.
- N-ST15.** A student cannot submit a final report before receiving feedback from the opponent.
- N-ST16.** A student can only submit a project plan before the deadline.
- N-ST17.** A student can only submit one file per submission.
- N-ST18.** A student can only submit a report once.

Supervisor

- N-SU2.** A supervisor shall be able to accept or reject a supervision request.

Coordinator

- N-C1.** The status that the coordinator sees of the submitted project plans' shall include the supervisors' feedbacks and the supervision confirmation.
- N-C2.** The grade on the project plan shall be a pass or fail grade.
- ~~**N-C3.** The coordinator can only grade the project plan after it received feedback from a supervisor.~~
- ~~**N-C5.** The report shall have readers before assigning opponents.~~
- ~~**N-C6.** The grades on the final reports shall be float on the range from A to F.~~
- N-C7.** The grade of the project description shall be either pass or fail.

Non admin user

- N-O1.** The feedback on the reports shall be sent before the deadline.

Administrator

- N-A1.** The roles that the system administrator can assign are student, supervisor, coordinator, opponent and reader.

System

- N-SY1.** The system shall be testable.
- N-SY2.** The system shall be a web application.
- N-SY3.** The system back-end shall be created in Java.



Additional Requirements

Search thesis functionality for coordinator, supervisor, reader, opponent.

Search user functionality for admin.



6. Traceability Table

The traceability table shows the relationship between all requirements in the system.

Requirement	Requires	Constraints	Specifies
F-U1	F-A1		
F-U2	F-U1, F-A1		
F-ST1	F-U1		
F-ST2	F-U1, F-ST1, F-C12		
F-ST3	F-U1, F-ST1, F-C12		
F-ST4	F-U1		
F-ST5	F-U1, F-ST4, F-C5		
F-ST6	F-U1		
F-ST7	F-U1		
F-ST8	F-U1, F-ST1, F-C12		
F-ST9	F-U1		
F-ST10	F-U1, F-C11		
F-ST11	F-U1, F-SU4, F-C5		
F-ST12	F-U1, F-SU8, F-R4, F-O2		
F-SU1	F-U1, F-ST6		
F-SU2	F-U1, F-SU1, F-ST1		
F-SU3	F-U1, F-SU1		
F-SU4	F-U1, F-SU3, F-ST4		
F-SU5	F-U1, F-SU3, F-ST4, F-C5		
F-SU6	F-U1, F-SU3,		



	F-ST7		
F-SU7	F-U1, F-SU7		
F-C1	F-U1		
F-C2	F-U1, F-C1		
F-C3	F-U1, F-ST4		
F-C4	F-U1, F-C3		
F-C5	F-U1, F-ST4		
F-C6	F-U1, F-R2		
F-C7	F-U1, F-R2, F-C6		
F-C8	F-U1, F-ST7		
F-C9	F-U1, F-C8		
F-C10	F-U1, F-R6		
F-C11	F-U1, F-R6		
F-C12	F-U1, F-C13		
F-C13	F-U1, F-C16		
F-C14	F-U1, F-C3		
F-C15	F-U1, F-C10		
F-C16	F-U1, F-ST1		
F-R1	F-U1, F-ST7		
F-R2	F-U1, F-R1		
F-R3	F-U1, F-C7		
F-R4	F-U1, F-R3		
F-R5	F-U1, F-ST9, F-C7		
F-R6	F-U1, F-R5		
F-O1	F-U1, F-C9		
F-O2	F-U1, F-O1		
F-A1	F-U1		
F-A2	F-U1, F-A1		



N-U1	F-U1, F-U2		
N-U2			F-U1
N-U3		F-U1	
N-U4		F-U1	
N-U5		F-U1	
N-U6		F-ST1, F-ST3, F-ST4, F-ST5, F-ST7, F-ST9	
N-U7		F-ST1, F-ST3, F-ST4, F-ST5, F-ST7, F-ST9	
N-U8		F-ST1, F-ST3, F-ST4, F-ST5, F-ST7, F-ST9	
N-ST2		F-ST1, F-ST3	
N-ST3		F-ST1, F-ST3	
N-ST4		F-ST1, F-ST3	
N-ST6		F-ST4, F-ST5	
N-ST7			F-ST6
N-ST8		F-ST7	
N-ST9		F-ST7	
N-ST10		F-ST7	
N-ST11		F-ST9	
N-ST12		F-ST9	
N-ST13		F-ST9	
N-ST14		F-ST9	
N-ST15		F-ST9	
N-ST16		F-ST4, F-ST5	
N-ST17		F-ST1, F-ST3, F-ST4, F-ST5, F-ST7, F-ST9	



N-ST18		F-ST7	
N-SU2			F-SU3
N-C1			F-C4
N-C2			F-C5
N-C3		F-C5	
N-C5		F-C9	
N-C6			F-C11
N-C7			F-C12
N-O1		F-O2	
N-A1			F-A2
N-SY1	N/A	N/A	N/A
N-SY2	N/A	N/A	N/A
N-SY3	N/A	N/A	N/A



7. Requirement classification

7.1 Tag descriptions

Each requirement can be assigned different tags depending on its function. These tags are explained in the table below.

Tag	Classification	Description
SYS	System	Requirements that affect the entire system such as performance or reliability requirements.
UI	User interface	Requirements that are concerned with user interaction.
DB	Database	Requirements that are concerned with the data managed by the system.
SEC	Security	Requirements that are concerned with the integrity and safety of the system and data.
COM	Communications	Requirements that are concerned with the external communication facilities in the system.

7.2 Classification table

Each requirement are assigned any number of tags, as shown in the table below.

