System/Software Requirements Specification

for

Online Supermarket Application

**Version 0.1 Beta**

**FPT University**

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**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

## Purpose

With technological advancements, the way people live their lives is continuously transforming. Today, tech-savvy consumers want all goods and services to be delivered right at their doorstep without the bother of visiting the stores for making the purchase. More and more people are now switching to the easy option of apps for their daily purchases and the burgeoning demand for a reliable supermarket shopping app for buying the everyday household products is no exception. Owing to this surge in demand, enhanced supermarket systems integrated with a mobile app are starting to be enhanced to match the increasing consumers' expectations.

## System Purpose

Using software for supermarket business provides great relief to the business owners in managing complicated & time-consuming business operations. Along with the faster transaction process that enhances the customer experience, such software makes it super-easy for the business owners to manage the inventory and ensure the proper stocking of the goods without the worries of overstocking and understocking of goods.

## Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| **Acronym** | **Definition** |
|  |  |
| **DBMS** | Database Management System |
| **GUI** | Graphical User Interface |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **UC** | Use Case |
| **UI** | User Interface |
| **UML** | Unified Modeling Language |
|  |  |
| **UX** | User Experience |

## Document Conventions

* Font family: Times New Roman,
* Font weight: Regular.
* Font size: 11.
* Font weight heading 1: bold.
* Font size heading 1: 18.
* Font weight heading 2: bold.
* Font size heading 2: 14.

## Project Scope

This application is for all people who have an android smartphone when you need to buy groceries from a supermarket. The application will make viewing products easier thus making it easier to purchase an order. The application is very suitable for nowadays context as Covid 19 is still running across the world

## References

# Overall Description

## Product/System Perspective

This software product is eventually intended for everybody who wants to purchase groceries from VinjMart.

The product will release a product app free, open-source. Users can easily view Application by smartphone

## System/Product Features

The application can run on smartphones using Android OS, upper android 8.1/API27. Main features of the product contains:

FE-1:

FE-2:

FE-3:

FE-4:

FE-5:

FE-6:

## User requirements

There are no requirements coming from end users.

## User Classes and Characteristics

|  |  |
| --- | --- |
| **Object** | **Description** |
| User | Open application for everyone    Characteristics: Software doesn’t require any special characteristics of the user. Every user can become a member of the system. |

## Operating Environment



## Design and Implementation Constraints

Developers should also be careful about the privacy of users.

The Internet connection is a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function.

## Assumptions and Dependencies

Assump users have an android smartphone

## Apportioning of Requirements

# Specific Requirements

## Functional Requirements Specification

**Business Rules**

|  |  |
| --- | --- |
| **ID** | **Descriptions** |
| B01 | User needs using the App Store to download the app. |

### Function1 /Use-case 1

3.1.1.1

SCR-01: Home screen

Use case Diagram

|  |  |  |
| --- | --- | --- |
| **ID** | **Actor** | **Name** |
| UC01 | User |  |
| UC02 | User |  |
| UC03 | User |  |
| UC04 | User |  |
| UC05 | User |  |
| UC06 | User |  |

### UC01 -

#### 

SCR-02:

**Table 3-1: Screen Definition**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Mandatory** | **Max Length** | **Description** |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |

**Figure 3-1**:

#### Use Case Specification

**Figure 3-2:**

|  |  |
| --- | --- |
| **Use Case ID** | **UC-01** |
| **Use Name** | **Checklist** |
| **Actor** |  |
| **Description** |  |
| **Precondition** |  |
| **Trigger** |  |
| **Post-Condition** |  |
| **Normal Flow** |  |
| **Alternative flows** |  |
| **Exceptions** |  |
| **Priority** |  |
| **Frequency of Use** |  |
| **Business Rules** |  |
| **Other Information** |  |
| **Assumptions** |  |

### UC02 -

#### Screen Design

**SRC-03**: Screen design

**Table 3-1: Screen Definition**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Mandatory** | **Max Length** | **Description** |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

