

---

# **Software Requirements Specification**

**for**

**Cafe Order/Management SW**

**Version 1.0 approved**

**MIT**

**22th April 2015**

**Prepared by :**

**Son Dongho  
Lee Jaesung  
Seo Sungho  
Park Chanyoung  
Choi Gwanggyu**

# TABLE OF CONTENTS

## **1. Introduction**

- 1.1. Purpose
- 1.2. Scope
- 1.3. Definitions, acronyms & abbreviations
- 1.4. References
- 1.5. Overview

## **2. Overall description**

- 2.1. Product perspective
  - 2.1.1. User interfaces
  - 2.1.2. Hardware interfaces
  - 2.1.3. Software interfaces
  - 2.1.4 Memory constraints
- 2.2. Product functions
- 2.3. User characteristics
- 2.4. Assumptions and dependencies
- 2.5. Apportioning of requirements

## **3. Specific Requirements**

- 3.1 External interface requirements
  - 3.1.1 User interfaces
  - 3.1.2 Hardware interfaces
  - 3.1.3 Software interfaces
    - 3.1.3.1 Incoming and Outgoing Items
    - 3.1.3.2 Services and Communications
  - 3.1.4 Communication interfaces
- 3.2 Functional requirements
- 3.3 Performance requirements
- 3.4 Design constraints
- 3.5 Software system attributes
  - 3.5.1 Reliability
  - 3.5.2 Availability
  - 3.5.3 Security
  - 3.5.4 Maintainability
- 3.6 Other requirements

# 1. Introduction

## 1.1 Purposes

The purpose of this Software Requirements Specification (SRS) document is to provide a detailed description of the functionalities of the Cafe Order Management (COM) system. This is the SRS document will help you understand the COM system. This document also will also provide a description of the communication between the software and the each system.

## 1.2 Scope

To implement Cafe Order Management (COM) systems, especially in Cafe529 at Ansan, there is a need for a Android application to ordering coffee in a user-friendly format and total management JAVA program to Point Of Sale (POS) machine. Android application support all customer actions in their table which include order, cancel, coupon. JAVA program manage an order list in chronologically and support control of process.

## 1.3 Definitions, acronyms & abbreviations

## 1.4 References

ZILDOR Inc. SplitPay SRS : [https://cise.ufl.edu/class/cen3031fa13/SRS\\_Example\\_1\\_2011.pdf](https://cise.ufl.edu/class/cen3031fa13/SRS_Example_1_2011.pdf)  
Aristotle University, SRS : [http://gparted.sourceforge.net/docs/sw-req-spec/C/Software\\_Requirements\\_Specification\\_-\\_GParted.pdf](http://gparted.sourceforge.net/docs/sw-req-spec/C/Software_Requirements_Specification_-_GParted.pdf)  
Attendance Tracking System SRS : <http://nkhalid.seecs.nust.edu.pk/SE/sample%20SRS%20for%20time%20attendance%20system.pdf>  
Virtual Medical Home SRS Document

## 1.5 Overview

This SRS contains customer Requirements and entire systems of our software. Requirements is divided into functional requirements, performance requirements, Design Constraints. Entire systems are mainly divided into hardware and software. this SRS observes IEEE standard.

## 2. Overall description

### 2.1 Product Perspective

The Cafe Ordering/Management system is a new system that not only makes cafe customer order more easy, but also helps employees reduce time spending for customer counter ordering. our project contains both server-side and client-side. Figure 1 shows context diagram explains entire system in brief.



### 2.1.1 User Interfaces

Android application is consist of 1 activity and 2 dialogs. Our activity contains 4 fragments. each Fragment interacts with customer for ordering, checking the order. Java program contains 2 main Layout. one is for checking counts of order, the other is for check bills of each layout.

### 2.1.2 Hardware Interfaces

Our system is consist of Android tablets, one desktop for server and Java Program. specific hardware models and spec of hardwares will be wroten later version.

