Chapter 1

Introduction

Chapter 2

Purpose

WORK IN PROGRESS

Chapter 3

Scope

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Chapter 4

Definitions, Acronyms, Abbreviations

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4.1 Revision History

1. Version 1.0 - 10th December 2018

4.2 Reference Documents

- Rumbaugh, Jacobson, Booch. 1999. *The Unified Modeling Language Reference Manual.* Addison-Wesley.

- MIT Software Design Group. *Appendix B: Alloy Language Reference.* http://alloytools.org/documentation.html

- MIT Software Design Group. *Tutorial Materials, Slides.* http://alloytools.org/tutorials/day-course/

4.3 Document Structure

This document is divided into six chapters.

First chapter   It introduces the project in terms of purpose, scope and goals. Moreover, it contains the definitions, acronyms and abbreviations needed to properly understand the sections following. All the documents used during the development of this project are listed.

Second chapter   This chapter goes deep into the system description and definition. In particular it has:

- A detailed description of the product to be delivered and its features.

- A list of all domain assumptions that enable to reach the goals described in section 1.3.

- A description of users for which the product was thought.

Third chapter   It analyzes and lists all the requirements needed to reach the goals described in section 1.3. Requirements are a huge and fundamental part of the project life cycle. Therefore, the chapter is divided in several sections, one for each aspect of requirements definition:

- Functional Requirements are listed as a description of interfaces, scenarios and uses cases (use case and sequence diagrams are included).

- Non Functional Requirements: performance, reliability, availability, security, portability.

- Any design constraint.

Fourth chapter   This chapter is dedicated to the formalization of the system and its scope through a formal representation of entities and constraints using Alloy. The representation is split between Data4Help, AutomatedSOS and Track4Run to keep the generated world as simple as possible and to keep the three systems separated even if they have some interaction. In fact, AutomatedSOS and Track4Run do not have interactions between each other, but they do with Data4Help. Therefore Data4Help appears in the world dedicated to the two *Services*.

Fifth chapter   Effort spent by all team members is shown as the list of all activities done during the realization of this document.

Sixth chapter   References of documents that this project was developed upon.