System Requirement Specification
Smart Drawer

Version	1.0
Status	Issue
Date	11-February-2017

CONTENTS

1 DOCUMENT DETAILS

1.1 Revision & Approval History

Version	Author		Reviewer		Approver	
	Name	**Date (DD-MM-YYYY)**	**Name**	**Date (DD-MMM-YYYY)**	**Name**	**Date (DD-MM-YYYY)**
Issue 1.0	Dhyan Patel Krisha Jain Zarna Pansuriya	10-Feb-17	Dhyan Patel	10-Feb-17	Saurabh Soni Darshana Mistry	11-Feb-17

1.2 Definition, Acronyms and Abbreviations

Definition/Acronym/Abbreviation	Description
Smart Drawer	Smart Drawer is one product which can be useful in inventory management which keep track of item in-out with respective person.
RFID	Radio Frequency Identification
Transaction	In/Out activity done by RFID reader.
InLog	It is the auto generated log when item goes in.
OutLog	It is the auto generated log when item goes out.

2 INTRODUCTION

2.1 Purpose of the Document

- The purpose of this document is to give a detailed description of the requirements for the "Smart Drawer". It will illustrate the purpose and complete requirement for the system. It will also explain system constraints, interface and interactions with other external applications. This document is primarily intended to be submitted to a customer for its approval as a reference for developing the first version of the system for the development team.
- There is no efficient tracking, monitoring and security solutions for the protections of products. Because of this project, we can track and monitor our products

2.2 Intended Audience

- The intended audience of this document includes the client, requirements team, requirements analyst, design team, testers, and other members of the developing organization to provide guidance.

3 SYSTEM OVERVIEW

3.1 Overview

3.1.1 Product Perspective

- Smart Drawer is used for tracking and monitoring Product in the inventories. It helps managers to easily handle the whole inventory.
- It also helps to identify the person who put/took item in/from drawer.