Requirement	Classification
F-U1	UI, DB, SEC
F-U2	UI, DB, SEC
F-ST1	UI, DB, SYS
F-ST2	UI, DB
F-ST3	UI, DB, SYS
F-ST4	UI, DB, SYS
F-ST5	UI, DB, SYS
F-ST6	UI, DB, SYS
F-ST7	UI, DB, SYS
F-ST8	UI, DB



F-ST9	UI, DB, SYS
F-ST10	UI, DB
F-ST11	UI, DB
F-ST12	UI, DB
F-SU1	UI, DB
F-SU2	UI, DB
F-SU3	UI, DB
F-SU4	UI, DB
F-SU5	UI, DB
F-SU6	UI, DB
F-SU7	UI, DB
F-C1	UI, DB
F-C2	UI, DB
F-C3	UI, DB
F-C4	UI, DB
F-C5	UI, DB
F-C6	UI, DB
F-C7	UI, DB
F-C8	UI, DB
F-C9	UI, DB
F-C10	UI, DB
F-C11	UI, DB
F-C12	UI, DB
F-C13	UI, DB
F-C14	UI, DB
F-C15	UI, DB
F-C16	UI, DB
F-R1	UI, DB



F-R2	UI, DB
F-R3	UI, DB
F-R4	UI, DB
F-R5	UI, DB
F-R6	UI, DB
F-O1	UI, DB
F-O2	UI, DB
F-A1	UI, DB, SYS
F-A2	UI, DB, SEC
N-U1	UI, SEC
N-U2	UI, DB, SEC
N-U3	UI, DB, SEC
N-U4	UI, DB, SEC
N-U5	UI, DB, SEC
N-U6	UI, DB, SYS, SEC
N-U7	UI, DB, SYS, SEC
N-U8	UI, DB, SYS, SEC
N-ST2	UI, DB, SYS
N-ST3	UI, DB, SYS
N-ST4	UI, DB, SYS
N-ST6	UI, DB, SYS
N-ST7	UI, DB
N-ST8	UI, DB, SYS
N-ST9	UI, DB, SYS
N-ST10	UI, DB, SYS
N-ST11	UI, DB, SYS
N-ST12	UI, DB, SYS
N-ST13	UI, DB, SYS



N-ST14	UI, DB, SYS
N-ST15	UI, DB, SYS
N-ST16	UI, DB, SYS
N-SU2	UI, DB
N-C1	UI, DB
N-C2	UI, DB
N-C3	UI, DB
N-C5	UI, DB
N-C6	UI, DB
N-C7	UI, DB
N-O1	UI, DB
N-A1	UI, DB, SEC
N-SY1	UI, DB, SEC, SYS, COM
N-SY2	UI, DB, SEC, SYS, COM
N-SY3	UI, DB, SEC, SYS, COM



8. Test Cases

This document present a set of test cases that include functional and non-functional requirements.

TFU1.1	Test user login-student is able to login
Requirement	F-U1, N-U2
Scenario	A student submits her username and password into the login page and is redirected to the students main page.
Precondition	The user is registered in the system and has the student role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a student role.
Expected Result	The user can access student functionalities.

TFU1.2	Test user login-student username not correct
Requirement	F-U1, N-U2
Scenario	A student submits a wrong username and a password into the login page and receives an error message.
Precondition	The user is registered in the system and has the student role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a student role.
Expected Result	The system response an error message.

TFU1.3	Test user login-student password not correct
Requirement	F-U1, N-U2
Scenario	A student submits her username and a wrong password into the login page and receives an error message.
Precondition	The user is registered in the system and has the student role.



Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a student role.
Expected Result	The system response an error message.

TFU1.4	Test user login-supervisor is able to login
Requirement	F-U1, N-U2
Scenario	A supervisor submits her username and password into the login page and is redirected to the students main page.
Precondition	The user is registered in the system and has the supervisor role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a supervisor role.
Expected Result	The user can access supervisor functionalities.

TFU1.5	Test user login-supervisor username not correct
Requirement	F-U1, N-U2
Scenario	A supervisor submits a wrong username and a password into the login page and receives an error message.
Precondition	The user is registered in the system and has the supervisor role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a supervisor role.
Expected Result	The system response an error message.

TFU1.6	Test user login-supervisor password not correct
Requirement	F-U1, N-U2



Scenario	A supervisor submits her username and a wrong password into the login page and receives an error message.
Precondition	The user is registered in the system and has the supervisor role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a supervisor role.
Expected Result	The system response an error message.

TFU1.7	Test user login-coordinator is able to login
Requirement	F-U1, N-U2
Scenario	A coordinator submits her username and password into the login page and is redirected to the students main page.
Precondition	The user is registered in the system and has the coordinator role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a coordinator role.
Expected Result	The user can access supervisor functionalities.

TFU1.8	Test user login-coordinator username not correct
Requirement	F-U1, N-U2
Scenario	A coordinator submits a wrong username and a password into the login page and receives an error message.
Precondition	The user is registered in the system and has the coordinator role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a coordinator role.
Expected Result	The system response an error message.



TFU1.9	Test user login-coordinator password not correct
Requirement	F-U1, N-U2
Scenario	A supervisor submits her username and a wrong password into the login page and receives an error message.
Precondition	The user is registered in the system and has the coordinator role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password from a coordinator role.
Expected Result	The system response an error message.

TFU1.10	Test user login-reader is able to login
Requirement	F-U1, N-U2
Scenario	A reader submits her username and password into the login page and is redirected to the students main page.
Precondition	The user is registered in the system and has the reader role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a reader role.
Expected Result	The user can access reader functionalities.

TFU1.11	Test user reader username not correct
Requirement	F-U1, N-U2
Scenario	A reader submits a wrong username and a password into the login page and receives an error message.
Precondition	The user is registered in the system and has the reader role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.



Test Data	An username and password with a reader role.
Expected Result	The system response an error message.

TFU1.12	Test user login-reader password not correct
Requirement	F-U1, N-U2
Scenario	A supervisor submits her username and a wrong password into the login page and receives an error message.
Precondition	The user is registered in the system and has the reader role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password from a reader role.
Expected Result	The system response an error message.

TFU1.13	Test user login-opponent is able to login
Requirement	F-U1, N-U2
Scenario	An opponent submits her username and password into the login page and is redirected to the students main page.
Precondition	The user is registered in the system and has the opponent role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with an opponent role.
Expected Result	The user can access reader functionalities.

TFU1.14	Test user reader username not correct
Requirement	F-U1, N-U2
Scenario	A reader submits a wrong username and a password into the login page and receives an error message.
Precondition	The user is registered in the system and has the reader role.



Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password with a reader role.
Expected Result	The system response an error message.

TFU1.15	Test user login-opponent password not correct
Requirement	F-U1, N-U2
Scenario	A opponent submits her username and a wrong password into the login page and receives an error message.
Precondition	The user is registered in the system and has the opponent role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the login page.2. The user provides a username and password.3. Wait server response.
Test Data	An username and password from a opponent role.
Expected Result	The system response an error message.

TFU2.1	Test user-student log out
Requirement	F-U2
Scenario	A student is able to log out the system.
Precondition	The user is logged into the system. The user is registered in the system with the student role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the log out component.2. The user performs a log out.3. Wait server response.
Test Data	An username and password from a opponent role.
Expected Result	The user is successfully logged out and redirected to the main page.

