<World Engine>

Supplementary Specification

Version <1.0>

Revision History

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| **Date** | **Version** | **Description** | **Author** |
| <02/june/17> | <1.0> | <The first version that highlights the key non functional requirements of the project> | <Stefanescu Marian> |
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Supplementary Specification

# Introduction

World Engine is an online, browser based game that puts the users in a medieval context, offering them the possibility to interact with a rich world, while also keeping a link with older, retro style games that implement the 2D but perspective maps and characters, for creating the illusion of a 3D world that has the benefit of very low system requirements.

In terms of Supplementary Specifications, this document highlights the key non-functional requirements, but also information that is related with the game like the client side languages used, that imply a certain amount of minimal browser requirements.

# Non-functional Requirements

1. **Loading time**

* Quality attribute: **Loading time** - the time it takes for a page to get loaded from the moment the user accesses the URL of the game(sends a request) until the moment of the last request’s response.
* Source of stimulus: Human
* Stimulus: The user accesses the web page
* Environment: Web browsers that support modern HTML5 specifications
* Artifact: The server were the system is stored
* Response: A set of HTTP response message with status 200
* Response measure: The response interval

# Accessibility

* Quality attribute: Accesibility – the game must support different browsers
* Source of stimulus: Client browser type, version etc.
* Stimulus: The user accesses the web page
* Environement: Web browsers of different types(Chrome, Firefox, Safari, IE)
* Artifact: The server were the game is stored
* Response: A set of HTTP response messages with status 200
* Response measure: The number of differences between the default, expected version and the actual one

## Availability

The server should be available 24/7, because we speak of an online game were time constraints should not be a problem.

## Performance

The main metric behind performance will be the loading time of different web pages of the application along with the request delays.

## Security

The measures of security offered to protect the user’s data, status and also the in-game level. Here the system should be fully protected against Injection attacks and other more subtle (XSS) types of vulnerabilities.

## Testability

In the case of my system, the most important type of tests will the functional top down ones, were at the first stage the system is tested from the perspective of a normal player, testing all the possible combinations and especially the features which have a great number of interdependencies.

Also, in designing my system, I’ve used an MVC structures, which follow a layered approach in the case of the business layer. The idea here is to offer a top – down dependency tree (which can be seen in the UML diagrams) because we want to offer a simple interface from every functional layer to the next. This facilitates Unit testing.

## Usability

The system can be used without problems on any browsers that support HTML5, CSS3 and Javascript. Other requirements are not needed as all the logic is held on the server.

# Design Constraints

Because this is an online, web browser game, a number of difficulties are met, but only at the final levels of the implementation. The vast majority of web servers have PHP and MySQL support, but lack extensevly support for Java or .NET. The exception of course exist, but with the added cost of more expensive hosting plans. PHP is in this sense preferred, as it offers high portability.

Also, on the client side, Jquery, basic Javascript and HTML5/CSS3 is used, so they are a must. For example the drag and drop feature from the village is dependent totally of HTML5.