

**Date** 11.04.2019

**Authors** Mihkel Sõtsov

## **Assignment 1**

### **1.1 Topic**

The main aim of this report is to demonstrate domain and business rule dictionaries, context diagram, defined and analyzed requirements, and also use cases for preliminary scope of the thesis work. The main actors are student, coordinator, advisor. Secondary actor is Konto system.

The starting point of this report is enrollment for thesis seminar by the student. Konto system checks whether student is able to participate in thesis seminar or not (Konto is marked as secondary actor because it basically exists only in the enrollment part and if the student is rejected for participating in thesis seminar then no further activities would be available).

The process continues with gathering, sharing, and approving the topic for thesis work. Responsible person for topic related activities listed before is the coordinator. Student's responsibility in this part is to select offered topic. Based on the student's selection, coordinator prepares the workshop(s).

Last part in this report includes assigning the thesis advisor. Responsible person for this task is coordinator. Advisor is a person who advises and helps a student during thesis work. Coordinator must consider different aspects such as advisor's availability while selecting and assigning responsible person for advising a student during thesis work.

## 1.2 Domain Dictionary

Complete the table below. Add rows as needed.

Name	Type	Description
<i>Add relevant concepts (one row per concept)</i>	<i>Add types</i>	<i>Add descriptions</i>
Student	Role	Is a student of HH who has started the thesis process. He also participates in thesis workshop(s).
Coordinator	Role	Is a person who coordinates a student. He gathers, organizes, approves thesis topic proposal, organizes workshops, assigns advisor.
Konto service	Object	Is a system that supports openness and agility at HH.
Urkund service	Object	Automated service for detecting the plagiarism.
Enrollment	Process	Student must be able to enroll and access Konto system.
Thesis	Object	Is a final step of studies in order to graduate.
Thesis process	Process	Steps taken by a student in order to complete the thesis.
Topic proposal	Object	Coordinator gathers and proposes the topic for thesis.
Approval of topic	Function	Coordinator approves student's selected topic for thesis work.
Workshop(s)	Object	Coordinator organizes the workshop(s) and student takes part in it/them.
Project plan	Object	List of steps to do.

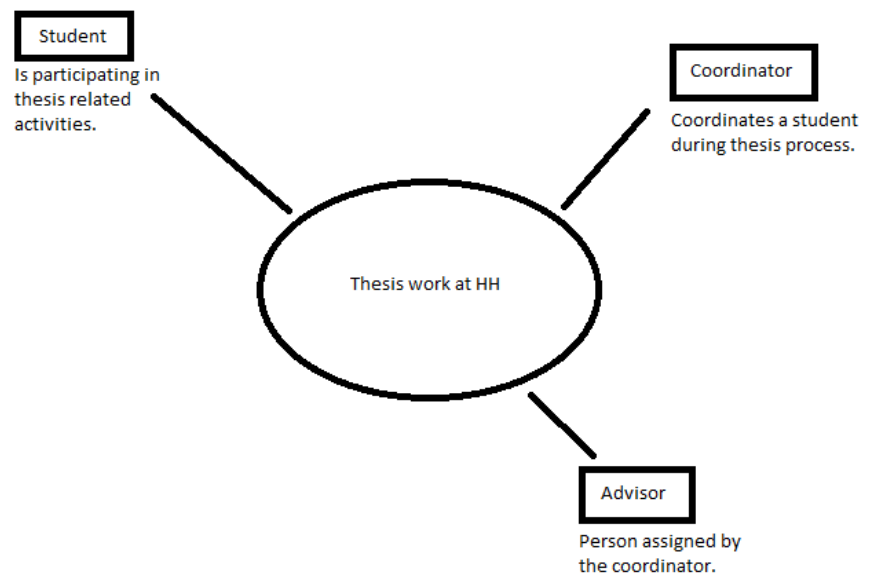
### 1.3 Business Rule Dictionary

Complete the table below. Add rows as needed.