TFU2.2	Test user-supervisor log out
Requirement	F-U2



Scenario	A supervisor is able to log out the system.
Precondition	The user is logged into the system. The user is registered in the system with the supervisor role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the log out component.2. The user performs a log out.3. Wait server response.
Test Data	An username and password from a supervisor role.
Expected Result	The user is successfully logged out and redirected to the main page.

TFU2.3	Test user-coordinator log out
Requirement	F-U2
Scenario	A coordinator is able to log out the system.
Precondition	The user is logged into the system. The user is registered in the system with the coordinator role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the log out component.2. The user performs a log out.3. Wait server response.
Test Data	An username and password from a supervisor role.
Expected Result	The user is successfully logged out and redirected to the main page.

TFU2.4	Test user-reader log out
Requirement	F-U2
Scenario	A reader is able to log out the system.
Precondition	The user is logged into the system. The user is registered in the system with the reader role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the log out reader.2. The user performs a log out.3. Wait server response.
Test Data	An username and password from a reader role.
Expected Result	The user is successfully logged out and redirected to the main page.



TFU2.5	Test user-opponent log out
Requirement	F-U2
Scenario	An opponent is able to log out the system.
Precondition	The user is logged into the system. The user is registered in the system with the opponent role.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the log out reader.2. The user performs a log out.3. Wait server response.
Test Data	An username and password from a opponent role.
Expected Result	The user is successfully logged out and redirected to the main page.

Student

TST1.1	Test project description submission by students
Requirement	F-ST1, N-U6, N-U7, N-U8
Scenario	A student submits a file as project description.
Precondition	The file format is zip or pdf. The deadline has not been reached. There is no other file submitted in the system.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the project description submission.2. The user submits a file.3. Wait for server response.
Test Data	A student role account. A correct file to submit.
Expected Result	The user successfully submits the file.

TST1.2	Test project description submission by students with wrong file
Requirement	F-ST1, N-U6
Scenario	A student submits a file as project description.
Precondition	The file format is not zip or pdf. The deadline has not been reached. There is no other file submitted in the system.



Test Steps	<ol style="list-style-type: none">1. The user navigates to the project description submission.2. The user submits a file.3. Wait for server response.
Test Data	A student role account. A incorrect file to submit.
Expected Result	The user fail to submits the file.

TST1.3	Test project description submission by students after deadline
Requirement	F-ST1, N-ST2, N-U6
Scenario	A student submits a file as project description.
Precondition	The file format is zip or pdf. The deadline has been reached. There is no other file submitted in the system.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the project description submission.2. Wait for server response.
Test Data	A student role account.
Expected Result	The user fail to submits the file. The system shows a warning message.

TST1.5	Test project description submission by students when failed on deadline
Requirement	F-ST1, F-ST3, N-ST6, N-U6
Scenario	A student submits a file as project description after failing a previous submission.
Precondition	The file format is zip or pdf. The deadline has not been reached. There is a file submitted in the system.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the project description submission.2. The project description got a fail grade.3. The user submits a new file.4. Wait for server response.
Test Data	A student role account. A file to submit.



Expected Result	The user successfully submits the file.
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TST1.6	Test project description submission by students with wrong file size
Requirement	F-ST1, N-U6, N-U7
Scenario	A student submits a file as project description.
Precondition	The file format is bigger than 50MB The deadline has not been reached. There is no other file submitted in the system.
Test Steps	4. The user navigates to the project description submission. 5. The user submits a file. 6. Wait for server response.
Test Data	A student role account. A incorrect file to submit.
Expected Result	The user fail to submits the file.

TST1.7	Test project description submission by students with big comment
Requirement	F-ST1, N-U6, N-U8
Scenario	A student submits a file as project description.
Precondition	The comment has to be bigger than 10000 characters The deadline has not been reached. There is no other file submitted in the system.
Test Steps	7. The user navigates to the project description submission. 8. The user submits a file. 9. Wait for server response.
Test Data	A student role account. A incorrect file to submit.
Expected Result	The user fail to submits the file.

TST2.1	Test student is able to check project description grade
Requirement	F-ST2, N-ST4



Scenario	A student wants to check the grade of the project description.
Precondition	The user has uploaded a file.
Test Steps	1. The user navigates to the project description page. 2. Wait for system response.
Test Data	-
Expected Result	The project description page shows the grade.

TST2.2	Test student checks project description grade with deadline ongoing.
Requirement	F-ST2
Scenario	A student wants to check the grade of the project description.
Precondition	The user has uploaded a file. The deadline has not been reached.
Test Steps	3. The user navigates to the project description page. 4. Wait for system response.
Test Data	-
Expected Result	The project description page shows the grade.

TST2.3	Test student checks project description grade after deadline.
Requirement	F-ST2
Scenario	A student wants to check the grade of the project description.
Precondition	The user has uploaded a file. The deadline has been reached.
Test Steps	5. The user navigates to the project description page. 6. Wait for system response.
Test Data	-
Expected Result	The project description page shows the grade.

TST4.1	Test project plan submission by students
Requirement	F-ST4, N-U6



Scenario	A student submits a file as project plan.
Precondition	The file format is zip or pdf. The deadline has not been reached. There is no other file submitted in the system. The student has an assigned supervisor.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the project plan submission.2. The user submits a file.3. Wait for server response.
Test Data	A student role account. A supervisor role account. A correct file to submit.
Expected Result	The user successfully submits the file.

TST4.2	Test project plan submission by students with wrong file
Requirement	F-ST1, N-U6
Scenario	A student submits a file as project plan.
Precondition	The file format is zip or pdf. The deadline has not been reached. There is no other file submitted in the system. The student has an assigned supervisor.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the project description submission.2. The user submits a file.3. Wait for server response.
Test Data	A student role account. A supervisor role account. A incorrect file to submit.
Expected Result	The user fail to submits the file.

TST4.3	Test project plan submission by students after deadline
Requirement	F-ST4, N-ST2, N-U6
Scenario	A student submits a file as project plan.
Precondition	The file format is zip or pdf. The deadline has been reached.



	The student has an assigned supervisor. There is no other file submitted in the system.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the project plan submission.2. Wait for server response.
Test Data	A student role account. A supervisor role account.
Expected Result	The user fail to submits the file. The system shows a warning message.

TST4.4	Test project plan submission by students when file already in system
Requirement	F-ST1, N-ST3, N-ST6, N-U6
Scenario	A student submits a file as project plan.
Precondition	The file format is zip or pdf. The deadline has not been reached. The student has an assigned supervisor. There is a file submitted in the system.
Test Steps	<ol style="list-style-type: none">1. The user navigates to the project plan submission.2. Wait for server response.
Test Data	A student role account. A supervisor role account. A new file to submit.
Expected Result	The user succeeds to submits a file. The system shows a warning message.