#### Use Case Specification

**Figure 3-14:**

|  |  |
| --- | --- |
| **Use Case ID** |  |
| **Use Name** |  |
| **Actor** |  |
| **Description** |  |
| **Precondition** |  |
| **Trigger** |  |
| **Post-Condition** |  |
| **Normal Flow** |  |
| **Alternative flows** |  |
| **Exceptions** |  |
| **Priority** |  |
| **Frequency of Use** |  |
| **Business Rules** |  |
| **Other Information** |  |
| **Assumptions** |  |

### UC03

#### Screen Design

**SRC-04**: Screen Design of

**Table 3-1: Screen Definition**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Mandatory** | **Max Length** | **Description** |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

#### Use Case Specification

**Figure 3-16:**

|  |  |
| --- | --- |
| **Use Case ID** |  |
| **Use Name** |  |
| **Actor** |  |
| **Description** |  |
| **Precondition** |  |
| **Trigger** |  |
| **Post-Condition** |  |
| **Normal Flow** |  |
| **Alternative flows** |  |
| **Exceptions** |  |
| **Priority** |  |
| **Frequency of Use** |  |
| **Business Rules** |  |
| **Other Information** |  |
| **Assumptions** |  |

### UC04 -

#### Screen Design

**SRC-05**: Screen Design o

**Table 3-1: Screen Definition**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Mandatory** | **Max Length** | **Description** |
| 1 |  |  |  |  |  |

#### Use Case Specification

**Figure 3-22:** Compass Use-Case Diagram

|  |  |
| --- | --- |
| **Use Case ID** |  |
| **Use Name** |  |
| **Actor** |  |
| **Description** |  |
| **Precondition** |  |
| **Trigger** |  |
| **Post-Condition** |  |
| **Normal Flow** |  |
| **Alternative flows** |  |
| **Exceptions** |  |
| **Priority** |  |
| **Frequency of Use** |  |
| **Business Rules** |  |
| **Other Information** |  |
| **Assumptions** |  |

### UC05 -

#### Screen Design

**SRC-06**: Screen Design of

**Table 3-1: Screen Definition**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Mandatory** | **Max Length** | **Description** |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |

#### Use Case Specification

**Figure 3-24:**

|  |  |
| --- | --- |
| **Use Case ID** |  |
| **Use Name** |  |
| **Actor** |  |
| **Description** |  |
| **Precondition** |  |
| **Trigger** |  |
| **Post-Condition** |  |
| **Normal Flow** |  |
| **Alternative flows** |  |
| **Exceptions** |  |
| **Priority** |  |
| **Frequency of Use** |  |
| **Business Rules** |  |
| **Other Information** |  |
| **Assumptions** |  |

### UC06 -

#### Screen Design

**SRC-07**:

**Table 3-1: Screen Definition**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Field Name** | **Type** | **Mandatory** | **Max Length** | **Description** |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |

#### Use Case Specification

**Figure 3-26:**

|  |  |
| --- | --- |
| **Use Case ID** |  |
| **Use Name** |  |
| **Actor** |  |
| **Description** |  |
| **Precondition** |  |
| **Trigger** |  |
| **Post-Condition** |  |
| **Normal Flow** |  |
| **Alternative flows** |  |
| **Exceptions** |  |
| **Priority** |  |
| **Frequency of Use** |  |
| **Business Rules** |  |
| **Other Information** |  |
| **Assumptions** |  |

## 3.3 Non-Functional Requirements Specification

### 3.3.1 External Interface Requirements

#### 3.3.1.1 Hardware Interface

* Android >= ver 8.1/API 27 Environment
* Internet

#### 3.3.1.2 Software Interface

|  |  |  |
| --- | --- | --- |
| **ID** | **Software Used** | **Description** |
| 1 | OS | Android OS |
| 2 | XML | Build front-end |
| 3 | Java | Build backend |

### 3.3.2 Other Nonfunctional Requirements

#### 3.3.2.1 Safety Requirements

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

#### 3.3.2.2 Performance Requirements

Any response must be within 2 seconds or less

After press any button, there’re always respond within 1 seconds (loading process, save success, etc)

## 4. Data Requirements

### 4.1 Logical Data Model

### 4.2 Data Dictionary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data Element | Description | Composition or Data Type | Length | Values |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## 5. Other requirements

### 5.1 Internationalization requirements