Id	Definition	Type	Source
X	Add relevant rules,	their types	and sources
1	A <b>student</b> is a person who is studying at HH and who is going to do the thesis in order to graduate.	Fact	Domain dictionary
2	A <b>student</b> must have enough credits and prerequisite before starting the thesis process.	Constraint	School's rule
3	A <b>student and coordinator</b> must agree on project plan.	Constraint	Interview
4	A <b>student</b> must complete the thesis in a limited time frame ( <b>3-15 months</b> ).	Inference	School's rule
5	A <b>coordinator</b> is person who coordinates a student during the thesis process.	Fact	Domain dictionary
6	A <b>coordinator</b> must propose and approve the topic for thesis; organize the workshop(s).	Constraint	Domain dictionary
7	A <b>coordinator</b> must assign thesis <b>advisor</b> .	Constraint	Domain dictionary
8	A <b>coordinator</b> must check the workload and availability of the advisor.	Constraint	Interview

## 1.4 Context Diagram

*Insert your context diagram here. You can use pen and paper and scan the drawing or use PowerPoint, Word drawing tools, Visio or any other drawing tool.*



## **Assignment 2**

### **2.1 Preliminary list of requirements**

*Insert your list here.*

**Functional requirements:**

- Student must be able to enroll
- Student must have enough credits or special prerequisite
- Student must be able to access Konto system
- Student must select 1 topic
- Student must be able to submit a topic plan
- Coordinator must be able to access Konto system
- Coordinator must gather the topics
- Coordinator must share list of the topics
- Coordinator must approve the topic
- Coordinator must organize the workshop(s)
- Coordinator must find an advisor
- Coordinator must assign thesis advisor
- Coordinator must check the availability of advisor
- Coordinator must provide advisor's contact details to the student
- There can be only 1 thesis advisor per student
- User must be able to change language of a Konto system

**Non-functional requirements:**

- Konto must provide accessibility to the service (including mobile devices)
- Konto must provide language options
- Coordinator must propose and approve thesis topic

## 2.2 Analyzed set of requirements

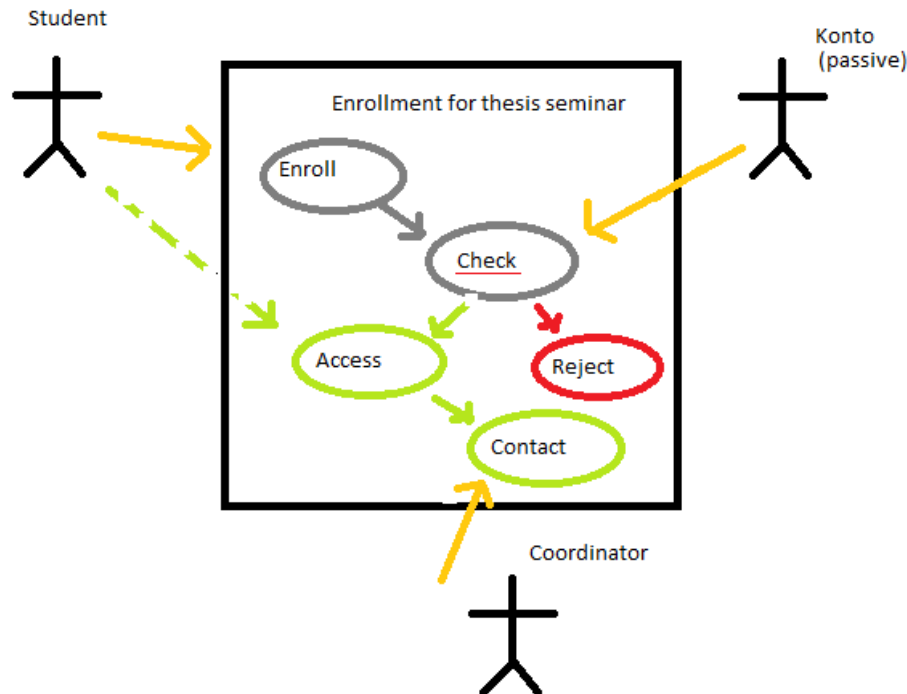
Complete the table below. Add rows as needed.

