

Politecnico di Milano  
A.A. 2015-2016  
Software Engineering 2: “myTaxiService”  
**Design Document**

Roberto Clapis (841859), Erica Stella (854443)

December 2, 2015



# Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
1.1	Purpose . . . . .	3
1.2	Scope . . . . .	3
1.3	Definitions, Acronyms, Abbreviations . . . . .	3
1.4	Reference Documents . . . . .	3
1.5	Document Structure . . . . .	3
<b>2</b>	<b>Architectural Design</b>	<b>4</b>
2.1	Overview . . . . .	4
2.2	High Level Components and Their Interaction . . . . .	4
2.3	Component View . . . . .	4
2.4	Deployment View . . . . .	5
2.5	Runtime View . . . . .	6
2.6	Component Interfaces . . . . .	6
2.7	Selected Architectural Styles and Patterns . . . . .	6
2.8	Other Design Decisions . . . . .	6
<b>3</b>	<b>User Interface Design</b>	<b>6</b>
<b>4</b>	<b>Requirements Traceability</b>	<b>6</b>
<b>5</b>	<b>References</b>	<b>6</b>
<b>6</b>	<b>Appendix</b>	<b>7</b>

# **1 Introduction**

## **1.1 Purpose**

The purpose of the Design Document is to provide documentation in order to aid the development of myTaxiService's system by providing a description of how it should be built and how its components are expected to interact with each other.

## **1.2 Scope**

This Design Document is intended to explain the design and architecture of myTaxiService, a new application that will provide an easy way to access the taxi service in a city. It describes the system both from a software and hardware point of view, in order to clarify the system's structure and how it accomplishes its functionalities.

## **1.3 Definitions, Acronyms, Abbreviations**

### **1.3.0.1 Definitions**

- 

## **1.4 Reference Documents**

- Document with the assignment for the project
- RASD for myTaxiService
- Template for the Design Document
- IEEE standard for Software Design Document
- The IEEE standard for architecture descriptions

## **1.5 Document Structure**

The following parts of this document are structured in 3 sections: architectural design, user interface design and requirements traceability. The architectural design section describes the software and hardware components of the system and their interactions. The user interface design section which refers to the "User Interfaces" subsection of the RASD. The requirements traceability section that explains how the proposed design meets the requirements that have been defined in the RASD.

## 2 Architectural Design

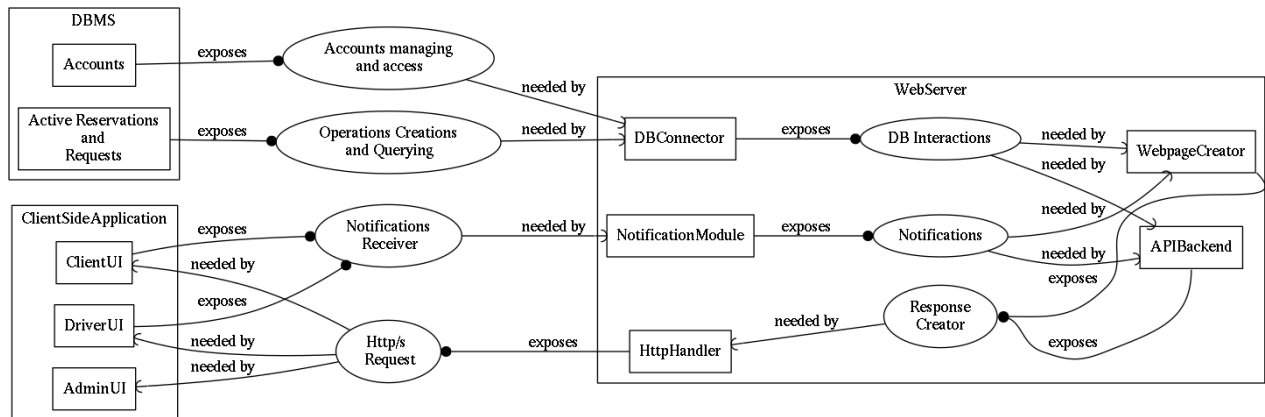
### 2.1 Overview

The system to be developed, as mentioned before, will be used to provide an easy access to a taxi service. Therefore, its main functionalities, that will have to be supported by the design and architecture, are: the storage of the taxi drivers' and clients' accounts, the computation of the taxi queue of each zone and the handling of requests and reservations. Furthermore, the system will have to comply to quality of service attributes as specified in the RASD.

