

DD

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1 Introduction

1.1 Purpose

This document represents the Design Document (DD) for SmartParking mobile application. The purpose of this document is to provide an overall guidance to the architecture of the software product and the interaction between all the components of the system to be developed, following the requirements and the goals that the software must satisfy.

1.2 Scope

SmartParking is a crowd-sourced application where users can view all the street parkings around them, together with detailed information. Users can also filter the parkings in several ways: the closest to the city center, the cheapest, etc... Moreover, users can pay the fee directly from the app, choosing the payment type and how much they want to stop.

1.3 Definition, Acronyms, Abbreviations

1.3.1 Definitions

- **User:** any client of the service, a person that logs in the system and uses it.
- **User Device:** any compatible device with the SmartParking application, mainly smartphones.
- **App:** abbreviation for the SmartParking Mobile Application.

1.3.2 Acronyms

- **DD:** Design Document.
- **API:** Application Programming Interface.
- **GPS:** Global Positioning System.
- **DMZ:** Demilitarized Zone.

1.3.3 Abbreviations

- **[Gn]:** n-goal.
- **[Rn]:** n-functional requirement.

1.4 Revision History

- 2/12/2019: First Version of DD Document.

1.5 Reference Documents and Used Tools

Reference Documents

Used Tools

- *Github*: <https://github.com/>
- *TexMaker*: <https://www.xmlmath.net/texmaker/>
- *Draw.io*: <https://www.draw.io/>
- *AdobeXD*: <https://www.adobe.com/it/products/adobexd.html>
- *LucidChart*: <https://www.lucidchart.com/>

1.6 Document Structure

1. **Introduction:** This section introduces the Design Document. It explains the Purpose, the Scope and the conventions of the document.
2. **Architectural Design:** This section describes the components used for the system and the relations between them, providing information about their deployment and how they works. It also specifies the architectural styles and the design patterns chosen to design the system.
3. **User Interface Design:** This section provides an overview on how the User Interface will look like. This section will be brief because the most important UI designs are specified in the RASD: we will add some more Screens and describe them.
4. **Requirements Traceability:** This section explains how the requirements specified in the RASD correspond to those specified in this document.
5. **Implementation, Integration and Test Plan:** This section contains the order of the system's subcomponents implementation, integration and testing.

2 Architectural Design

2.1 Overview: High Level Components and their Interactions

2.2 Component View

2.3 Deployment View

2.4 Runtime View

2.5 Component Interfaces

2.6 Architectural styles and patterns

2.7 Other Design decisions

3 User Interface Design

4 Requirements Traceability

5 Implementation, Integration and test plan

6 Effort Spent

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Date	Subject	Hours
Total		0

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Date	Subject	Hours
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