POLITECNICO
MILANO 1863

Travlendar+

Design Document

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1 Introduction

1.1 Purpose

1.2 Scope

1.3 Definitions, Acronyms, Abbreviations

- API: Application Programming Interface.
- DD: Design Document
- GPS: Global Positioning System.
- GSM: Global System for Mobile Communications.
- GUI: Graphical User Interface.
- OAMOT: Other Autonomous Means of Transport
- ONAMOT: Other Non-Autonomous Means of Transport
- OS: Operating System.
- RAM: Random-access memory.
- RASD: Requirement analysis and Specification Document.
- SMS: Short Message Service.

1.4 Revision history

- Mandatory Project Assignments.pdf
- Requirements Analysis and Specification Document
- Design Deliverable Sample from A.Y. 2015-2016.pdf
- DD From the car sharing project.pdf
- Integration and test plan from the car sharing project.pdf

1.5 Reference Documents

1.6 Document Structure

2 Architectural design

2.1 Overview

Travlendar+ is based on a three-tier architecture. A diagram of the proposed system was already present in section 2.4.3 of the RASD; here we provide on the same diagram a division between the different tiers and a more detailed description of each one of these.

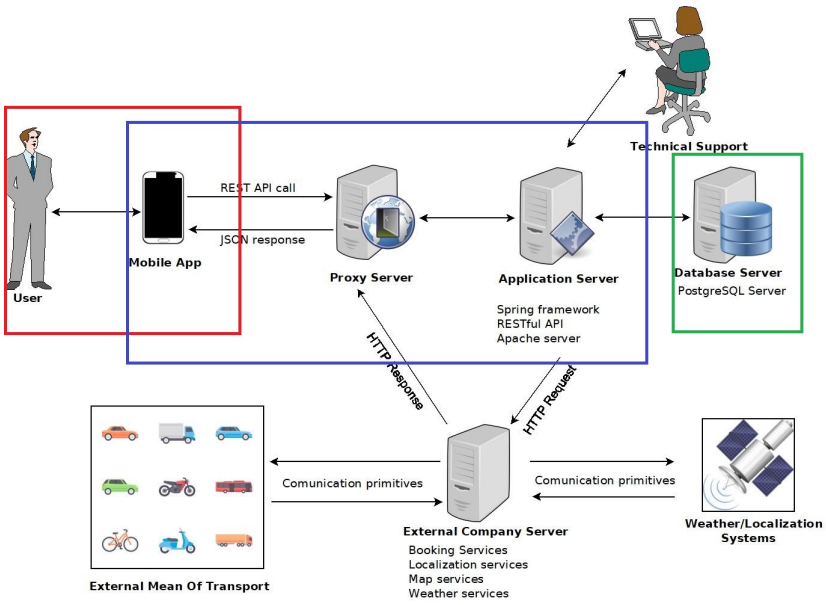

Figure 1: Proposed system with tier division. Red: presentation, Blue: logic, Green: data

The presentation layer consists of the mobile application, which provides a GUI for the interaction of the user with the service.
The logic layer is mainly represented by the application server, where all main decisions and computation take place, although a small part of logic is left to the mobile application (simple elaborations of data such as the location of the user through GPS, or remodeling of the view presented to the user).
A proxy server is inserted between the application server and the mobile application for security reasons.
Finally, the data layer is represented by the database server, interacting with the application server when needed.

3 Algorithm design

4 User interface design

5 Requirements traceability

6 Implementation, integration and test plan

7 Effort spent

8 References