TFST5.1	Re-submit a project plan
Requirement	F-ST5, N-U6, N-ST16, N-ST17,N-ST18
Scenario	Student can re-submit the project plan and see a successful notification.
Precondition	Student failed the first chance of submitting the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the correct format once.
Test Data	The project plan.



Expected Result	Successfully submit.
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TFST5.2	Re-submit a project plan with the wrong format of submission
Requirement	F-ST5, N-U6, N-ST16, N-ST17,N-ST18
Scenario	Student can re-submit the project plan and see a fail notification.
Precondition	Student failed the first chance of submitting the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the wrong format once.
Test Data	The project plan.
Expected Result	Fail to submit.

TFST5.3	Re-submit a project plan after deadline
Requirement	F-T5, N-U6, N-ST17,N-ST18
Scenario	Student can re-submit the project plan after deadline and see a fail notification.
Precondition	Student failed the first chance of submitting the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the correct format once.
Test Data	The project plan.
Expected Result	Fail to submit.

TFST5.4	Re-submit a project plan more than once
Requirement	F-T5, N-U6, N-ST16, N-ST17, N-ST18
Scenario	Student can re-submit the project plan more than once and see a successful notification.
Precondition	Student failed the first chance of submitting the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the correct format more than once.
Test Data	The project plan.



Expected Result	Succeed to submit.
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TFST5.5	Re-submit project plans
Requirement	F-ST5, N-U6, N-ST16, N-ST17, N-ST18
Scenario	Student can re-submit the project plans once and see a fail notification.
Precondition	Student failed the first chance of submitting the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit more files with the correct format once.
Test Data	The project plans.
Expected Result	Fail to submit.

TFST6.1	Submit a supervisor request
Requirement	F-ST6
Scenario	Student can submit a supervisor request and see a successful notification.
Precondition	Student shall pass the project description.
Test Steps	<ol style="list-style-type: none">1. Go to the page about submitting a supervisor request.2. Choose a supervisor3. Submit the request.
Test Data	
Expected Result	Successfully submit.

TFST6.2	Submit a supervisor request when the supervisor is unavailable
Requirement	F-ST6
Scenario	Student can submit a supervisor request and see a fail notification.
Precondition	Student shall pass the project description.
Test Steps	<ol style="list-style-type: none">1. Go to the page about submitting a supervisor request.2. Choose a supervisor3. Submit the request.



Test Data	
Expected Result	Fail to submit.

TFST7.1	Submit a report
Requirement	F-ST7, N-U6, N-ST8, N-ST9, N-ST10, N-ST17
Scenario	Student submit a report and see a successful notification.
Precondition	Student shall get passing from supervisor..
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the correct format once.
Test Data	A report.
Expected Result	Successfully submit.

TFST7.2	Submit a report with wrong format of submission
Requirement	F-ST7, N-U6, N-ST8, N-ST9, N-ST10, N-ST17
Scenario	Student can submit a report with wrong format of submission and see a fail notification.
Precondition	Student shall get passing from supervisor.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the wrong format once.
Test Data	A report.
Expected Result	Fail to submit.

TFST7.3	Submit a report after deadline
Requirement	F-ST7, N-U6, N-ST9, N-ST10, N-ST17
Scenario	Student can submit a report after deadline and see a fail notification.
Precondition	Student shall get passing from supervisor.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the correct format once.
Test Data	A report.



Expected Result	Fail to submit.
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TFST7.4	Submit a report more than once
Requirement	F-ST7, N-U6, NST-8, N-ST9, N-ST10, N-ST17
Scenario	Student can submit report more than once and see a successful notification.
Precondition	Student shall get passing from supervisor.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the correct format more than once.
Test Data	A report.
Expected Result	Succeed to submit.

TFST7.5	Submit reports
Requirement	F-ST7, N-U6, NST-8, N-ST9, N-ST10, N-ST17
Scenario	Student can submit reports more than once and see a fail notification.
Precondition	Student shall get passing from supervisor.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit more files with the correct format once.
Test Data	Reports.
Expected Result	Fail to submit.

TFST7.6	Submit reports without receiving a passing grade from a supervisor
Requirement	F-ST7, N-U6, NST-8, N-ST9, N-ST10, N-ST17
Scenario	Student can submit reports once and see a fail notification.
Precondition	Student shall not get passing from supervisor.
Test Steps	<ol style="list-style-type: none">1. Go to submit page.2. Submit the file with the correct format once.
Test Data	A report.



Expected Result	Fail to submit.
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TFST8.1	View one submitted feedback on the project description
Requirement	F-ST8
Scenario	Student can see the submitted feedback on the project description.
Precondition	Student get the submitted feedback on the project description.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View submitted feedback.
Test Data	
Expected Result	Be able to see one submitted feedback.

TFST8.2	View more than one submitted feedback on the project description
Requirement	F-ST8
Scenario	Student can see the submitted feedbacks on the project description.
Precondition	Student get submitted feedbacks on the project description.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View submitted feedbacks.
Test Data	
Expected Result	Be able to see more than one submitted feedback.

TFST8.3	View none submitted feedback on the project description
Requirement	F-ST8
Scenario	Student cannot see the submitted feedback on the project description.
Precondition	Student does not get submitted feedbacks on the project description.
Test Steps	<ol style="list-style-type: none">1. Go to the view page2. View submitted feedback
Test Data	
Expected Result	Be able to see nothing in that page.



TFST9.1	Submit a final report
Requirement	F-ST9, N-U6, N-ST11, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit a final report and see a successful notification.
Precondition	Student shall get feedbacks from supervisor, reader and opponent.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page2. Submit the file with the correct format once.
Test Data	A final report
Expected Result	Successfully submit.

TFST9.2	Submit a final report with wrong format of submission
Requirement	F-ST9, N-U6, N-ST11, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit a final report with wrong format of submission and see a fail notification.
Precondition	Student shall get feedbacks from supervisor, reader and opponent.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page.2. Submit the file with the wrong format once.
Test Data	A final report
Expected Result	Fail to submit.

TFST9.3	Submit a final report after the deadline
Requirement	F-ST9, N-U6, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit a final report after the deadline and see a fail notification.
Precondition	Student shall get feedbacks from supervisor, reader and opponent.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page.2. Submit the file with the correct format once.
Test Data	A final report
Expected Result	Fail to submit.



