REVISION HISTORY

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 29/09/2016 | 0.01 | Setting up first version. | Uluç, Eren, Melih |
| 03/10/2016 | 0.02 | Updates to following sections:  - 2.1 Software Development Process  - 2.1.2 Technical Documentation  - 2.2.2 Requirement Management and Documentation  - 4.1 Risk Analysis  - 4.2 Risk Planning | Melih |
| 4/10/2016 | 0.03 | Fixed typos.  Adjusted page layout for page 2 and 3 (some tables and sentences were misaligned).  Updated revision history.  Updated 1.2.1 Abbreviations section. | Uluç |
| 4/10/2016 | 0.04 | Fixed typos.  - 2.1.3 Deliverables  - 2.2.1 Workstation | Berkay |
| 4/10/2016 | 0.05 | Fixed sheet styles and line spacing.  Table of Contents page correction.  Updated Abbreviations.  -2.1.1 Gantt Chart | Arda |
| 12/10/2016 | 0.06 | -2.3 Software Development rules and standards  Added links to the given standards | Eren |
| 12/10/2016 | 0.07 | Updated the risk assessment and risk plan table. | Melih |
| 12/10/2016 | 0.08 | Updated 2.1.1 Gantt Chart. | Arda |
| 12/10/2016 | 0.09 | Updated 2.1.3 Deliverables. | Berkay |
| 12/10/2016 | 0.10 | Updated 1.1 Document Overview | Uluç |

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# Identification

## Document overview

This document contains the software development plan of software RMS. (Room Management System)

Room Management System is a web application aimed for computers. Main purpose of RMS is helping students to find empty rooms which are suitable to study. RMS shows which rooms are currently empty or busy. It is also possible to book rooms through the system.

## Abbreviations

### Abbreviations

RMS: Room Management System

SDP: Software Development Plan

SRS: Software Requirements Specification

STP: Software Test Plan

SDD: Software Detailed Design

SI: Software Integration

STR: Software Test Report

DB: Database

## References

### Project References

|  |  |  |
| --- | --- | --- |
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| - | - | - |

# Software Development Activities

The section lists and describes the software development activities of RMS software development project.

## Software development process

The software development process chosen for the project is the waterfall programming model.

The waterfall programming model was chosen for the reasons below:

Since our development team has detailed knowledge about the Room Management System (RMS) and the requirements of this system, there is no extra thing to add in the future, waterfall is the best option for development process.

### Overview of process phases

### Technical documentation

The following documentation is produced during the design phases:

* Software specification: SRS, STP,
* Software detailed conception: updated SRS, SDD,
* Coding and unit tests: STR of unit tests
* Software tests phases: STR.

### Deliverables:

The following items are delivered at the end of the process:

• Software Detailed Design,

• Software Test Report,

• Software Development Plan,

• Software Requirements Specification,

• Software Test Plan,

• GitHub repositories: https://github.com/ulucsahin/CS320

## Software development tools

### Workstation

Workstation with specs:

* Processor: Amd fx 8320,
* RAM: 8 GB DDR3,
* Storage: 1 TB HDD 7200 RPM

Workstation with specs:

* Processor: Intel i7 5820k 4.1 Ghz,
* RAM: 16 GB DDR3 2666 Mhz,
* Storage: 1 TB HDD 7200 RPM

Workstation with specs:

* Processor: Intel i7 4790 3.7 Ghz,
* RAM: 8 GB DDR3 1867 Mhz,
* Storage: 1 TB HDD 7200 RPM

Laptop with specs:

* Processor: Intel i5 4210U 2.4 Ghz,
* RAM: 6 GB DDR3 1600 Mhz,
* Storage: 500 GB HDD 5400 RPM

Laptop with specs:

* Processor: Intel i5 3210M 2.5 Ghz,
* RAM: 4 GB DDR3 1600 Mhz,
* Storage: 320 GB HDD 5400 RPM

### Requirements management and documentation

Microsoft Word

### Software Design

* Argo UML open source tool
* Microsoft Word

### Coding and automated tests

* Eclipse + JUnit Plugin

### Configuration management

* GitHub will be used for configuration management

## Software development rules and standards

UML will be used for design.

<http://www.omg.org/spec/UML/ISO/19505-1/PDF/>

Google java coding standards will be used.

<https://google.github.io/styleguide/javaguide>

# Responsibilities

## Activities and responsibilities

|  |  |  |
| --- | --- | --- |
| **Activity** | **Responsibility** | **Comment** |
| Project management | Mehmet Uluç Şahin | - |
| Configuration tools management | Mehmet Melih Arıcı | - |
| Setting up the Development tools | Arda Mutlu | - |
| Software specifications | Eren Balatkan | - |
| Database design | Berkay Bayram | - |
|  |  |  |
|  |  |  |

# Risk Assessment

## Risk Analysis

|  |  |  |
| --- | --- | --- |
| **RISK** | **Probability** | **Effects** |
| Wrong time estimation for completing the project | High | Serious |
| Used technology is not very compatible with system requirements | Moderate | Tolerable |
| The size of software is underestimated | Moderate | Tolerable |
| Required training for team members is not available | High | Tolerable |
| One of workers quit the job or some illness problems | Moderate | Tolerable |

## Risk Planning

|  |  |
| --- | --- |
| Risk | Strategy |
| Wrong time estimation | Preparing a reasonable document for senior manager to explain the difficulty of project and requesting some time to complete with showing reasonable excuses. Also, alerting customer for potential delays. |
| Not compatible technology | Changing some minor parts if it is possible, however main part should not be changed because it can affect whole system. |
| Underestimated SW size | Doing some restoration on software to reduce size of it. |
| Lack of training of team | Allocating some time (not too much) and some resources for training the staff. Also, alerting the manager and customer for education delays. |
| Quitting or illness problem | Alerting team members for some extra works. And designating the team member who can substitute illness person for. |