### 2.1.3 Software Interfaces

*COM is to be developed under following environments.*

Program	Development Environment	Program Language	Tool
Customer Order App	Mac OS x	Android SDK , Java	Android Studio
Management Program	Mac OS x	Java	Eclipse IDE Luna
Server	Mac OS x	PHP	Sublime Text2

### 2.1.4 Memory constraints

2GB external spaces is required. over 1GB memory is required for good work Beacause Android mobile application should contains 4~6 advertise videos.

## 2.2 Product functions

S.No.	Particulars
1	Advertisement
2	Next Page
3	User Registration
4	Menu & Order
5	Notification
6	Oreder list view
7	Order accept
8	Order detail
9	Order Cancel
10	Order refund
11	Undo

## 2.3 User Characteristics

Customer	<p>Customer orders menu, Wait for coffee.</p> <p>90 percent of customers are from twenty to thirty. So they are familiar with android devices. after our system applied, Cafe don't have to helps customer to use our tablet ordering system.</p>
Employee	<p>Employee makes coffee, gets order from customer.</p> <p>Employees should accept our system. Ordering process of cafe that is applied our system is very different from the original one. So employees should learn and accept our system by reading Manual.</p>
Cafe Owner	<p>Cafe Owner is merely related to interaction with customer and employee. He is only interested in maintaining cafe, checking revenue.</p>

## 2.4 Assumptions and dependencies

Assumption 1 - User ordering coffee have always membership of our cafe.

Assumption 2 - User can't cancel the order when ordered goods are being prepared by employee.

Dependency - Because no reusable systems and libraries is required, there is no dependency.

## 2.5 Apportioning of requirements

Non-member ordering system - Support additional orderign system for non-member.

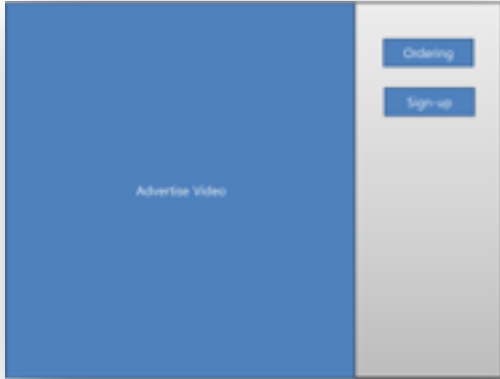

Today's menu - Recommend today's menu and discount.

SMS authorization - Confirm user's identification by SMS.

