

# Team 3

## Vision Document

### Combat

System Development Game Project

Department of Computer Science at Norwegian University of Science and Technology

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#### Revision History

Date	Version	Description	Author
28.02.2019	1.0	Making the document	Team 3

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## 1. Introduction

The purpose of this document is to describe the project in Systemutvikling 1. In this project we are going to develop a combat game. The main goal of this project is to learn programming and create a database. The game must be a multiplayer game where all players play on their own computer. No animated graphics are allowed in this project.

The game is about fighting monsters. All the players are on the same team and must work together to win. The game is turn-based, which means each player take their turn individually. The monsters will also take turns, which the game handles on its own.

### 1.1 References

- [1] lectures and presentations from tuition in object oriented programming and databases.
- [2] gitlab: [https://gitlab.stud.idi.ntnu.no/users/sign\\_in](https://gitlab.stud.idi.ntnu.no/users/sign_in)
- [3]phpMyAdmin: <https://www.phpmyadmin.net/>
- [4]balsamiq: <https://balsamiq.com/>

## 2. Summary

### 2.1 Problem summary

The end product, along with the documentation and presentation, will be evaluated and graded. The given grade affects 45% of the total grade in this course, the remaining 55% being the final exam.

This product can solve the problem of living far away from the other players. It replaces the standard tabletop game that requires that everyone is at the same place. With this product you can play online and the problem is resolved.

### 2.2 Product summary

<b>For</b>	young adults interested in Role-playing fantasy games
<b>Who</b>	wishes to play the game.
<b>The game</b>	is a standalone Java application connected to a database
<b>Which</b>	allows the players to experience a digital adaptation of the combat system from the tabletop game Dungeons & Dragons

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<b>As opposed to</b>	meeting up to play or not being able to play because of distance barriers
<b>this product</b>	allows players to interact with each other through an internet connection

### 3. Stakeholders and users

#### 3.1 Stakeholder summary

Name	Description	Role
User	End user	Creates user, logs in and plays the game.
Lecturer	End user	Makes sure the requirements for the game is met and evaluates the quality of the game.

#### 3.2 User summary

Name	Description	Role throughout the development	Represented by
Student part of Team 3	Student at Department of Computer Science at NTNU	Works towards a finished product with the other team members	Self-represented
Lecturer	Works and teaches at the Department of Computer Science at NTNU	Supervisor for the students, creator of the task and who evaluates the project	Self-represented
Tester	A user outside of the	tests the game,	Self-represented

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	team	especially user interaction and engagement	

### 3.3 User environment

The user will run a standalone Java-application that will connect to a database. The user is required to use a computer to use this application. The user must create its own user profile to play.

### 3.4 User needs

Needs	Priority	About	Solutions
Register as a user	High	Registration	Register by setting a username and password
Change username	Low	Registration	Register a new username for their account
Change password	Low	Registration	Register a new password for their account
Join lobby	Medium	Game	Receive a lobby key from another player and join the lobby
Play the game	High	Game	Log in and start game
View statistics and profile	Medium	Game	Enter "Account" from game menu
Log out	High	Main menu	Disconnect the user from the database by letting them click "Sign out"
View user manual	Medium	Main menu	Button in the main menu that will open

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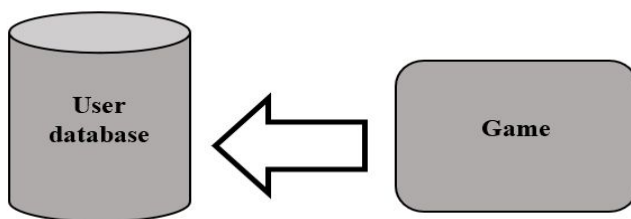
			their standard browser and taking them to the project's wiki
Communicate through a chat	Low	Game	In-game chat
Contact the developers	High	Application and game	Give the users access to a web-page containing necessary information

### 3.5 Alternatives

Other turn based combat games or a Dungeons and Dragons play group.

## 4. Product overview

### 4.1 Role in a user environment



### 4.2 Assumptions and dependencies

Before the start of development, some preconditions has been set. The product should be a multiplayer game with login functionalities. This game will be programmed in Java, as a standalone application. This includes the use of the standard libraries from Java. JavaFX will be used for implementing a Graphical User Interface.

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## 5. Product functional properties

Functional properties
Using the login page, the user enters the username and password to log in to the game.
On the register page you can register a new player if you don't have an account.
Changing the password. If you want to change the password, you can to that here.
The game is a multiplayer game in which the players fight against a monster. The game is played in turns. When the player decides what it wants to do, they roll a digital dice to see if they succeed or fail.
If the players beat the monster, they will gain a level. if they fail, they have to exit the game and retry the level.
The players win the game if all the monsters have been beaten. The monsters are ranked and gets progressively harder to beat.

## 6. Constraints and other requirements

The game needs to be a standalone Java application using the mySQL database provided by the university. Hashing and salting must be used for user passwords. To prevent SQL injections, prepared statements must be used. A connection pool must be used with one connection. 3D-graphics are not allowed.

There is a requirement that the team uses collaboration tools as part of the project, primarily Gitlab. It is required to make a prototype using BalsamiQ and also using JUnit to test all classes in the game. The product must be tested by people who are not part of the team.

The process should be carried out in three iterations. The two first iterations will be presented at the two first team meetings, and the third will be presented in the project presentation.

The first iteration should focus on vision and requirements. An early prototype of the game must be made in BalsamiQ and tested by users outside of the team. On the first team meeting the prototype should be presented, along with the vision document and the domain model.

In the second iteration the focus should be on making a minimum viable product in Java. this

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application must also be tested by users outside of the team. The MVP and the first version of the requirements documentation WIKI should be presented at the second team meeting.

In the third iteration the game and all documentation should be finished.

Submission of the report consists of the main report with all necessary attachments. The attachments include collaboration agreement, project plan with gantt-chart, timesheets for each team member, meeting summonings, vision document and finally links to Gitlab WIKI and JavaDoc pages.