POLITECNICO
MILANO 1863

Travlendar+ project YOUR NAMES

Requirement Analysis and Specification Document

Deliverable:	RASD
Title:	Requirement Analysis and Verification Document
Authors:	Luca Alessandrelli, Andrea Caraffa, Andrea Bionda
Version:	1.0
Date:	19-October-2018
Download page:	https://github.com/lucaalessandrelli/AlessandrelliCaraffaBionda.git
Copyright:	Copyright © 2017, Luca Alessandrelli, Andrea Caraffa, Andrea Bionda – All rights reserved

Copyright © 2017, YOUR NAMES – All rights reserved

Contents

Copyright © 2017, YOUR NAMES – All rights reserved

Copyright © 2017, YOUR NAMES – All rights reserved

List of Figures

List of Tables

Copyright © 2017, YOUR NAMES – All rights reserved

1 Introduction

1.1 Purpose

The following Requirements Analysis and Specification Document examines a possible solution for a specific system-to-be provided by the TrackMe company. Therefore, this document contains the description of the scenarios, the use cases that described them, and the models describing requirements and specification for the system-to-be.

Data4Help is a location-based health information service-to-be that allows third parties to monitor the location and health status of individuals. The given problem is to design and develop this service and other two services, AutomatedSOS and Track4Run, which exploit the features offered by Data4Help.

AutomatedSOS is a service-to-be thought to help elderly people. Constantly monitoring the health status of the subscribed customers, this service sends to the location of them an ambulance as soon as the recorded values are anomalus, for example when some health parameters are below certain thresholds.

Finally, Track4Run is a service-to-be to track ahtletes participing in a run. The serive, allows organizzers to define path for the run, participants to enroll to the run and spectators to see on a map the position of all the runners during the run.

1.2 Scope

... Here you see a subsubsection

1.2.1 Goals

- Data4Help
  - G.1 Locate users' position on demand and in real time.
  - G.2 Retrieve users' health status on demand and track it in live.
  - G.3 Allow third parties registered to retrieve information about users with single and group requests.
  - G.4 Ensure users' privacy.
  - G.5 Allow third parties to retrieve historical data and statistics about users.
- AutomatedSOS
  - G.1 Monitor in real time users' health status with more attention to critical parameters.
  - G.2 Allow only health-interested third parties the access to data detected by AutomatedSOS.
  - G.3 Provides to send an ambulance if certain parameters are below critical values.
- Track4Run
  - G.1 Allow races organizer to promote into the system a new race and specify all the useful information about the race.
  - G.2 Allow users to enroll on a specific race.
  - G.3 Allow users to watch in real time the position of every athletes in a specific race during the run.

1.2.2 World Phenomena

... what are world phenomena???

Copyright © 2017, YOUR NAMES – All rights reserved

1.3 Definitions, Acronyms, Abbreviations

- Definitions

(a) User: authenticated individual that provides information about himself

(b) Third party society: external society interested to retrieve data from TrackMe's user.

(c) Single request: request of data from a specific registered individual.

(d) Group request: request of data from many individuals.

(e) Live acquisition: third parties can access to data as soon they are ready, through service updates.

(f) On demand acquisition: third parties can access to data when they request them.

(g) Subscribers: third parties allowed to receive live acquisition about preselected group.

(h) User credentials: information that an individual has to provide to become a registered user: name, surname, date of birth, address, email, telephone number, job, marital status and fiscal code.

(i) Third parties' credentials: information that a company has to provide to become a registered one: company name, p.iva.

(j) Race information: all the information about the run: name, date, promoters, maximum number of participants and race path.

1.4 Revision History

... Here you see a subsubsection

1.5 Reference Documents

... Here you see a subsubsection

1.6 DocumentStructure

... Here you see a subsubsection

Copyright © 2017, YOUR NAMES – All rights reserved

2 Overall Description

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

Here is the command to refer to another element (section, figure, table, ...) in the document: *As discussed in Section 1.6 and as shown in Figure* **??**, ... Here is how to introduce a bibliographic citation [**?**]. Bibliographic references should be included in a `.bib` file.

Table generation is a bit complicated in Latex. You will soon become proficient, but to start you can rely on tools or external services. See for instance this https://www.tablesgenerator.com.

2.1 Product perspective

Here we include further details on the shared phenomena and a domain model (class diagrams and statecharts)

2.2 Product functions

Here we include the most important requirements

2.3 User characteristics

Here we include everything that is relevant to classify their needs.

