

# Software Requirements Specification

Created May 5, 2022 in CEN 3073 for Micaela's Produce Center by Rosa Reynoso

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## 1. Introduction

### 1.1 Purpose

The development of the inventory mobile application will provide Micaela's Produce center with an opportunity to improve company operations. The app will help the owners of the company to organize product information by allowing them to store all product and company information in one, secure place. The owners of the company will be able to add and update any information related to the product and financial details about the company in the mobile app. Storing all information related to the company and the products they sell in one place, will prevent unauthorized users from accessing confidential information. When information is stored in one place and is backed up in the cloud, it increases security and ease of user access. Micaela's produce center is a very fast-paced company where employees and management are always busy assisting customers with any questions they might have and their purchases. Having an app on the employee's phones will allow them to quickly assist customers when they ask about prices and other things. The app will also assist the owners in managing the company budget, the conservation time of the produce, product availability, and accurately placing orders from suppliers for restocking. Incorporating an app into the business will help the company reach its goal by increasing sales and product quality through efficient management.

### 1.2 Scope

#### Product Name

Micaela's Produce Center Organizer

#### Overview

The mobile app will store product and company information in one place. There will be two types of users of the app, the owners and the employees. For security purposes, all users will log in to the app to access it. Any information that the owner inputs or updates in the app will be stored in the cloud as a backup. The app will allow the employees to view product names and prices. The app will be a management method for the company to organize and keep track of all products sold at its retail locations.

#### Goals

The mobile app will upgrade the security and organizational management of Micaela's Produce Center. Storing company and product information in the app will secure its data and make them easily accessible to all authorized users. Employees can answer any customer's inquiries about a specific product using the app because the app can simply be opened on any phone for reference. The mobile application will also allow the company founders to view all product information from anywhere because all information is backed up in the cloud. Enhancing these components in the company will help achieve the goals of the company of increasing sales, improving customer service, improving the public's perception of

the company image, and enhancing company operations. An app that is accessible from anywhere and from any phone makes it easier for the company to function when unexpected situations arise. A prototype of the company app with information features about products is expected by May 3.

- Have mockup of the app containing features such as the landing page by April 20.
- Have the design approved by the owner by April 20.
- Have the layout of the app approved by April 20.
- Have the app contain language options by May 1.
- Have the text size approved by April 20.
- The app will save data to the cloud every 2 days.
- Have products displayed by May 1.
- Customer satisfaction increase.

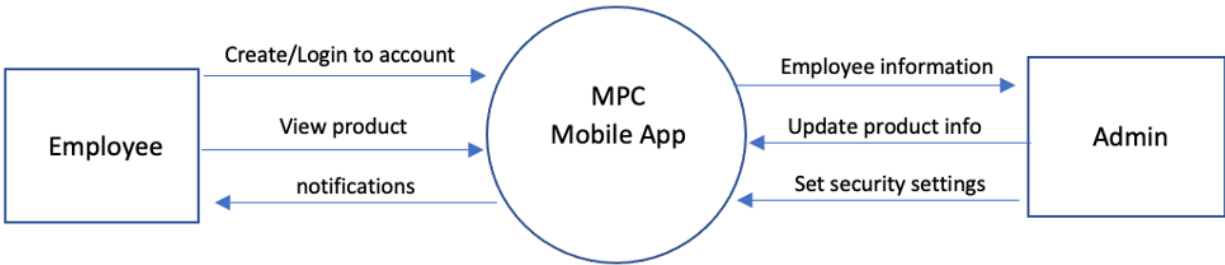
Out of Scope

The mobile app will not be available for use by the customers of Micaela’s Produce center. The owners of the company have decided that the only authorized users of the app will be employees and the owners themselves. The company is focused on improving company operations but is open to reconsidering who can have access to the app in the future. The owners of the company are also open to considering adding online shopping features in a later release of the app.

1.3 Product overview

1.3.1 Product perspective

Data Flow Diagram:



Constraints:

Key	Summary	T
MPC-70	The administrators click at the top of the page to view employee information.	
MPC-69	Users can use the app without a network connection.	
MPC-68	The user can click on the product image to view more information.	
MPC-67	The system needs to be compatible with various screen sizes.	
MPC-66	Users need to complete a tutorial of how to use the app.	
MPC-54	All inventory will stored in Microsoft OneDrive.	
MPC-53	The application will run on Andriod.	
MPC-52	The application will run on iOS.	
MPC-51	The users click at the top of the landing page to change the language setting.	
MPC-50	Users need to agree to privacy terms and policies prior to using the app.	

