



### First Iteration of Report and Presentation

You are expected to follow agile development with Scrum as much as possible for the management of your senior year projects throughout the courses CNG491 and CNG492. Each iteration will be considered as a sprint. You will need to complete the first iteration of your report by using one of the templates given below. Please note that we categorise the graduation projects as (1) standard development projects or (2) research-based development projects. You will need to discuss with your supervisor(s) to decide which category your project belongs. You will need to prepare your report in LaTeX and submit it in .pdf format. The required LaTeX template is available on ODTUCLASS.

You will also need to present your work to the course instructor in your assessment session and answer the questions. Please note that you are expected to use your report to present your work and additional sources (such as Trello, Meeting Notes in Additional Files, Github, etc.). The assessment session of the first iteration will be in Week 7. These sessions are expected to be approximately 20 minutes long for each group and the order of the project groups will be randomly determined and announced in the following days.

### Report Template for Standard Development Project

#### 1. Introduction

*Three questions (What, Why, How)*

##### 1.1. Motivation

##### 1.2. Aim & Objectives

*The single aim and multiple objectives of the project should be discussed.*

##### 1.3. Methodology

*You need to explain the methods you are planning to employ for implementation, testing, and validation.*

#### 2. Requirements

##### 2.1. Stakeholders

##### 2.2. Functional System Requirements

*You are expected to use natural language in a standard form with systematic numbering.*

##### 2.3. Non-functional Requirements

*You are expected not to miss the critical ones. For example, if your project runs real-time, then its performance is critical. Similarly, if your project has a graphical user interface, then the usability of the graphical user interface is critical.*

##### 2.4. Domain Requirements – if any.

##### 2.5. Assumptions and Justifications

*Do not simply put "None"! In most cases, there are assumptions that you need to consider for software development.*

#### 3. System Modelling

##### 3.1. Structured Use Case Diagram

*Do not forget to consider generalisation, inclusion and extension relationships.*

##### 3.2. Sequence Diagrams of the Major Use Cases

*You only need to provide the sequence diagrams for the major use cases, not all of them.*

##### 3.3. Context Model

##### 3.4. Architectural Model

##### 3.5. Process Model

*You should think of the activities in your software product and try to describe its flow by using an activity diagram.*

4. (Graphical) User Interface

*You can use any tool (even Paint is ok) to describe what the (graphical) user interface of your software product will look like. You should consider entry and major views, not only the entry view. Of course, the user interface can be changed in the future.*

5. Agile Development with Scrum

5.1. Sprint Backlog

*The list of tasks completed so far and the time spent. You do not need to write them in the form of user stories.*

5.2. Sprint Burndown Chart

*The chart should show the remaining time of the tasks of the first sprint over the weeks.*

5.3. Sprint Review

*You need to discuss whether the sprint has meet its goal and how, whether any problems and issues related to the project have emerged during the sprint, etc.*

5.4. Spring Retrospective

*You need to discuss how the sprint has been executed, how it can be improved, and how these improvements can be made, etc.*

6. Project Estimation

Grading Item	Mark
Introduction	7%
Requirements	10%
System Modelling	10%
Graphical User Interface	5%
Agile Development with Scrum	10%
Project Estimation	10%

**Report Template for Research-based Development Project**

1. Introduction

*Three questions (What, Why, How)*

1.1. Motivation

1.2. Aim & Objectives

*The single aim and multiple objectives of the project should be discussed.*

1.3. Research Methodology

*You need to explain the methods you are planning to employ for implementation, testing, and validation.*

2. Related Work

*You need to present the background to the problem using a review of related literature. Literature should be up to date, directly relevant and should underpin the problem area chosen. The presentation, proper citations, paraphrasing, use of quotations etc. are very important for this section. Please do not directly copy paragraphs of information from external resources. In case there are simple diagrams you need, draw them from scratch. If the figures are rather complicated, or unique, you can copy them, but for both of the cases, proper citation is essential.*

3. Requirements

3.1. Stakeholders

- 3.2. Functional System Requirements  
*You are expected to use natural language in a standard form with systematic numbering.*
- 3.3. Non-functional Requirements  
*You are expected not to miss the critical ones. For example, if your project runs real-time, then its performance is critical. Similarly, if your project has a graphical user interface, then the usability of the graphical user interface is critical.*
- 3.4. Domain Requirements – *if any.*
- 3.5. Assumptions and Justifications  
*Do not simply put "None"! In most cases, there are assumptions that you need to consider for software development.*
4. System Modelling
  - 4.1. Structured Use Case Diagram  
*Do not forget to consider generalisation, inclusion and extension relationships.*
  - 4.2. Sequence Diagrams of the Major Use Cases  
*You only need to provide the sequence diagrams for the major use cases, not all of them.*
  - 4.3. Context Model
  - 4.4. Architectural Model
  - 4.5. Process Model  
*You should think of the activities in your software product and try to describe its flow by using an activity diagram.*
5. (Graphical) User Interface  
*You can simply use any tool (even Paint is ok) to describe what the (graphical) user interface of your software product will look like. You should consider different views, not only the entry panel. Of course, the user interface can be changed in the future.*
6. Agile Development with Scrum
  - 6.1. Sprint Backlog  
*The list of tasks completed so far and the time spent. You do not need to write them in the form of user stories*
  - 6.2. Sprint Burndown Chart  
*The chart should show the remaining time of the tasks of the first sprint over the weeks*
  - 6.3. Sprint Review  
*You need to discuss whether the sprint has met its goal and how, whether any problems and issues related to the project have emerged during the sprint, etc.*
  - 6.4. Spring Retrospective  
*You need to discuss how the sprint has been executed, how it can be improved, and how these improvements can be made, etc.*
7. Project Estimation

Grading Item	Mark
Introduction	10%
Related Work	10%
Requirements	7%
System Modelling	7%
Graphical User Interface	3%
Agile Development with Scrum	8%
Project Estimation	7%

## Presentation of Work

The presentation of your work will be graded based on the following criteria. Therefore, you are expected to be ready to answer the questions related to the following criteria.

	No Progress (0%)	Unacceptable (2%)	Basic (4%)	Good (6%)	Excellent (8%)
<b>Background, Aims &amp; Organisation</b>					
Formulation of design Problem		The design problem is not formulated clearly.	The problem formulation is unclear in some respects and does not appear to be well thought out.	The problem formulation is clear, but the scope is not well defined.	Design problem formulation is clear and well thought out. The problem scope is well defined.
<b>Utilization of engineering/problem solving skills</b>					
Analysis		Engineering analysis is infrequently used. When used, it appears trivial and leads to obvious conclusions.	Some analysis is included, but it is not very detailed or challenging. Many steps are not supported by calculations.	The engineering analysis is detailed and challenging, but some steps do not appear to be supported by calculations.	Engineering analysis is detailed and challenging and is used at every stage of the design process.
Assumptions		No assumptions are stated.	Assumptions are stated but none are justified.	Assumptions are stated, but some are not justified.	All assumptions are stated and justified.
<b>Extension of knowledge</b>					
Concepts		Prior course contents are not applied correctly. New areas are not included.	Prior course contents are used, but new and unfamiliar areas are not introduced.	Prior course contents used, and some material beyond the course is included.	Concepts beyond those in the prior course contents used are frequently used.
Innovation		No innovative work initiated by student.	Innovative work initiated by student of minimal importance.	Innovative work initiated by student of minimal impact.	Evidence of some promising innovative work initiated by student.
<b>Project management</b>					
Usage		Little evidence of project management.	Use of project management techniques but little evidence of its application.	Use of project management techniques with evidence of its use.	Use of project management techniques with evidence of its continuous use.