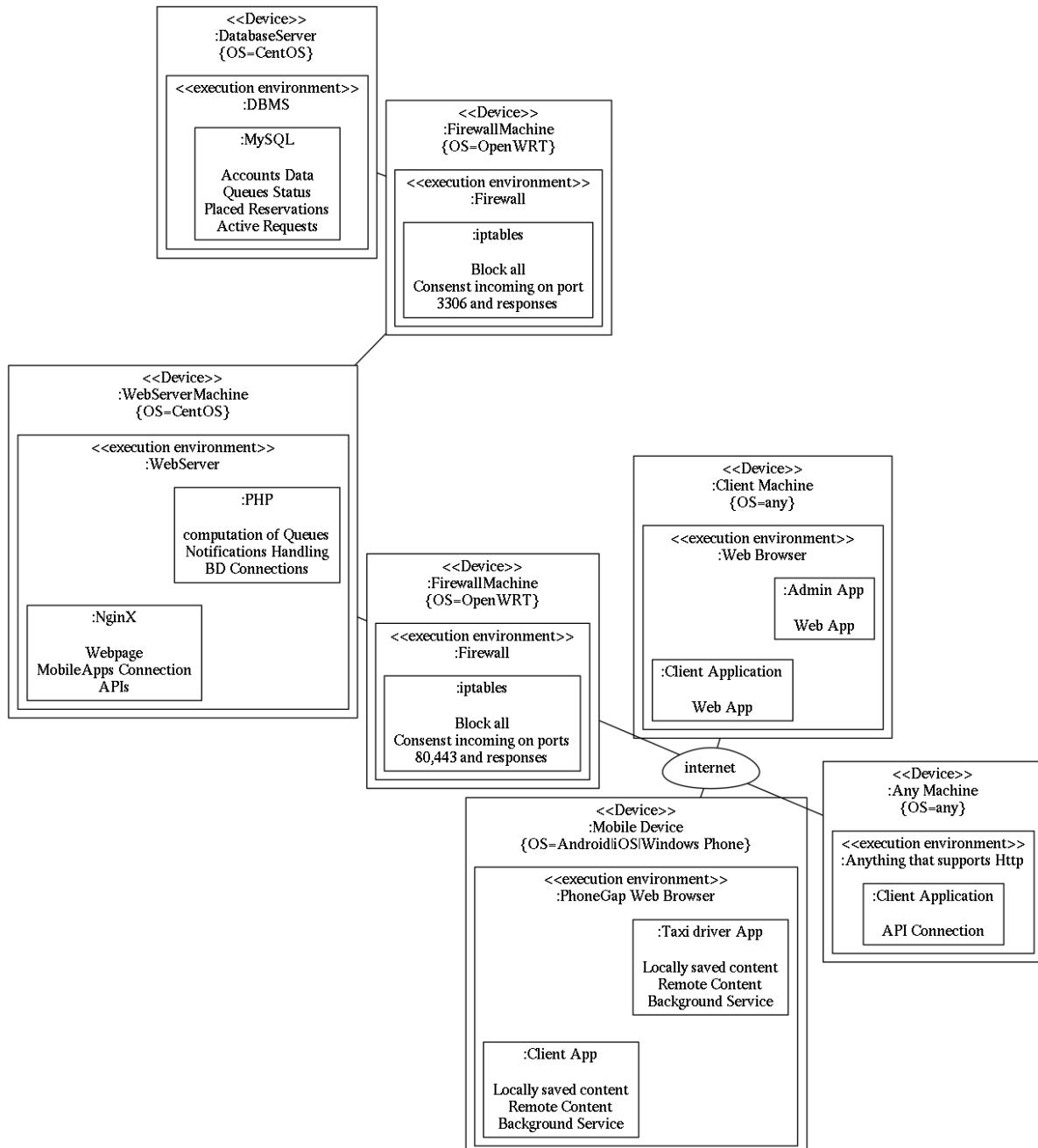
### 2.2 High Level Components and Their Interaction

myTaxiService's system is composed by three main components: DBMS, Web Server and the client application. The client application provides the UI through which end-users (taxi drivers, administrators and clients)

### 2.3 Component View



## 2.4 Deployment View



## **2.5 Runtime View**

## **2.6 Component Interfaces**

## **2.7 Selected Architectural Styles and Patterns**

## **2.8 Other Design Decisions**

# **3 User Interface Design**

This section has been explored in RASD's section 2.1.1 "User Interfaces" so we refer to that one.

# **4 Requirements Traceability**

# **5 References**

## 6 Appendix

Appendix for Roberto Clapis

Work hours: 15

Software Used:

Task	Software
Edit $\text{\LaTeX}$ Source	Vim
Edit Graphs Sources	Vim
Edit sources for Sequence Diagrams	Vim
Convert Sequence Diagrams to images	Quick SequenceDiagramEditor
Generate and Raster directed graphs	Dot
Generate and Raster undirected graphs	Fdp
General images mangling and cropping	ImageMagick & Shotwell
Convert $\text{\LaTeX}$ source to PDF	$\text{\LaTeX}$ MK
Spell Check	Aspell
$\text{\LaTeX}$ Check	LaCheck