2.4 Assumptions, dependencies and constraints

In the specification document certain parts were not specific and were ambiguous. So we decided to make the following assumptions.

2.4.1 Text Assumptions

- Data4Help
  (a) Individuals can always see all the data that have been acquired from his monitoring.
  (b) Only third parties can request monitoring service.
  (c) Groups are characterized by its member's attributes (age, gender, city, etc. . .)
  (d) In order to perform single mode acquisition, third parties has to insert fiscal code of tracked user (aka: nor security number nor fiscal code are visible on the application).
  (e) In order to perform group mode acquisition, third parties has to select attributes of individuals in which they are inserted
  (f) Discriminative attributes are all the credentials inserted by user (i.e. age, job etc...), their location more or less precise (country, region, city, neighbourhood ..) and the period of time interested (days, weeks, months..)
  (g) Third parties in group mode are interested in number of users that match attribute specified, their statistics and the statistics of group health status.
  (h) Third parties in single mode are interested to retrieve the sequence of position and health status information, detected from a certain users during a selected time period.
- AutomatedSOS
  (a) For this service individuals subscribe to Third Parties and not the other way around.
  (b) Third parties that want to exploit this service need to enable the individual registration function.

Copyright © 2017, YOUR NAMES – All rights reserved

(c) Who are these Third Parties? (Only croce rossa like , or even doctors. . .) (dal testo rileggendolo si capisce che sono solo tipo croce rossa)

(d) There are multiple parameters that can have a threshold and every third parties have their own.

(e) Only for elderly people like written in the document or any individual could use this AutomatedSOS

(f) Special devices for elderly people?

- Track4Run

(a) Any user can organize an event.

(b) An event can be public or private.

(c) An event can have some parameters, for example if it's public then a parameter could be the maximum amount of participants.

(d) If the event is private then, the organizer need to know the security number or the fiscal code of the athletes to invite them to the event, and also the ones of the spectators.

(e) If the event is public then every user can spectate the event.

(f) All users invited to an event can accept or discard the request.

(g) Race path are always composed by citizen routes (never in private circuits or stadium)

2.4.2 Domain Assumptions

- Data4Help

D.1.1 The identification (fiscal code, social security number) and the secondary data (attributes) given by the individual during the registration are correct.

D.1.2 Individuals always have a device with them so that they will be properly monitored.

D.1.3 The location of individuals is acquired using GPS technology.

D.1.4 Devices used to monitor individuals always work and report the correct values.

- AutomatedSOS

D.2.1 All devices used to monitor the health of the individual always work and report the correct values.

D.2.2 The ambulance successfully reach the location of the individual.

D.2.3 The ambulance always get to the location in the minimum amount of time.

D.2.4 As soon as the parameters get below the threshold, the ambulance gets notified

- Track4Run

D.3.1 The path defined by the organizer actually exist

D.3.2 If an athlete enroll to a run then he also participates to the run.

D.3.3 All athletes have their tracking devices with them for the entire duration of the run.

D.3.4 Athletes never go out of the defined path defined.

Copyright © 2017, YOUR NAMES – All rights reserved

3 Specific Requirements

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

3.1 External Interface Requirements

3.1.1 User Interfaces

3.1.2 Hardware Interfaces

3.1.3 Software Interfaces

3.1.4 Communication Interfaces

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 Any other constraint

3.5 Software System Attributes

3.5.1 Reliability

3.5.2 Availability

3.5.3 Security

3.5.4 Maintainability

3.5.5 Portability

Copyright © 2017, YOUR NAMES – All rights reserved

4 Formal Analysis Using Alloy

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

Copyright © 2017, YOUR NAMES – All rights reserved

5 Effort Spent

In this section are provided information about how much effort each group member spent in working at this document.

5.0.1 Luca Alessandrelli

Date	Task	Hours
18/10/18	Goals	1
19/10/18	Domain Assumptions	3
	Total	4

5.0.2 Andrea Caraffa

Date	Task	Hours
18/10/18		
19/10/18		
	Total	

5.0.3 Andrea Bionda

Date	Task	Hours
18/10/18		
19/10/18		
	Total	

Copyright © 2017, YOUR NAMES – All rights reserved

6 References

asdasd

Copyright © 2017, YOUR NAMES – All rights reserved