TFST9.4	Submit a final report more than once
Requirement	F-ST9, N-U6, N-ST11, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit a final report more than once and see a fail notification.
Precondition	Student shall get feedbacks from supervisor, reader and opponent.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page.2. Submit the file with the correct format more than once.
Test Data	A final report
Expected Result	Fail to submit.

TFST9.6	Submit final reports
Requirement	F-ST9, N-U6, N-ST11, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit final reports once and see a fail notification.
Precondition	Student shall get feedbacks from supervisor, reader and opponent.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page.2. Submit files with the correct format once.
Test Data	Final reports
Expected Result	Fail to submit.

TFST9.7	Submit final report without receiving feedback from supervisor
Requirement	F-ST9, N-U6, N-ST11, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit a final report once and see a fail notification.
Precondition	Student shall get feedbacks from reader and opponent.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page.2. Submit the file with the correct format once.
Test Data	A final report
Expected Result	Fail to submit.

TFST9.8	Submit final report without receiving feedback from reader
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Requirement	F-ST9, N-U6, N-ST11, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit a final report once and see a fail notification.
Precondition	Student shall get feedbacks from supervisor and opponent.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page.2. Submit the file with the correct format once.
Test Data	A final report
Expected Result	Fail to submit.

TFST9.9	Submit final report without receiving feedback from opponent
Requirement	F-ST9, N-U6, N-ST11, N-ST12, N-ST13, N-ST14, N-ST15
Scenario	Student can submit a final report once and see a fail notification.
Precondition	Student shall get feedbacks from supervisor and reader.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page.2. Submit the file with the correct format once.
Test Data	A final report
Expected Result	Fail to submit.

TFST10	View the grade of the final report
Requirement	F-ST10
Scenario	Student can view the grade of the final report.
Precondition	Student shall pass the final evaluation from reader.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View the grade of the final report.
Test Data	
Expected Result	Fail to submit.

TFST11.1	View one submitted feedback on the project plan
Requirement	F-ST11



Scenario	Student can see the submitted feedback on the project plan.
Precondition	Student get the submitted feedback on the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View submitted feedback.
Test Data	
Expected Result	Be able to see one submitted feedback.

TFST11.2	View more than one submitted feedback on the project plan
Requirement	F-ST11
Scenario	Student can see the submitted feedbacks on the project plan.
Precondition	Student get submitted feedbacks on the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View submitted feedbacks.
Test Data	
Expected Result	Be able to see more than one submitted feedback.

TFST11.3	View none submitted feedback on the project plan
Requirement	F-ST11
Scenario	Student cannot see the submitted feedback on the project plan.
Precondition	Student does not get submitted feedbacks on the project plan.
Test Steps	<ol style="list-style-type: none">1. Go to the view page2. View submitted feedback
Test Data	
Expected Result	Be able to see nothing in that page.

TFST12.1	View one submitted feedback on the report
Requirement	F-ST12



Scenario	Student can see the submitted feedback on the report.
Precondition	Student get the submitted feedback on the report.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View submitted feedback.
Test Data	
Expected Result	Be able to see one submitted feedback.

TFST12.2	View more than one submitted feedback on the report
Requirement	F-ST12
Scenario	Student can see the submitted feedbacks on the report.
Precondition	Student get submitted feedbacks on the report.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View submitted feedbacks.
Test Data	
Expected Result	Be able to see more than one submitted feedback.

TFST12.3	View none submitted feedback on the report
Requirement	F-ST12
Scenario	Student cannot see the submitted feedback on the report.
Precondition	Student does not get submitted feedbacks on the report.
Test Steps	<ol style="list-style-type: none">1. Go to the view page.2. View submitted feedback.
Test Data	
Expected Result	Be able to see nothing in that page.

Coordinator

TFC1.1	Set a deadline for one submission.
Requirement	F-C1



Scenario	Coordinator can set a deadline for one submission and see the deadline.
Precondition	
Test Steps	<ol style="list-style-type: none">1. Go to the submit page for coordinator.2. Set a deadline for submission.
Test Data	
Expected Result	Be able to see a deadline in that page.

TFC1.2	Set deadlines for more than one submissions.
Requirement	F-C1
Scenario	Coordinator can set deadlines for more than one submissions and see the deadlines.
Precondition	
Test Steps	<ol style="list-style-type: none">1. Go to the submit page for coordinator.2. Set a deadline for each submission.
Test Data	
Expected Result	Be able to see deadlines in that page.

TFC2.1	Change a deadline for one submission.
Requirement	F-C2
Scenario	Coordinator can change a deadline for one submission and see the new deadline.
Precondition	Coordinator has already set a deadline.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page for coordinator.2. Change a deadline for submission.
Test Data	
Expected Result	Be able to see a new deadline in that page.

TFC2.2	Change deadlines for more than one submissions.
Requirement	F-C1



Scenario	Coordinator can set deadlines for more than one submissions and see the deadline.
Precondition	Coordinator has already set deadlines.
Test Steps	<ol style="list-style-type: none">1. Go to the submit page for coordinator.2. Change a deadline for each submission.
Test Data	
Expected Result	Be able to see new deadlines in that page.

TFC3	See a list of all submitted project plans
Requirement	F-C3
Scenario	Coordinator can see a list of all submitted project plans.
Precondition	Students have already submitted their project plans.
Test Steps	<ol style="list-style-type: none">1. Go to the page that contains all submitted project plans.2. See a list of all submitted project plans.
Test Data	Project plans.
Expected Result	Be able to see a list of all submitted project plans.

TFC4.1	See all the submitted project plans' status
Requirement	F-C4, N-C1
Scenario	Coordinator can see all the submitted project plans' status.
Precondition	Students have already submitted their project plans and supervisor gives the feedback and supervision confirmation.
Test Steps	<ol style="list-style-type: none">1. Go to the page that contains all submitted project plans' status.2. See all submitted project plans' status.
Test Data	Project plans.
Expected Result	Be able to see all submitted project plans' status.

TFC4.2	See all the submitted project plans' status without supervisor's feedback and supervision confirmation
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Requirement	F-C4, N-C1
Scenario	Coordinator cannot see all the submitted project plans' status.
Precondition	Students have already submitted their project plans and supervisor does not give the feedback or supervision confirmation.
Test Steps	<ol style="list-style-type: none">1. Go to the page that contains all submitted project plans' status.2. See all submitted project plans' status.
Test Data	Project plans.
Expected Result	Be able not to see submitted project plans' status.

