

# **Working Title**

***Software Requirements Specification (SRS)***

# CSC.154.0001 - Group 4

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## 1. General Description

**1.1 Introduction**

The document is a compilation of identified requirements for (Working Title) App, an application for tracking and managing an ingredients inventory for food industry clients.

**1.2 Scope of this Document**

The scope of this document will cover various categories of requirements for the (Working Title) app. It will include user stories to highlight user work flow and identify the needs of various forms of users when utilizing the app.

**1.3 Overview**

*(Working Title)* is an inventory management and tracking application that utilizes a relational database. The system stores an inventory of individual ingredients as well as tables of menu items linked to those ingredients. Users will be able to update, in real time, inventory quantities while processing orders from front house to back house. Wait staff and cooks will be notified if an order cannot be completed due to inventory shortage. Managers will be able to view ingredient and menu item history, to include frequency of use/order by period of time, as well as place orders with vendors online or print out a purchase inventory. Market price for inventory items can be entered to assist with cost estimation and tracking historical costs.

**1.4 Business Context**

Wait staff will be able to assist with accurate inventory management by simply entering orders in the system. Management will be able to accurately track inventory, ordering trends, and prices.

## 2. Business Requirements

**2.1 Inventory tracking**

Real time inventory updates and requests. Inventory may be viewed or updated individually or as a dish. Dishes may also have alterations made to their base ingredients. Ingredients will also have an expiration tracker.

**2.2** **Inventory history**

Retain records of previous inventory states and orders by date for up to 10 years. Inventory will retain ingredients, dishes, quantities, number of times a dish was ordered, market price of ingredients for that day, what dishes were on special. Records may be annotated with additional information in notes.

**2.3 Trend analysis**

The system will be able to track ordering trends for a period of time, defaulted to a weekly and a monthly view. It will track usage of ingredients and number of times a dish was ordered per time period. It will allow comparison between two periods of time as well. Dishes may also be marked as a special, or as part of a special holiday or event menu.

**2.4 Ordering and Market Price Updates**

The system will allow for the creation of an inventory for order, which may be printed. Users may enter in prices for inventory items to assist with cost analysis. The system will allow a filter of vendors for ingredients to be saved as well as notes for each vendor. Ordered items will also have a date ordered for tracking.

## 3. User Requirements

* 1. The user will be able to store menu items with the exact ingredients and cost for each menu item.
  2. The user will be able to add, modify, or delete daily count for a full weeks’ worth of inventory.
  3. The user will be able to track the expiration date of each item and a place for food thrown out.
  4. The user will be able to track the average amount an item is order over a week, month, and year.
  5. The user will receive an alert when certain inventory items are out or fall below a specified threshold.
  6. Incoming inventory will show an ordered-on date with a quantity.
  7. Orders from the front of the house will print an order ticket to the kitchen with a timestamp.
  8. Separate user permissions for managers vs servers or cooks.

## 4. Hardware Requirements

1. Internet service with a minimum of 300mpbs.
2. A desk top computer with 2TB of storage
3. POS System conforming to the Object Linking & Embedding for Retail Point of Sale (OPOS) Standard as developed for Microsoft Windows based systems as well as standard Windows based PCs.

## 5. Functional Requirements

* 1. Use a database to store menu items with ingredients and cost for each menu item as well as cost for each inventory item.
  2. Use a separate section to track the expiration date of each item.
  3. Make calculations to update the database with number of items and alert the user when certain inventory items are low or out.
  4. Create an average amount of ingredients used per week, month, and year.
  5. Separate logins to the app with different level permissions

## 6. Non-Functional Requirements

1. The system should be available from 9am to 11pm Monday – Friday.
2. The system should be able to hold 10,000 item records initially.
3. The system should be able to add 10,000 records a year for 10 years.
4. A record should be fully available on the system for at least 7 years.
5. The system should deconflict simultaneous updates from two different input sources
6. The data can be exported to the manager or vendor to make more

portable.