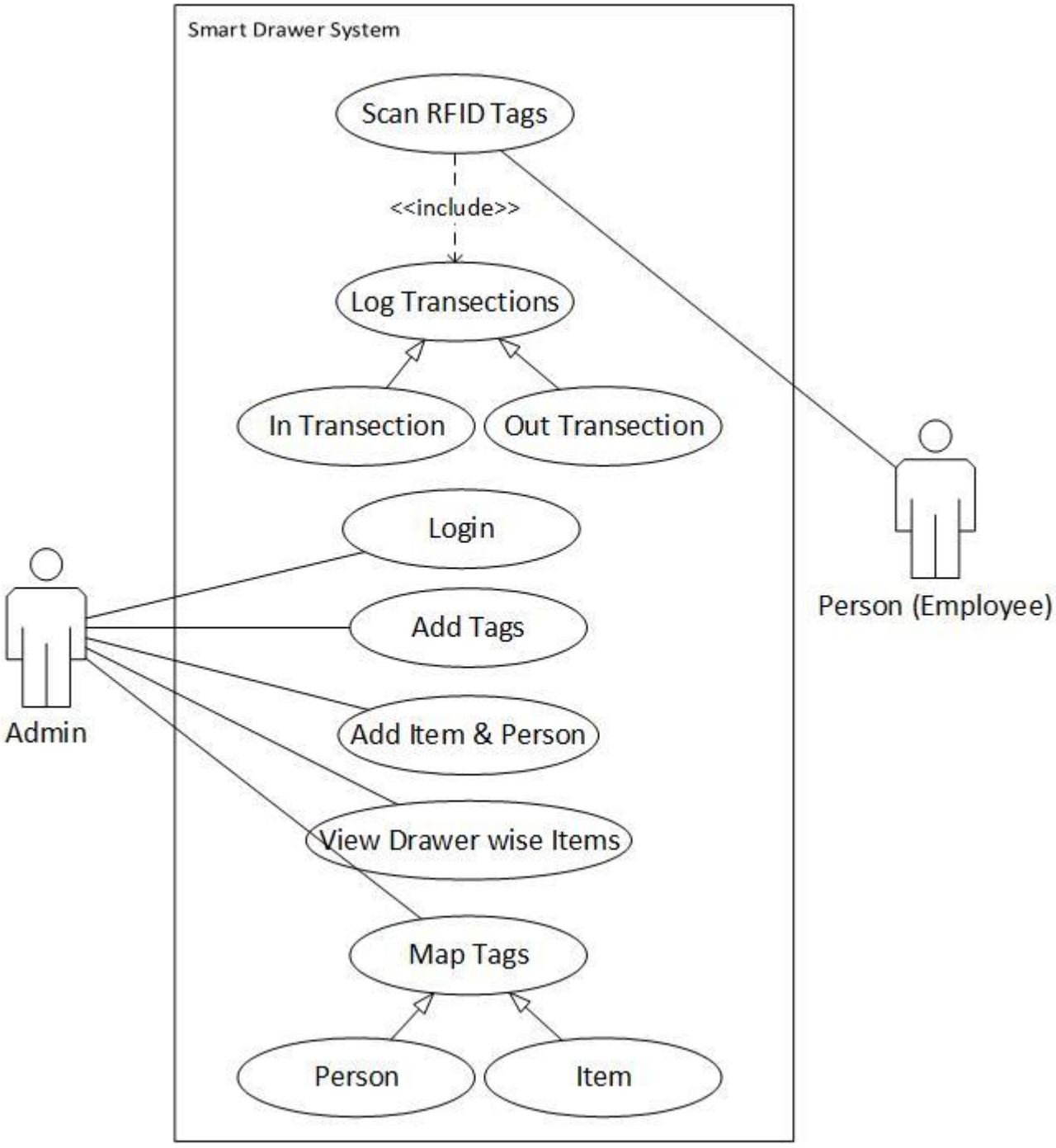
3.1.2 Purpose & description

- When the products are take out from drawer it will be automatically scan by RFID reader. It will read the RFID tags of products. Scanned products had their product id will be automatically stored in the system with respective person details.
- When the manager open a web portal, after login use admin. In this panel there are all the detail of product will be show to them like how many items are in the drawer.

3.1.3 Objective

- To develop a module using RFID tag and RFID reader which is used to tracking and monitoring the products.
- Web panel will be provided to the manager to manage all details of products.

3.2 Use Case Diagram



3.3 Scope

- Admin Side:-
  - ✓ Admin side include the functionalities like insert RFID tags, mapping with item/person and inventory management.
  - ✓ Inventory management include functionalities like check item details in specific drawer and check in/out transaction details.
  - ✓ Transaction details includes item details, timestamp and respective person of that transection.

- Reader Side:-
  - ✓ Reader side has the main feature of taking data by scanning RFID tag and log in to the system. Log can be elaborate more by InLog and OutLog.

4 FUNCTIONAL REQUIREMENTS

- Insert RFID tags In Tag Bank.
- Mapping RFID tags with Items/Persons.
- Items/persons In.
- Items/persons Out.
- View Items in Drawer.

4.1 Insert RFID tags In Tag Bank

Term	Description
REQ ID	RQ01
Purpose	Store unique RFID tags into Tag Bank.
Access Restrictions	Authorized Person
Input(s)	RFID Tags
Output(s)	Information
Process	1. Provide/Insert RFID tags.

4.2 Mapping RFID tags with Items/Persons.

Term	Description
REQ ID	RQ02
Purpose	Mapping of RFID TAG
Access Restrictions	Authorized Person
Input(s)	Select RFID Tag
Output(s)	Information
Process	1. Insert tag category of the tag. 2. Mapping RFID tag with appropriate item or person (Depends on tag category).

4.3 Items/persons In.

Term	Description
REQ ID	RQ03
Purpose	Give an information about added item to the drawer
Access Restrictions	Tag holder Person
Input(s)	Add item to the drawer
Output(s)	Information
Process	1. RFID tags will be scan by RFID reader. 2. RFID reader gives item id. 3. Mapped item is added to the drawer.

4.4 Items/persons Out.

Term	Description
REQ ID	RQ04
Purpose	Give an information about removed item from the drawer.
Access Restrictions	Tag holder Person
Input(s)	Remove from the drawer
Output(s)	Information
Process	1. RFID tags will be scan by RFID reader. 2. RFID reader gives item id. 3. Mapped item is remove from the drawer.

4.5 View Items in Drawer.

Term	Description
REQ ID	RQ05
Purpose	Give an information about available item in the drawer.
Access Restrictions	Authorized Person
Input(s)	
Output(s)	Information
Process	1. Request for viewing the items.

5 Non-functional requirements

5.1.1 Reliability

- The application should be highly reliable and it should generate all the updated information in correct order.

5.1.2 Availability

- Any information about the product should be quickly available to the authorized user 24/7.

5.1.3 Security

- The system must be fully accessible to only authentic users.

6 EXTERNAL INTERFACE

6.1 User Interface

All user interfacing is done through a web UI

- Login interface to enter in the system.
- Add Tags interface to add tags into the tag bank.
- Add Interface to add item and person.
- Mapping interface to map tag with item/person.
- View Items interface to check available items in specific drawer.
- View Transaction interface to check transactions.

6.2 Hardware Interface

- RFID Reader
- RFID Tag
- Computer
- RAM(free) : 500 MB

6.3 Software Interface

As this system is controlled through computer/mobile, it will require following software interface.

Name of Software	Use of Software
Web Browser	To access web application(system)