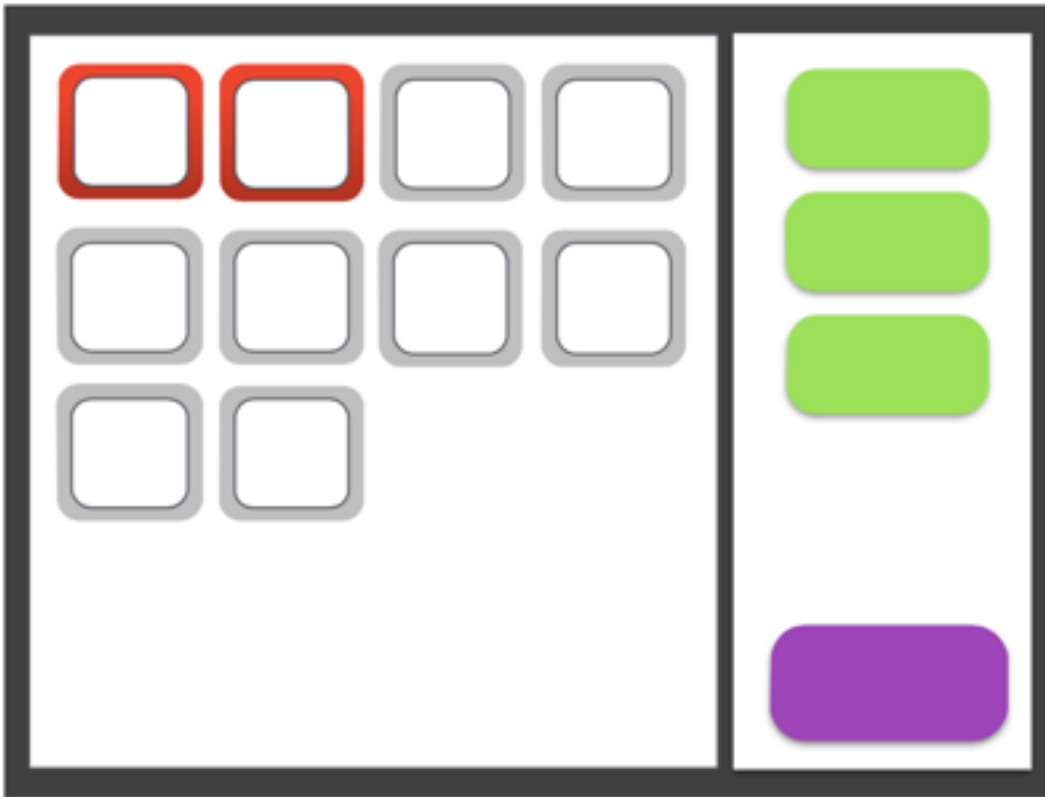
## 3. Specific Requirements

### 3.1 External interface requirements


#### 3.1.1 User interfaces

ID	A-01
	
Advertise video	Video view component
Ordering button	When user click button, go to A-02
Sign-up button	When user click button, open A-03 Dialog window
ID	A-02
	
ID edittext	Length should be more than 4, less than 20. No special character.
PW edittext	Length should be more than 4, less than 20. No special character.
PHONE edittext	Length should be less than 13, only number.
Sign-up button	Check variables ID,PW,PHONE. If there is no error, tell server user info
ID	J-01





Employee	select Employee that use program. Only one can be selected.
Modify button	when clicked, state goes back.
order grid layout	<p>Shows how many orders are received. When clicked, ordering state is changed. Employee must go J-02 windows when state changed.</p> <div data-bbox="402 1381 1221 1570"> </div> <p style="text-align: right;">New</p> <p>Order In (White) Order Approved(Making coffee is started)(Yellow) Making coffee is finished (Green)</p> <p>It turns red when order is over 15 minute.</p>

ID	J-02
	
ID edittext	Length should be more than 4, less than 20. No special character.
PW edittext	Length should be more than 4, less than 20. No special character.
PHONE edittext	Length should be less than 13, only number.
Sign-up button	Check variables ID,PW,PHONE. If there is no error, tell server user info

### 3.1.2 Hardware Interfaces

COM consists of Android App and Java program.

Customer Order App is intended as a mobile application for the Android platform and is solely supported on Android-powered devices. Customer Order App is being developed for Android 5.0(Lollipop)

Management Program is intended as Java program for Mac OS X and is solely supported on Mac OS X devices.

### 3.1.3 Software Interfaces

#### 3.1.3.1 Incoming and Outgoing Items

Program	Incoming and Outgoing Items	Items
<i>Customer Order App</i>	Incoming data	<i>State of making coffee and coupon information from Server</i>
	Outgoing data	<i>Lists of order and client information sent by users to there Server</i>
<i>Management Program</i>	Incoming data	<i>Lists of order and clients information from Server</i>
	Outgoing data	<i>State of making coffee sent by staffs to the Server</i>
<i>Server</i>	Incoming data	<ul style="list-style-type: none"> <li>- <i>Lists of order and clients information from users</i></li> <li>- <i>State of making coffee from Management Program</i></li> </ul>
	Outgoing data	<ul style="list-style-type: none"> <li>- <i>State of making coffee and coupon information to users</i></li> <li>- <i>Lists of order and clients information to Management Program</i></li> </ul>

### 3.1.3.2 Services and Communications

Communication will occur between Customer Order App and Server in following situations:

- When a user join App.
- When a user order menu.
- When the state of making coffee changes, Server will notify the app.