<b>Id</b>	<b>Description</b>	<b>Category</b>	<b>Priority</b>	<b>Source(s)</b>	<b>Notes</b>
<i>X</i>	<i>Add descriptions,</i>	<i>categories,</i>	<i>priorities,</i>	<i>sources, and</i>	<i>notes.</i>
1	A student must be able to choose, complete, and submit a topic plan for thesis.	F	1	Business rules 1, 5, 6	
2	A student must be able to enroll for the thesis work	F	1	Business rules 1, 2, 4	
3	Coordinator must assign the advisor.	F	1	Business rule 7	
4	Coordinator must propose and approve thesis topic.	NF	1	Business rules 3, 6	
5	Coordinator must check the availability of thesis advisor.	F	2	Business rule 8	

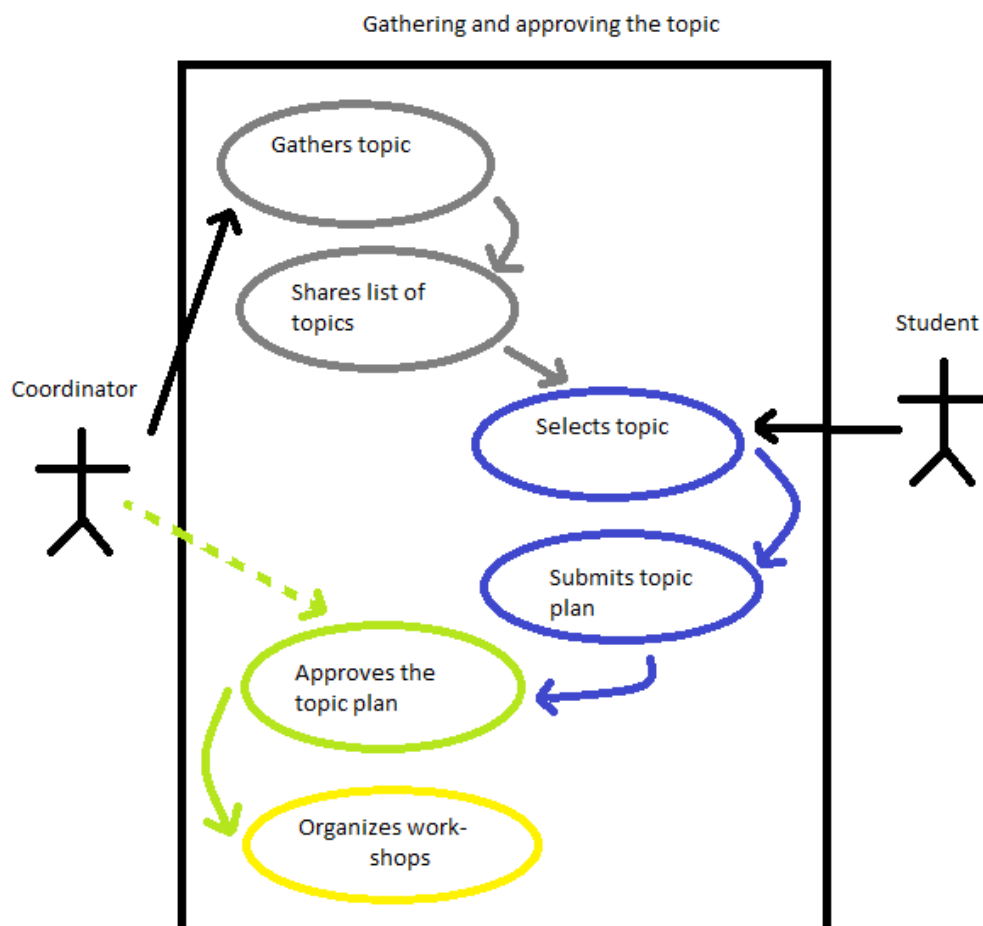
## Assignment 3

### 3.1 Use Case Diagram

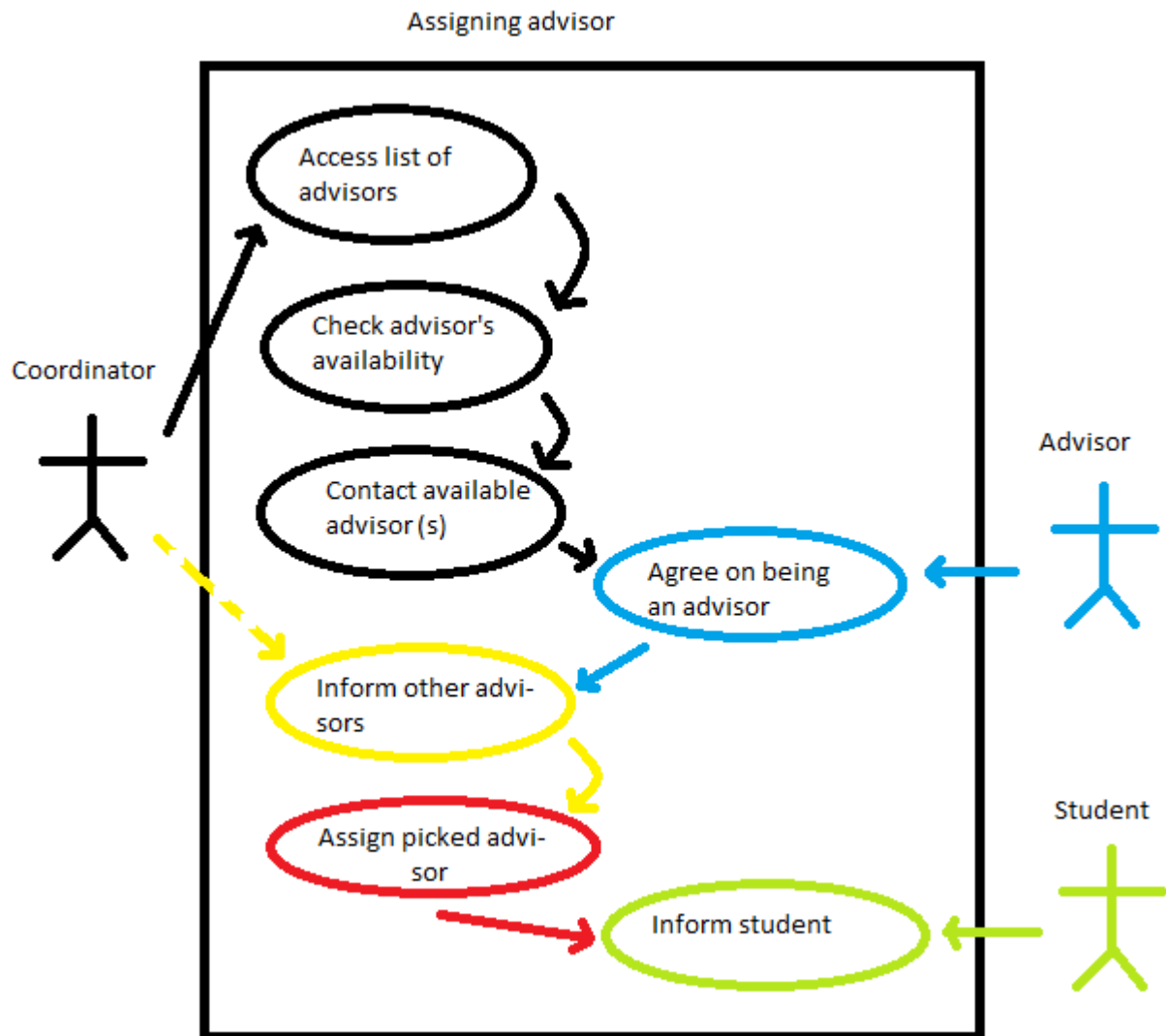
Use case 1. Enrollment for thesis seminar.



