Software Requirements Specification Document

SMART INVENTORY

Software Requirements Specification

1.0

09/09/2018

TEAM MEMBERS

Rakesh Varma Nadakudhiti

Snohitha Rakashi

Lokeswari Pittu

Nilantha Dambadeni Kalu Achchillage

Shivani Busireddy

Niharika Gundala

Karthik Raja Vemula

Submitted in partial fulfilment

Of the requirements of

CSIS 44-691 Graduate Directed Project 1

# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Description** | **Author** | **Comments** |
| 09/09/2018 | 1.0 | Nilantha Dambadeniya | First Revision |
| 09/16/2018 |  | Shivani Busireddy | Second Revision |
| 09/23/2018 |  | Lokeswari Pittu | Third Revision |
| 9/30/2018 |  |  | Forth Revision |

# Document Approval

The following Software Requirements Specification has been accepted and approved by the following:

|  |  |  |  |
| --- | --- | --- | --- |
| **Signature** | **Printed Name** | **Title** | **Date** |
|  | Dr. Zhengrui Qin  Naveen Kumar Nuggu | Project Requirements | 09/14/2018 |
|  | Dr. Zhengrui Qin  Naveen Kumar Nuggu | ER Diagram | 09/21/2018 |
|  | Dr. Zhengrui Qin  Naveen Kumar Nuggu | Project Schedule(Gantt Chart) | 09/14/2018 |
|  |  | UI designs | pending |

**Table of Contents**

**Table of Contents Page Number**

1. Introduction
   1. Purpose
   2. Scope
   3. Definitions, Acronyms, and Abbreviations
   4. References
   5. Overview
2. General Description
   1. Product Perspective
   2. Product Functions
   3. User Characteristics
   4. General Constraints
   5. Assumptions and Dependencies
3. Specific Requirements
   1. External Interface Requirements
      1. User Interfaces
      2. Hardware Interfaces
      3. Software Interfaces
      4. Communications Interface
   2. Functional Requirements
   3. Use Cases
   4. Class/Objects
   5. Non-Functional Requirements

3.5.1. Performance

3.5.2. Reliability

* + 1. Availability
    2. Security
    3. Portability
  1. Inverse Requirements
  2. Design Constraints
  3. Logical Database Requirements
  4. Other Requirements
  5. Prototypes (for complete project)
  6. Use Case Diagrams

1. Design

4.1. ER diagram

4.2. GUI

1. Analysis Models

4.1. Data Flow Diagram

4.2. Sequence Diagram

1. Introduction

* 1. Purpose

This project requirement document contains the requirements for the Smart Inventory – Android (SMI) the inventory control and android based vendor – user interaction interface application system. These requirements are identified and defined by the client and the project team. These requirements are implemented in the development of the application and if there are any changes or new requirements, client and development team need to be agreed to include them in this document.

* 1. Scope

Vendor is the person who run the business and maintain the inventories. Users are the people who provide items to vendor for the price vendor asked for. The inventory will hold the information about users and items.

The inventory system should have two level of access, admin level and user level. Admin should be able to add, remove and edit the item list as well as accept, add, remove users and send messages to the users. In user level, users should be able to create a user account, view the item inventory, request approvals and shipping labels and track the transaction history.

Admin can access the inventory through his personal computer and on his android phone. Client can access the inventory through his android phone.

User

Vender

Smart Inventory

1.3 Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| **Definition** | **Abbreviation** |
| SIA | Smart Inventory-Android |
| UI | User Interface |
| ERD | Entity Relationship Diagram |
| URD | User Requirement Document |
| SRD | Software Requirement Document |

1.4 References

* 1. Overview

This document is divided into five chapters, Introduction, General Description, Specific requirements, Design and Analysis Models.

In the Introduction it describe the purpose and scope of the project.

The General Description gives a clear and concise description of product prospective. It consists of a short view on the product, a short summary of the general capabilities of the product and more in-depth view of the main parts of the product.

The Specific requirements chapter will describe all the external interface requirements, functional requirements, uses cases, class/object definitions and non-functional requirements. Moreover, here it will describe the user constraints, logical database requirements, prototype and use case diagrams.

The Design chapter will describe the ER diagram and the UI designs.

The last chapter will describe the Data Flaw diagram and Sequence design.