Also communication will occur between Server and Management Program in following situations:

- When the state of making coffee is changed, Management Program will notify Server.
- When Server receives a new list of coffee, Server will notify Management Program.

### 3.1.4 Communications Interfaces

COM will have a server that is local based and created using php language. The server exists to help communication between Customer Order App and Management Program. The product also calls for a database system that stores user information and history of orders.

## 3.2 Functional requirements

S.No.	Features	Functionality	Descriptions (Including Sub-Functionality)
1	Advertisement	Playing cafe advertisements.	Playing cafe advertisement which is stored in local storage.
			Playing at main page.
2	Next Page	Decide next page	Pop up registration dialog when registration button is clicked.
			Go menu&order page when menu&order button is clicked.
			Customer phone number is required when menu&order button is clicked.
3	User Registration	Sign in	Require phone number and password.
			Password will be four digits.
			Send certification message.
4	Menu & Order	User can get menu information and order.	Items in menu is image with price and name.
			Items will be added when user click menu image.
			Show detail information about long click items.
			Shopping cart show total selected items and price.
			Items can be deleted from shopping cart.
			User can apply coupons.
			Require password when user click order button.
5	Notification	Send message "coffee is ready"	Send message "coffee is ready" when coffee is ready.
			Using dialog format.

S.No.	Features	Functionality	Descriptions (Including Sub-Functionality)
1	Order List View	Show current order list.	Order is received in chronological order.
			Unaccepted item has white color.
			Accepted item has yellow color.
			Completed item has green color.
			Delayed more than 15mins item has flash red border line.
2	Order Accept	Staff can accept order.	1) Click staff name. 2) Click unaccepted item. 3) Unaccepted item state will be changed accepted item state.
			1) Click accepted item. 2) Accepted item state will be changed completed item state. 3) System sends notification to user.
3	Order Detail	Show detail information about received order.	Information about count of each items.
			Information about order received time.
			Information about staff who accept this order.
			Information about total price.
			Information about name of each items.
4	Order Cancel	Cancel progress	Cancel accepted order.
5	Order Refund	Order refund	Delete canceled tuple from database.
6	Undo	Undo progress	If staff make mis-clicked or any reasons system can roll-back each progress.

### 3.3 Performance requirements

Order and cancel take no longer than three seconds.

Database capacity can allow at least one month of data.

Menu image resolution is at least 200\*200 size.

Undo function can remember three transactions.

Alarm sound and vibration have the maximum power of machine.

### 3.4 Design constraints

One of Android application design constraints is implementing graphic user interfaces to be shown same in various devices. We don't have real tablet, so release is tested on Galaxy S3 mobile phone. Considering Cafe device upgrade and deploying process, It is important for our GUI to be shown as same in various devices.

The other constraints of Android application

### 3.5 Software System Attributes

There are a number of attributes of software that can serve as requirements. It is important that required attributes by specified so that their achievement can be objectively verified. The following items provide a list of software system attributes:

#### 3.5.1 Reliability

There is no error between customer's app and management program if the order comes to Android App.

There is no error if the administrator check the sales

There is no error when communication between the customer's app and the manager's app.

#### 3.5.2 Availability

The rest of the time except for the time that the store is open, must always be available on the cafe administration.

#### 3.5.3 Security

The coupon verification system does not require security.  
An order after the login. Therefore, it is necessary secure login system. However, we need a little personal information. So the system is no need to use strong security system.

### 3.5.4 Maintainability

Period of the cafe is at least five years. In the meantime, should be easy to maintain.

Since the cafe near the company does not need to store a lot of members. But should be able to continue to save the new members.

### 3.5.5 Portability

The customer's App must be run from a tablet pc.  
POS must be run from a typical Windows computer.

## 3.6 Other requirements