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Politecnico di Milano

Software Engineering 2 Project
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Customers Line-up
Design Document

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Banfi Stefano Alessandro
Bresciani Matteo

Referent professor: Di Nitto Elisabetta

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Chapter 1

Introduction

1.1 Purpose

The Design Document aims to give usefull information to help in software development by providing the details for how the software should be built. In particolar it should be detailed enough so that developers could code the project without having to make any significant decisions. This is done thanks to detailed description with graphical documentation of the software design for the project including different diagram type and other supporting requirement information.

1.2 Scope

The main scope of the system is to provide users the possibility to make a booking in order to give access to the market. This could be done with two possibilities: the first allows users to be inserted in the virtual queue; instead, the second give the possibility to schedule the booking in a precise moment in an particular day. So, the system have to reply users' requests in real time without waiting more than few seconds due to its reliability. To achieve this, the system is organized with a three tiers architecture which divides the systems in independent modules: presentation, application and a data tier. The detailed architecture will be described as wellin the next chapter.

1.3 Definitions, Acronyms, Abbreviations

1.4 Revision history

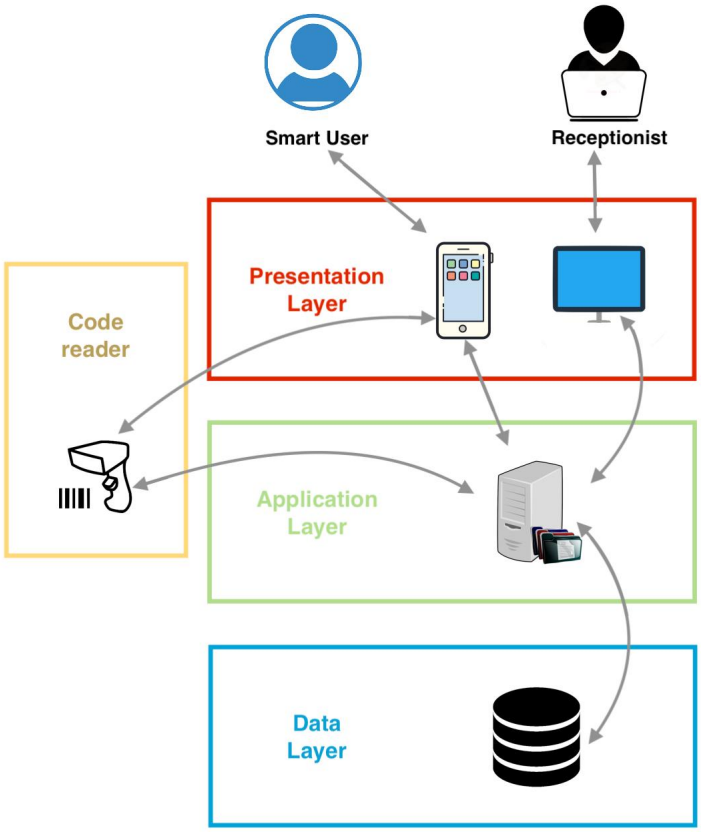
1.5 Reference Documents

1.6 Document Structure

Chapter 2

Architectural Design

Figure 2.1: Three tiers architecture of the system



2.1 Overview: High-level components and their interaction

The system is organized following the three tiers architecture. This aims to decouple logical layers in order to gurantee an horizontal scalability and a low fault tolerance. Graphically it's shown in the figure 2.1.

Presentation layer. It's the front end layer which consists of the user interface. We have two types of user interface, depending on his funcitonality:

- **CLup**: It's the mobile application used by users who have a smartphone. They can manage their booking by themselves;
- **CLup Operator**: It's the desktop application used by receptionists who act as an intermediary to manage booking of users that have only a mobilephone.

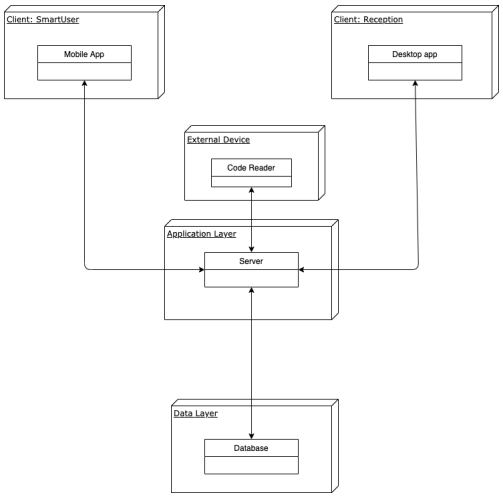
Application layer. It deals with the model of the system, by containing the business logic of the application. In our system it consists in a remote server to which mobile and desktop applications have to connect due to manage any bookings.

Data layer. It's composed by a data storage system. It includes:

- User sensitive data asked during the registration process;
- Information about user's grocery shopping;

2.2 Component view

Figure 2.2: High-Level component diagram



component diagram ogni componente descritto er diagram o class diagram specificp

-strittura -model applicazione -database

2.3 Deployment view

-deployment diagram

2.4 Runtime view

sequence diagrams

2.5 Component interfaces

ogni componente app server+db laptop receptionist

2.6 Selected architectural styles and patterns

mvc + tier + ..

2.7 Other design decisions

security+google api

Chapter 3

User Interface Design

ux diagram

Chapter 4

Requirements Tracebility

requirement of rasd in relation to components

Chapter 5

Implementation, Integration and Test Plan

how to (dividing each parts)

testing how to integratio plan

Chapter 6

Effort Spent

Chapter 7

References