POLITECNICO
MILANO 1863

Code Kata Battle - Eusebio Alberto,
Martini Marcello

Requirement Analysis and Specification Document

Deliverable:	RASD
Title:	Requirement Analysis and Verification Document
Authors:	Eusebio Alberto, Martini Marcello
Version:	1.0
Date:	22-December-2023
Download page:	https://github.com/martinimarcello00/EusebioMartini
Copyright:	Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

Contents

Table of Contents **3**

List of Figures **4**

List of Tables **4**

1 Introduction **5**
1.1 Purpose 5
1.2 Scope 5
1.2.1 World Phenomena 5
1.2.2 Shared Phenomena 5
1.3 Definitions, Acronyms, Abbreviations 5
1.4 Revision history 5
1.5 Reference Documents 5
1.6 Document Structure 5

2 Overall Description **6**
2.1 Product perspective 6
2.1.1 Scenarios 6
2.1.2 Domain models 6
2.2 Product functions 6
2.2.1 Requirements 6
2.3 User caratheristics 6
2.4 Assumptions, Dependencies and Constraints 6
2.4.1 Assumptions 6
2.4.2 Dependencies 6
2.4.3 Constraints 6

3 Specific Requirements **7**
3.1 External interface requirements 7
3.1.1 User interfaces 7
3.1.2 Hardare interfaces 7
3.1.3 Software interfaces 7
3.1.4 Communication interfaces 7
3.2 Functional requirements 7
3.3 Performance requirements 7
3.4 Design constraints 7
3.4.1 Standards compliance 7
3.4.2 Hardware limitations 7
3.4.3 others 7
3.5 Software systems attributes 7
3.5.1 Reliability 7
3.5.2 Availability 7
3.5.3 Security 7
3.5.4 Maintainability 7
3.5.5 Portability 7

4 Formal Analysis Using Alloy **8**

5 Effort Spent **9**

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

List of Figures

List of Tables

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

1 Introduction

This document has been prepared to help you approaching Latex as a formatting tool for your Travlendar+ deliverables. This document suggests you a possible style and format for your deliverables and contains information about basic formatting commands in Latex. A good guide to Latex is available here https://tobi.oetiker.ch/lshort/lshort.pdf, but you can find many other good references on the web.

Writing in Latex means writing textual files having a `.tex` extension and exploiting the Latex markup commands for formatting purposes. Your files then need to be compiled using the Latex compiler. Similarly to programming languages, you can find many editors that help you writing and compiling your latex code. Here https://beebom.com/best-latex-editors/ you have a short oviewview of some of them. Feel free to choose the one you like.

Include a subsection for each of the following items[1]:

- Purpose: here we include the goals of the project
- Scope: here we include an analysis of the world and of the shared phenomena
- Definitions, Acronyms, Abbreviations
- Revision history
- Reference Documents
- Document Structure

Below you see how to define the header for a subsection.

1.1 Purpose

The purpose of the CodeKataBattle (CKB) is to provide a provide a platform where students can improve their software development skills, by solving programming exercises, in this context called as katas. Each kata is proposed by a single instructor throught the platform, and can be addressed by several groups of students in a programming language of choice. katas are composed of the following elements:

- A brief textual description of the problem
- A set of test cases that will the base to evaluate the proposed solution

The platform allows Educators to define deadlines on subscription and submission as long as other constraints such as the maximum and minimum number of students per group and other mechanisms for scoring.The problems are addressed in battles, organized in tournaments, where the groups of students can participate. the partecipation in a turnament can improve a student's rank on the platform and grant them badges, based on the performance measured. The thresholds for badges, their release and the creation of other variables are features available only to educators.

1.2 Scope

... Here you see a subsubsection

[1] By the way, what follows is the structure of an itemized list in Latex.

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

1.2.1 World Phenomena

1.2.2 Shared Phenomena

1.3 Definitions, Acronyms, Abbreviations

1.4 Revision history

1.5 Reference Documents

1.6 Document Structure

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

2 Overall Description

Here you can see how to include an image in your document.

2.1 Product perspective

2.1.1 Scenarios

2.1.2 Domain models

2.2 Product functions

2.2.1 Requirements

2.3 User caratheristics

2.4 Assumptions, Dependencies and Constraints

2.4.1 Assumptions

2.4.2 Dependencies

2.4.3 Constraints

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

3 Specific Requirements

3.1 External interface requirements

3.1.1 User interfaces

3.1.2 Hardare interfaces

3.1.3 Software interfaces

3.1.4 Communication interfaces

TODO: use case diagrams, use cases and associated sequence/activity diagrams, and mapping on requirements

3.2 Functional requirements

3.3 Performance requirements

3.4 Design constraints

3.4.1 Standards compliance

3.4.2 Hardware limitations

3.4.3 others

3.5 Software systems attributes

3.5.1 Reliability

3.5.2 Availability

3.5.3 Security

3.5.4 Maintainability

3.5.5 Portability

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

4 Formal Analysis Using Alloy

Organize this section according to the rules defined in the project description.

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved

5 Effort Spent

Provide here information about how much effort each group member spent in working at this document. We would appreciate details here.

Copyright © 2023, Eusebio Alberto, Martini Marcello – All rights reserved