**2. General Description**

* 1. Product Perspective

The client (Vendor) is running a business that he buys items for bargained price from registered users and sell them on regular price to make a revenue. Right now the client is maintaining the user records and item inventories manually on spread sheets and accounting books. Smart Inventory system is an effort of computerized inventory system for the above business.

With the new system, vendor get to create a list of required items with the description and users can view them on real time and supply the items to the vendor. When vendor add or edit an item on the inventory, he can declare an expiring date for the item to be alive on the user list. User can inform the vendor the number of specific items he can supply and request for shipping labels. User will get 7 days to ship the items after receiving the shipping labels from the vendor, otherwise shipping labels will be expired. Once the vender receive the items he conforms it to the user and then user can bill the vendor for the items. Vender will pay using third party payment method.

* 1. Product Functions

* 1. User Characteristics

* 1. General Constraints

* 1. Assumptions and Dependencies

1. **Specific Requirements**
   1. External Interface Requirements
      1. User Interfaces
      2. Hardware Interfaces
      3. Software Interfaces
      4. Communications Interface
   2. Functional Requirements

Admin Requirements

1. Admin login

Administrator should be able to log in to the system with admin privileges using his admin user name and password

|  |  |
| --- | --- |
| Admin username | Any user name |
| Password | Minimum of 8 characters  At least one uppercase letter  At least one lowercase latter  At least one number or symbol (!, #, %, &. \*) |

1. Add new items to the inventory

Administrator should be able to add new items to the list. Most recently added item should be displayed on the top of the inventory list. New item should have following fields. Items should be able to publish to the user’s list or hide it from the user’s list.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ID | Picture of the item | Item | Description | Buying price | # of units needed | Added date | Expiring Date | Comments |

1. Edit/Remove items on the inventory

Administrator should be able to edit or remove any existing items on the list. When editing, he can edit all the fields except ID.

1. Accept or deny membership requests from new users

When a new user wanted to sign up for the Smart Inventory, he may fill up a sign up form and send the request to the vendor. Vendor should be able to accept or deny the request and send an email to the user informing the decision.

1. Accept or deny items supply requests from users

Once a user submit an item supply request, vendor should be able to accept or deny the request and inform the user the decision through an email.

1. Admin should be able to send shipping labels to the user

If vendor accept the item supply request, he should send shipping label to the user’s email for the accepted items.

1. Conform the received items from the users

Once vendor received the items form a user, vendor should be able to conform the received items and send a request for invoice from the user. These information will be sent to the user’s email.

1. Accept and pay user bills

Once user send the invoice for the items, vendor will pay the user through a third party money transfer system.

User Requirements

1. Make request for sign up

When a potential user wanted to be a member of the smart inventory system, he should fill the sign up form and send it to the vendor for approval. When a user sign up for the system, he should provide following details.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| First Name | Last Name | Email Address | Password | Contact number | Date of birth | Gender | Selected security question | Security answer |

In addition he needs to agree to the user agreement and user privacy notice

1. Log in to the Smart Inventory - Android

Once vendor approves the signup request, user can log in to the Smart Inventory – Android using his email address and password.

1. Recover lost or forgotten password

If user lost or forgot the password, he can recover the password by answering to the security question. The new password will be sent to the user’s email.

1. View the items and details vender looking for

Once the user log in to the Smart Inventory – Android, he can view the list of items currently vender is looking for. In the initial list it will display the following fields

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ID | Picture of the item | Item | Buying Price | # of units needed | Expiring date |

If user wants to see more details about a specific item, he can tap on the item and view the other information and methods of supplying the items.

1. Send requests to vendor for supplying items and request shipping labels

If user wish to supply any items to the vendor he can fill an item supply request and send it to the vendor for acceptance. In that request user need to provide the following details.

|  |  |
| --- | --- |
| Number of items | If shipping label required |

1. Send requests for canceling/editing supplying list

If user wants to cancel or change a supply request that sent to the vendor, he should be able to send a cancel/change supply request to the vendor.

1. Send invoice to vendor for payments

Once user receive the item received confirmation from the vendor, user can send an invoice to vendor for payments. In this invoice, user should provide the available methods for receiving money form the vendor.