TFC5.1	Submit a grade on the project plan
Requirement	F-C5, N-C2, N-C3
Scenario	Coordinator can submit a grade on the project plan.
Precondition	Students have already submitted their project plans and supervisor gives the feedback and supervision confirmation.
Test Steps	<ol style="list-style-type: none">1. Go to the page that coordinator can grade on project plan.2. Find the ungraded project plan.3. Give the pass or grade.4. Submit the grade.
Test Data	Project plans.
Expected Result	Be able to give submitted project plans' pass or fail grades.

TFC5.2	Submit a grade on the project plan
Requirement	F-C5, N-C2, N-C3
Scenario	Coordinator cannot submit a grade on the project plan.
Precondition	Students have already submitted their project plans and supervisor does not give the feedback or supervision confirmation.
Test Steps	<ol style="list-style-type: none">1. Go to the page that coordinator can grade on project plan.2. Find the ungraded project plan.3. Give the pass or fail grade.4. Submit the grade.



Test Data	Project plans.
Expected Result	Be able not to give submitted project plans' pass or fail grades.

TFC5.3	Submit a grade on the project plan without supervisor's feedback and supervision confirmation
Requirement	F-C5, N-C2, N-C3
Scenario	Coordinator cannot submit a grade on the project plan.
Precondition	Students have already submitted their project plans and supervisor does not give the feedback or supervision confirmation.
Test Steps	<ol style="list-style-type: none">1. Go to the page that coordinator can grade on project plan.2. Find the ungraded project plan.3. Give other kind of grade, like numbers or A-F.4. Submit the grade.
Test Data	Project plans.
Expected Result	Be able not to give submitted project plans' grades.

TFC6	See a list of readers who have made a bid for a report
Requirement	F-C6
Scenario	Coordinator can see a list of readers who have made a bid for a report.
Precondition	Student submit the report and reader have made a bid for a report.
Test Steps	<ol style="list-style-type: none">1. Go to the page that coordinator can see a list of readers who have made a bid for a report.2. See a list of readers who have made a bid for a report.
Test Data	
Expected Result	Be able to see a list of readers who have made a bid for a report.

TFC7.1	Test assign a reader to a report
Requirement	F-C7
Scenario	A coordinator selects a report and assign a reader to it.



Precondition	The student has submitted a report successfully. The report has not previous reader assigned.
Test Steps	<ol style="list-style-type: none">1. The coordinator navigates to the report page2. A reader is assigned to that report.
Test Data	A student role account with a submitted report. A reader role account.
Expected Result	The report status gets the selected reader assigned.

TFC7.2	Test assign readers to a report
Requirement	F-C7
Scenario	A coordinator selects a report and assign a reader to it.
Precondition	The student has submitted a report successfully. The report has a previous reader assigned.
Test Steps	<ol style="list-style-type: none">3. The coordinator navigates to the report page4. A reader is assigned to that report.
Test Data	A student role account with a submitted report. Two reader role accounts.
Expected Result	The report status gets a second reader assigned.

TFC8.1	Coordinator checks on opponents list
Requirement	F-C8
Scenario	The coordinator wants to check a list of people that who can be opponents for a report.
Precondition	A list of users with the role of opponent
Test Steps	<ol style="list-style-type: none">1. The coordinator navigates to the opponents page.2. Waits for response.
Test Data	-
Expected Result	The server shows a list of people that has the role of opponent.

TFC9.1	Coordinator assigns opponent to a report
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Requirement	F-C9, N-C5
Scenario	The coordinator selects a report and assigns an opponent
Precondition	A set of users with the role of opponent. At least a report.
Test Steps	<ol style="list-style-type: none">3. The coordinator navigates to the reports page.4. Selects a report5. Assign an opponent
Test Data	-
Expected Result	The report status is updated with the assigned opponent.

TFC9.2	Coordinator assigns opponent to a report already assigned
Requirement	F-C9, N-C5
Scenario	The coordinator selects a report and assigns an opponent
Precondition	A set of users with the role of opponent. At least a report with an assigned opponent.
Test Steps	<ol style="list-style-type: none">1. The coordinator navigates to the reports page.2. Selects a report3. Assign an opponent4. Wait for response
Test Data	-
Expected Result	The application shows a warning message.

TFC10.1	Coordinator checks list of final evaluations
Requirement	F-C10
Scenario	The coordinator wants to check which reports have got a final evaluation
Precondition	A list of students with submitted reports. Reports shall be graded.
Test Steps	<ol style="list-style-type: none">1. The coordinator navigates to the report page2. Filter the list of reports by graded
Test Data	Set of submitted reports



Expected Result	The application show the list of reports that were graded
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TFC11.1	Coordinator grades final reports
Requirement	F-C11, N-C6
Scenario	The coordinator navigates to a report and is able to grade it.
Precondition	A final report submitted into the system, graded by the readers and opponents.
Test Steps	<ol style="list-style-type: none">1. The coordinator navigates to the report page2. Filter the list of reports by graded3. Selects a graded report4. Grades the report
Test Data	A student role account with a submitted final report.
Expected Result	The final report is successfully graded.

TFC12.1	Coordinator grades project description
Requirement	F-C12, N-C7
Scenario	The coordinator navigates to a project description and is able to grade it.
Precondition	A student has submitted a project description. A supervisor has given feedback to the project description.
Test Steps	<ol style="list-style-type: none">1. The coordinator navigates to the project description page.2. Checks that the project description has been given feedback from the supervisor.3. The report is graded.
Test Data	A student account with a project description submitted. A supervisor that has given feedback to the project description.
Expected Result	The project description is graded successfully

TFC13.1	Coordinator checks a project description
Requirement	F-C13
Scenario	The coordinator selects a specific project description



Precondition	A project description has been submitted
Test Steps	<ol style="list-style-type: none">1. Browse list of files2. Select a specific file3. Wait for response
Test Data	A file submitted into the system as project description.
Expected Result	The application shows the file selected.

TFC14.1	Coordinator checks a project plan
Requirement	F-C14, N-C1
Scenario	The coordinator selects a specific project plan
Precondition	A project description has been submitted
Test Steps	<ol style="list-style-type: none">1. Browse list of files2. Select a specific file3. Wait for response
Test Data	A file submitted into the system as project plan.
Expected Result	The application shows the file selected.