Use case 2. Gathering and approving thesis topic



Use case 3. Assigning advisor





### 3.2 Use Cases

#### Use case 1.

Use case 1 describes the process of enrollment for thesis seminar. The starting point is the enrollment by the student in the Konto system. After the enrollment, system checks whether student is able to participate on seminar or not (checks the amount of credits or any other prerequisite). If student is able to enroll for the course, then the system gives the permission to the access to the content, if not, student gets a message where he is informed why he/she is not able to participate in the seminar. After successful enrollment, student contacts the coordinator.

*Enrollment for thesis seminar*

---

#### Normal Flow:

1. *Enroll*
2. *Wait for approval*
3. *Access Konto*
4. *Contact coordinator*

#### Subflows:

*No sub-flows.*

#### Alternate Flow/ Exceptions:

- 1.0 *Student enrolls*
  - 2.0 *Student doesn't have enough credits*
  - 3.0 *Enrollment rejected*
  - 3.1 *Student informed*
  - 4.0 *Wait until student collects correct amount of credits*
- 

Result of the use case: Student enrolled for thesis seminar.

Fulfilled requirements:

- Student must be able to enroll
- Student must have enough credits or special prerequisite
- Student must be able to access Konto system (**technical and progress question**)
- Coordinator must be able to access Konto system (**technical question**)
- User must be able to change language of a Konto system

*Use case 2.*

2<sup>nd</sup> use case describes the process of gathering, sharing, and approving the topic for the thesis. Also, based on the pick – organizing workshops. Responsible person for gathering the topic for thesis work is coordinator. He gathers topics from competence groups, theme groups and different organizations. When the coordinator collects the topics, he shares them with the student. Student is responsible for picking one topic. After picking the topic, student submits the topic plan and informs the coordinator. Coordinator accepts the topic plan. Based on the topic, coordinator is responsible for organizing workshops and making other theses related activities.

---

*Gathering and approving thesis topic*

---

**Normal Flow:**

1. *Coordinator gathers topics*
2. *Coordinator shares the topics with the student*
3. *Student picks the topic*
4. *Coordinator approves picked by the student topic*
5. *Coordinator organizes workshops*

**Subflows:**

- 1.1 *Coordinator gathers topics*
- 1.2 *From competence groups*
- 1.3 *From theme groups*
- 1.4 *From organizations*

**Alternate Flow/  
Exceptions:**

---

*No exceptions/alternate flows.*

---

Result of the use case: Selected topic for thesis work. In addition, the process of organizing workshops starts.

Fulfilled requirements:

- Student must select 1 topic
- Student must be able to submit a topic plan
- Coordinator must gather the topics
- Coordinator must share list of the topics
- Coordinator must approve the topic
- Coordinator must organize the workshop(s)

*Use case 3.*

The last use case describes the process of assigning the thesis advisor for the student. First of all, coordinator finds the list of advisors. Then he checks advisors' availability. Coordinator contacts the available advisor and has a discussion. If everything is ok with chosen advisor, then advisor agrees on advising a student for thesis work. If the chosen advisor rejects the proposal, coordinator must contact other advisors. There can be only one advisor per student. When one advisor is selected, other advisors are notified about that. Finally, coordinator assigns the advisor and informs the student (provides advisor's name, contact details, any other information).

*Assigning advisor*

---

**Normal Flow:**

1. *Access list of advisors*
2. *Check availability*
3. *Contact available advisor*
4. *Discuss with advisor*
5. *Get an agree from the advisor*
6. *Inform other advisors*
7. *Assign selected advisor*
8. *Inform student*
- ...

**Subflows:**

- 4.1 *Discuss with advisor*
- 4.2 *Advisor rejects an offer*
- 4.3 *Contact another advisor*
- 4.4 *Discuss with advisor*
- 4.5 *Advisor agrees*

**Alternate Flow/  
Exceptions:**

- 7.1 *Assign selected advisor*
  - 7.2 *Only 1 advisor can be assigned*
- 

Use case results: Advisor assigned.

Fulfilled requirements:

- Coordinator must find an advisor
- Coordinator must assign thesis advisor
- Coordinator must check the availability of advisor
- Coordinator must provide advisor's contact details to the student
- There can be only 1 thesis advisor per student