POLITECNICO
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Travlendar+ project YOUR NAMES

Requirement Analysis and Specification Document

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1 Introduction

1.1 Purpose

This document represents the Requirement Analysis and Specification Document (RASD). The goal of this document is to describe the software application and focus on all its features. Furthermore, it's interested to describe the functional and non-functional requirements of the system. Show the constraint, imposed by stakeholders and application environment, the limits of the software. This document is intended to all people that are interested to the project, such as stakeholders, investors and all developer and programmer that have to implement the application.

1.2 Scope

The application to develop is a mobile application that is called Travlendar+. This software is intended to help people with many commitments to manage the calendar on their smartphone. The only action that the user has to do is insert his daily appointments. The application should be able to organize the whole user's day, providing advice and reminding all inserted appointment. The application aims to be an advanced calendar management system, since it isn't a simple appointments reminder but it has a lot functionality that allow to the user to be always well organized. Lot are the functionality that the application provides, such as the complete transport management, that allow to compute the travel time and to identify the better travel solution basing on user's preferences and environment information, such as weather conditions. The user can choose if travel with own car or walk. He can decide to travel also in public transport and the application provides to the user the transport schedules and which transport choose. The system allows also the functionality to buy a ticket in-app. Furthermore, the application is able to find the car sharing or bike sharing points nearest to the user. It has an advices system when the appointment and the travel times overlaps. Daily the application can set a little time window (at most half an hour) reserved for the lunch. As this functionality, the user can schedule little break that the application set in day autonomously.

1.3 Definition, Acronyms, Abbreviations

1.3.1 definition

1.3.2 acronyms

1.3.3 abbreviations

1.4 Revision history

1.5 Reference documents

1.6 Document structure

2 Overall Description

2.1 Product perspective

The product we will provide is an application distributed for any kind of device that supports Android as operative system. This application will immediately be useble as soon as you install it on a device. It will not have any internal interface for administration but it will be only user based. (UML e stateCharts)

2.2 Product functions

This application aims to provide a smart calendar, which schedules the best organization, taking account of your personal appointments, which you inserted in the calendar. The computed schedule depends on some preferences that you filled out and you can modify them when you want.

2.3 User characteristics

We recommend the application to a person who wants to organize easily his time in the best way. He will be able to benefit from this service in a very simple way because Travlendar+ requires only basic knowledge of a simple calendar. After registering an account, the application is ready to handle his commitments, so scheduling the best organization.

2.4 Domain Assumption and Dependencies

- For any day user can create unlimited number of events.
- User has only one calendar.
- There isn't any dependence between users.
- User can choose among some alternative travel proposals.
- If an event is overlapping another one, the user must select a choice from the choices proposed.
- User can delete an event.
- User can modify an event already created.
- User can change the scheduling proposed.
- User can select in which preferences the scheduling based on.
- Notification of best proposal will be shown.
- Notification of any problem that occurs will be shown.

2.5 Constrains

Travlender+ requires:

- Internet connection enabled on own device
- GPS available on own device
- Login during the first access
- Initially registration with an account

- Android device
- Milano as the default city
- 30 Mb(?) of storage memory available on own devise to be installed

3 Specific Requirements

3.1 External interface requirements

3.1.1 User interface

3.1.2 Software interface

3.2 Functional requirements

3.2.1 [G1] Allow a Guest to create a registered Travlendar+ account.

3.2.2 [G2] Allow an User to log in into his Travlendar+ account.

3.2.3 [G3] Allow an User to create a new appointment in his calendar.

3.2.4 [G4] Allow an User to delete an existing appointment from his calendar.

3.2.5 [G5] Allow an User to edit an existing appointment in his calendar.

3.2.6 [G6] Allow an User to view his appointments.

3.2.7 [G7] Allow an User to view his Daily Schedule

3.2.8 [G8] Allow an User to navigate and choose between different travel alternatives.

3.2.9 [G9] Allow an User to manage alerts for each appointment.

3.2.10 [G10] Allow an User to manage his travel preferences.

3.2.11 [G11] Allow an User to buy public transportation tickets.

3.3 Design constraints

3.3.1 Standards compliance

3.3.2 Hardware limitations

3.4 Software system attributes

3.4.1 Reliability

3.4.2 Availability

3.4.3 Security

3.4.4 Maintainability

3.4.5 Portability

4 Formal Analysis Using Alloy

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

5 Effort Spent

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

References

[1] S. Bernardi, J. Merseguer, and D. C. Petriu. A dependability profile within MARTE. *Software and Systems Modeling*, 10(3):313–336, 2011.