TFC15.1	Coordinator checks a final report
Requirement	F-C15
Scenario	The coordinator selects a specific project plan
Precondition	A project description has been submitted
Test Steps	<ol style="list-style-type: none">1. Browse list of files2. Select a specific file3. Wait for response
Test Data	<ol style="list-style-type: none">4. A file submitted into the system as project plan.
Expected Result	The coordinator selects a specific project plan

TFC16.1	Coordinator checks list of project descriptions
Requirement	F-C16



Scenario	The coordinator wants to check the list of project descriptions submitted
Precondition	<ol style="list-style-type: none">1. Browse list of files2. Select a specific file3. Wait for response
Test Steps	<ol style="list-style-type: none">5. A file submitted into the system as project plan.
Test Data	The application shows the file selected.
Expected Result	The coordinator selects a specific project plan

Supervisor

TFSU1.1	A supervisor views incoming supervision requests from students. The students have submitted a supervision requests
Requirement	F-SU1
Scenario	A supervisor view incoming supervision requests from students
Precondition	Already login
Test Steps	See the supervision requests page
Test Data	
Expected Result	Supervision requests page displays incoming supervision requests from students

TFSU1.2	A supervisor views incoming supervision requests from students after deadline. The students have submitted a supervision requests
Requirement	F-SU1
Scenario	A supervisor view incoming supervision requests from students
Precondition	Already login
Test Steps	See the supervision requests page
Test Data	
Expected Result	Supervision requests page does not display incoming supervision requests from students



TFSU2	A supervisor views the project description submitted by a student requesting supervision
Requirement	F-SU2
Scenario	A supervisor views all documents submitted by a student requesting supervision
Precondition	Already login, after the students pass the evaluation
Test Steps	See the student requesting supervision page
Test Data	
Expected Result	Documents page displays all documents submitted by a student requesting supervision

TFSU3.1	A supervisor rejects a supervision request
Requirement	F-SU3, N-SU2
Scenario	A supervisor reject to a supervision request
Precondition	Already login
Test Steps	1. See the supervision requests page 2. Reject a supervision request
Test Data	
Expected Result	A replay is shown

TFSU3.2	A supervisor accepts a supervision request
Requirement	F-SU3, N-SU2
Scenario	A supervisor reject to a supervision request
Precondition	Already login
Test Steps	1. See the supervision requests page 2. Accepts a supervision request
Test Data	
Expected Result	A replay is shown



TFSU4	A supervisor shall be able to give feedback to a project plan.
Requirement	F-SU4
Scenario	A supervisor give feedback to a project plan
Precondition	Already login
Test Steps	1. See the project plan page 2. Write a feedback for a project plan
Test Data	
Expected Result	A feedback is shown

TFSU5	A supervisor view the evaluation of a project plan by the coordinator
Requirement	F-SU5
Scenario	A supervisor see view a evaluation of a project plan by the coordinator
Precondition	Already login, after the coordinator gave the evaluation
Test Steps	See the project plan page
Test Data	
Expected Result	A evaluation of a project plan by the coordinator is shown

TFSU6.1	A supervisor views her students' reports
Requirement	F-SU6
Scenario	A supervisor view a students' reports
Precondition	Already login, after the students submitted the reports
Test Steps	See the students' reports page
Test Data	
Expected Result	A students' reports is shown and can be download

TFSU7.1	A supervisor shall be able to submit her assessment on a student's report.
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Requirement	F-SU7
Scenario	A supervisor submit her assessment on a student's report.
Precondition	Already login
Test Steps	See the students' reports page Write assessment for a students' report
Test Data	
Expected Result	A assessment is shown

Reader

TFR1.1	The students have submitted the reports .A reader see a list of reports.
Requirement	F-R1
Scenario	A reader see a list of reports.
Precondition	Already login
Test Steps	See the list of reports page
Test Data	
Expected Result	A list of the students reports is shown

TFR1.2	The students have not submitted the reports .A reader see a list of reports.
Requirement	F-R1
Scenario	A reader see a list of reports.
Precondition	Already login
Test Steps	See the list of reports page
Test Data	
Expected Result	List is empty

TFR2	A reader bid for as many reports as desired.
Requirement	F-R2



Scenario	A reader bid for reports.
Precondition	Already login, the students have submitted the reports
Test Steps	1. See the list of reports page 2. bid for reports as the maximum number
Test Data	
Expected Result	Reports is bid

TFR3.1	A reader see a list of reports assigned to him/her. After a coordinator has assign reports for a reader.
Requirement	F-R3
Scenario	A reader see a list of reports assigned to him/her.
Precondition	Already login, a reader has bid reports
Test Steps	See the list of reports page
Test Data	
Expected Result	A list of the students reports is shown

TFR3.2	A reader see a list of reports assigned to him/her. A coordinator has not assign reports for a reader.
Requirement	F-R3
Scenario	A reader see a list of reports assigned to him/her.
Precondition	Already login, a reader has bid reports
Test Steps	See the list of reports page,
Test Data	
Expected Result	List is empty

TFR4	A reader submit feedback on the report.
Requirement	F-R4
Scenario	A reader submit feedback on the report



Precondition	Already login, a coordinator has assign reports for a reader
Test Steps	1. See the list of reports page 2. Summit feedback
Test Data	
Expected Result	Feedback is submitted

TFR5.1	The students have submitted the final reports. A reader see a list of final reports assigned to him/her.
Requirement	F-R5
Scenario	A reader see a list of final reports assigned to him/her.
Precondition	Already login, a coordinator has assign reports for a reader
Test Steps	See the list of reports page
Test Data	
Expected Result	Final reports is shown

TFR5.2	The students have not submitted the final reports. A reader see a list of final reports assigned to him/her.
Requirement	F-R5
Scenario	A reader see a list of final reports assigned to him/her.
Precondition	Already login, a coordinator has assign reports for a reader
Test Steps	See the list of reports page,
Test Data	
Expected Result	List is empty

TFR6	A reader submit a final evaluation of the final reports
Requirement	F-R6
Scenario	A reader submit a final evaluation of the final reports
Precondition	Already login, a coordinator has assign reports for a reader, the students have submitted the final reports



Test Steps	1. See the list of reports page, 2. Submit final evaluation
Test Data	
Expected Result	Final evaluation is submitted

Opponent

TFO1.1	Coordinator has assigned reports for a reader. An opponent see a list of reports assigned to him/her.
Requirement	F-O1
Scenario	An opponent see a list of reports assigned to him/her.
Precondition	Already login
Test Steps	See the list of reports page
Test Data	
Expected Result	A list is shown

TFO1.2	Coordinator has not assigned reports for a reader. An opponent see a list of reports assigned to him/her.
Requirement	F-O1
Scenario	An opponent see a list of reports assigned to him/her.
Precondition	Already login
Test Steps	See the list of reports page
Test Data	
Expected Result	List is empty

TFO2.1	An opponent see a list of reports assigned to him/her before report deadline.
Requirement	F-O1, N-O1
Scenario	An opponent see a list of reports assigned to him/her.