1. System will update in real time.

## 7. MOSCOW Analysis

Must

* Hold menu items and ingredients in database.
* Automatically remove items from database list when ordered.
* Updates to inventory in real time
* Available during business hours. (9am – 11pm)
* User login
* View database tables
* Be able to add/remove/edit menu items and their specific ingredients
* Have common OPOS work stations
* Create an order ticket from selected dishes
* Edit list of dishes on the menu screen
* Deconflict simultaneous updates to the database from two different work stations

Should

* Record transaction trends on daily, weekly, monthly
* Retain inventory states and orders for up to 10 years
* Alert staff when items are low, expired or out
* Tag inventory items with an expiration date and minimum/maximum amount
* Be able to compare specific days, weeks or months
* Allow user with special permissions to modify database. (change price, delete/add items, etc.)
* Different view depending on account permission
* Retain price information for inventory items
* Internet speed of 300mpbs
* Utilize Two-Tier Client/Server to allow multiple work stations
* Allow dishes to be marked as a special
* Retain information of vendors with notes

Could

* Incorporate API/EDI for automatic pricing of items
* Show date and tracking information of items on order
* Automatically send a weekly print-out for menu items used with trending graphical visual
* Add/remove vendors automatically
* Color code items and categories for easier visual
* Filter vendors by ingredients available

Won’t

* Route payment for inventory ordering to third party vendors

## 8. Preliminary User Story

### 8.1 Manager User Story

The manager sits down at office computer and uses the mouse to double click to start the program, it loads up to the login page. The manager puts in there given username and password. After less than a minute the home page loads.

The manager decides they want to check yesterday’s inventory used and compare it to the same day the week before. They click the tab labeled ‘Inventory History’ which takes them to a new window with multiple dropdown list where they can choose the year, month, week and day. The manager picks a day, then on the home page repeats the process to pull up another day to compare.

Then the manager decides they need to change the cost of some of the ingredients because their suppliers increased the cost. On the home page they click the tab labeled ‘manual inventory update’ which will open a separate window with a list of categories of the inventory as well as a search box. The manager knows which items they have to change so they type the item in the search box which will show the item with all the associated information in an edit mode. They change the cost and then at the bottom and the top of the page there is a ‘Submit’ button that will confirm the change.

The manager notes that some fish in the inventory has been marked for an expiration coming soon. While searching for fish to order, the manager sees a note that a particular vendor had a high-quality selection. He filters the vendors for that item, saving the filter selection, and checks the price and updates the price field for the item for costing and historical data. He adds it to his order inventory.

While looking over the order trends, the manager notices that a particular dish has not been selling well. He marks it as a special, entering a time date for the period of the special. The manager also sees that a particular dish was very popular over the last month, but ingredients often ran out before the end of the week. He adjusts the minimum quantity to keep on hand in the inventory and updates his order inventory.

Finally, the manager prints out his order inventory. He orders what he can through vendor's online services and enters in an ordered-on date for each ingredient.

### 8.2 Wait Staff User Story

A server clocks in for their shift and enters in their user name and password for the app. A menu appears breaking down dishes and beverages by category.

A couple come in to the restaurant and are greeted and sat by the hostess. The server introduces themselves and gives them water. The customers have very complicated orders. The server writes it down and then proceeds to put the order in using the company supplied ordering system that has all the modification buttons for the complicated customer orders. The server first enters the table number for the order, and then selects the dinner menu to bring up a list of dishes currently on the menu. She selects the dishes ordered, checking the modifications box, which opens a menu. She enters in the name of ingredients that the customer wishes to add, adjusts the number of items already in the dishes to the customers preference, and removes ingredients that they did not want.

The ordering system automatically routes the information to the kitchen ticket printer and also to the inventory tracker. The inventory tracker will then make the calculation to update the database with amount of ingredients required for that menu item, also taking into account the modifications. If the menu item requires ingredients that are not available, the system will notify the server before submitting the order for printing. Dishes that have been identified as requiring ingredients that are not available will now be highlighted in red in the user interface for the wait staff. Dishes that were modified will have the changes listed under each dish on the print ticket in bold.

## 9. Definitions, Acronyms, Abbreviations

Front House – Service area where customers are served. Wait staff working domain. This is where orders from customers are taken and entered into the system.

Back House – Working domain of kitchen staff. This is where orders from the front house are prepared. Orders entered into the system from the front house route an order ticket to the back house for preparation.

API – Application Programming Interface

EDI – Electronic Data Interchange

OPOS – Object Linking and Embedding Point of Sale – a point of sale platform implementation standard that utilizes Microsoft Windows technologies

## 10. Use Case Model