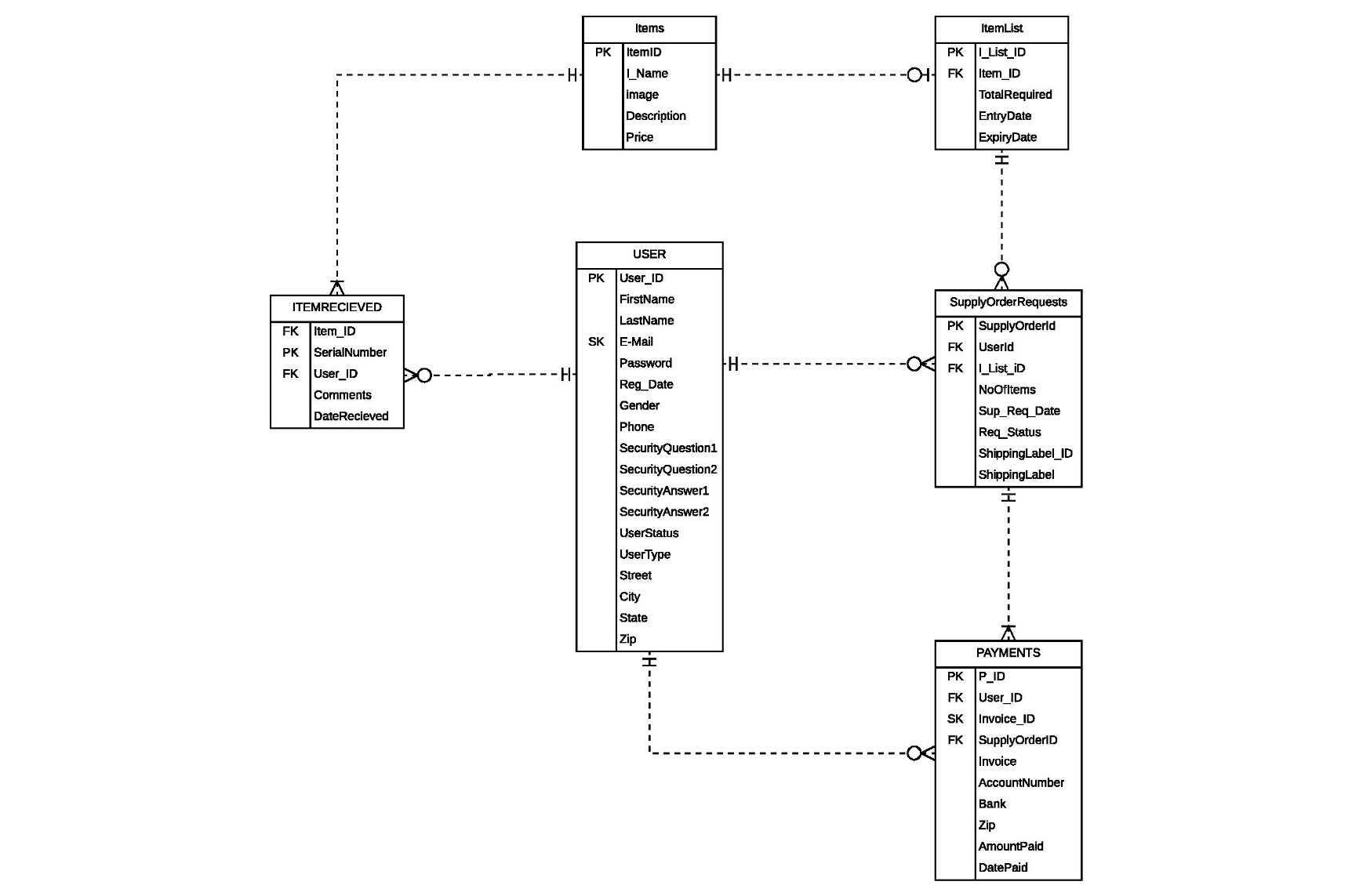
1. View the user’s transaction history

User should be able to view his transaction history with vendor.

* 1. Use Cases
  2. Class/Objects
  3. Non-Funtional Requirements
     1. Performance
     2. Reliablility

**4. Design**

4.1 ER diagram



4.2 GUI

|  |  |
| --- | --- |
| Login Page | Password Recovery |
|  |  |
| Signup | Signup2 |
|  |  |
| User Home | Item Details |
|  |  |
| Admin View | Add Item |
|  |  |
| New user request | New user accept |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Chapter 4 to be continued as the project progress…………………

**5.** **Analysis Models**

5.1 Gantt Chart

Please refer to the support document Gantt Chart PDF and Gantt Chart MPP.

Documentation continues as the project progress…………………