Precondition	Already login, coordinator has assigned reports for a reader.
Test Steps	1. See the list of reports page 2. Submit feedback
Test Data	
Expected Result	Feedback is submitted

TFO2.2	An opponent see a list of reports assigned to him/her after report deadline.
Requirement	F-O1, N-O1
Scenario	An opponent see a list of reports assigned to him/her.
Precondition	Already login, coordinator has assigned reports for a reader.
Test Steps	1. See the list of reports page 2. Submit feedback
Test Data	
Expected Result	Feedback cannot be submitted

Admin

TFA1	Add new users to the system
Requirement	F-A1
Scenario	Admin can add new users to the system.
Precondition	User makes a request for the system.
Test Steps	1. Go to the admin page. 2. Add new users to the system.
Test Data	
Expected Result	Be able to add new users to the system.

TFA2.1	Assign roles to users
Requirement	F-A2, N-A1
Scenario	Admin can assign roles to users.



Precondition	User makes a request for the system and admin adds new users to the system.
Test Steps	<ol style="list-style-type: none">1. Go to the admin page.2. Add new users to the system.3. Assign roles (student, supervisor, coordinator, opponent and reader) to users.
Test Data	
Expected Result	Be able to assign roles to users.

TFA2.2	Assign wrong roles to users
Requirement	F-A2, N-A1
Scenario	Admin can assign roles to users.
Precondition	User makes a request for the system and admin adds new users to the system.
Test Steps	<ol style="list-style-type: none">1. Go to the admin page.2. Add new users to the system.3. Assign roles except student, supervisor, coordinator, opponent and reader to users.
Test Data	
Expected Result	Be able not to assign such role to users.

System Administration

TNSY1.1	Check system testability
Requirement	N-SY1
Scenario	The developers create test units.
Precondition	-
Test Steps	<ol style="list-style-type: none">1. Navigate to source code2. Check junit test
Test Data	-
Expected Result	The system has test unit cases.



TNSY2.1	Check web application
Requirement	N-SY2
Scenario	The tester runs the application in a browser
Precondition	-
Test Steps	1. Turn on server 2. Test application on browser
Test Data	-
Expected Result	The application shows in a browser.

TNSY3.1	Check application technologies
Requirement	N-SY3
Scenario	The tester checks the technologies used
Precondition	-
Test Steps	1. Navigate through the source code
Test Data	-
Expected Result	The application has to be developed using java

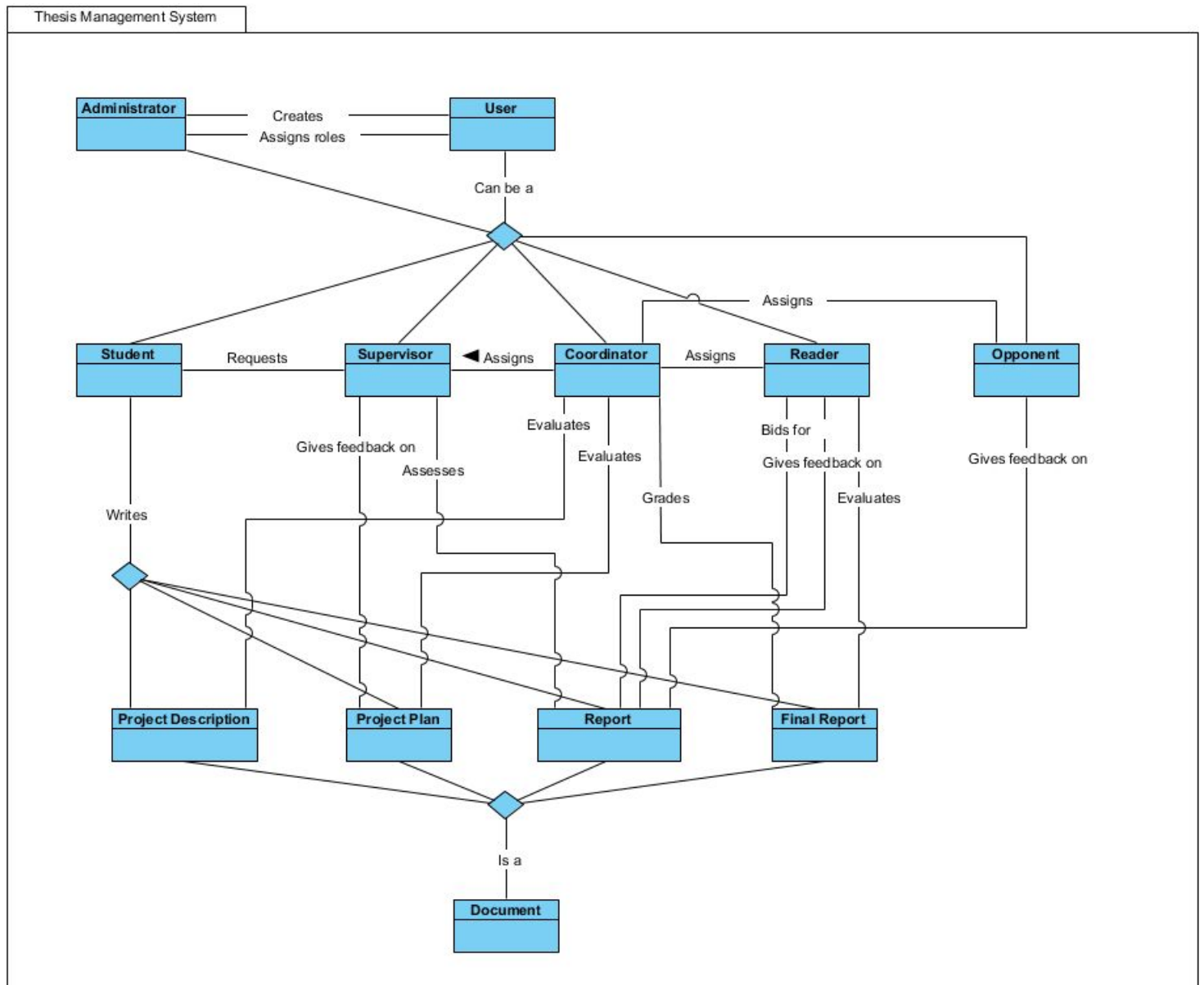


9. UML diagrams

In this sections a groups of diagrams will be presented that will show the domain model as well as an use case diagram.

9.1 Domain model diagram

The domain model shows the relationship between different elements present in the system.





9.2 Use case diagram

The use case diagram shows all the different actors using the system, and what actions each actor is capable of doing.