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1.3.2 Product functions

- store product information
- save the user's information
- display product information
- product information updates
- require users to log in
- restricted app features for users
- display images of the products
- backup product information
- organize product information
- language options

### 1.3.3 User characteristics

The users of the app are the owners and employees of the company. The owners speak Spanish strictly and are not proficient in reading in Spanish or English. They know some and speak some English phrases. They do not know much about technology. They do know how to use a smartphone but are not proficient in using all the features a phone offers. The owners of the company are proficient in sales, budgets, and other finances related to the company. They are experts in knowing about the products they purchase for their company, but mainly rely on pictures and speaking in Spanish when identifying products. A couple of employees are proficient in English and are technically proficient. Some employees only speak and read in Spanish, as it is their first language. All employees know the basics of using a smartphone but are not proficient. All the users of the app require training to ensure they can use the app effectively.

### 1.3.4 Limitations

Key	Summary	Description	Labels
MPC-36	The system needs to be backed up in the cloud	Having data backed up in the cloud ensures data will not be lost easily.	limitation
MPC-35	The system needs to function while offline	The system should function even while a phone loses its internet connection. It should still display product information and once it's back online, it can update the information.	limitation
MPC-34	The system needs to have different accessibility settings for users	Accessibility refers to the security levels of the app. Not all users can access the same information on the system.	limitation
MPC-33	The system cannot run maintenance on Sunday	Sundays are the most popular day for shopping.	limitation
MPC-32	The system needs to have language options	Language options allow users of different backgrounds and races to be able to use the app.	limitation
MPC-31	The system needs to run on iOS and Android	The system needs to run on both platforms to ensure all users can install it on their phones.	limitation
MPC-30	The password cannot include characters	Numbers can be easier for users to input than characters.	limitation
MPC-29	The password length needs to be 6 numbers	The password should only be in numbers because not all users are proficient in reading or using characters.	limitation

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## 1.4 Definitions

**Conservation time:** date to ensure the products are fresh and to avoid losses because of spoiled products.

**Produce and Products:** Fruits and vegetables. No other products except these are sold by the company.

**Sustainability:** Sustainable practices promote the health and vitality of the environment, humans, and the economy. Micaela's Produce Center sells premier produce and often donates to local shelters to avoid wasting leftover products that are close to their expiration date.

**Owner:** The founders, Marcos Reynoso and Micaela Felipe.

**Market:** This refers to the company, as it resembles a farmer's market.

## 2. References

The company does not currently own a website dedicated to the business, so for reference, the founders of Micaela's Produce Center were interviewed.

Speakers: Micaela Felipe and Marcos Reynoso (Founders of Micaela's Produce Center)

Citation: Felipe, M., Reynoso, M. (2022, April 20). Business Analysis. (R. Reynoso, Interviewer)

Citation: Felipe, M., Reynoso, M. (2022, April 27). Business Analysis. (R. Reynoso, Interviewer)

Citation: Felipe, M., Reynoso, M. (2022, May 1). Business Analysis. (R. Reynoso, Interviewer)

### 3. Specific requirements

Requirements:

Key	Summary	Description	T	Linked Issues	P	Labels
MPC-65	The system shall display product names under the images.	The name of the product should be under the image to help with identification.	☰	MPC-27 , MPC-15	⬆	functional
MPC-63	The system shall include an instructional page in the app about how to use it.	Not every user is proficient in using the app, so an instruction manual will help them understand it better.	☰		⬇	nonfunctional
MPC-62	The system shall backup data in the cloud everyday.	Saving data to the cloud every day helps keep data secure.	☰		⬆	functional
MPC-61	The system shall notify users when a product is out of stock.	Notifying users when an item is out of stock helps them with daily operations such as customer service and restocking.	☰	MPC-25	⬆	functional
MPC-60	The system shall allow administrators to delete any product information.	This is to update information.	☰	MPC-19	⬆	functional
MPC-59	The system shall allow administrators to input product information.	Inputting product information is essential to being able to track inventory.	☰	MPC-19	⬆	functional
MPC-58	The system shall accept JPG and PNG files from the administrator of the app.	Approved file types help make sure that it is compatible with the system layout and design.	☰	MPC-27	⬇	nonfunctional
MPC-57	The system shall include high quality photos of all products.	High-quality photos make the product vibrant and clear.	☰	MPC-27	⬇	nonfunctional
MPC-56	The system shall run maintenance at scheduled times.	Running maintenance at scheduled times allows users to prepare ahead of time.	☰		⬇	functional
MPC-55	The system shall provide a search tool to easily find information.	A search tool quickly finds information.	☰		⬇	functional
MPC-49	The system shall identify the two types of users and restrict their access according to their security level clearance using their credentials.	There are two types of users: the owners and the employees. The employees have restricted access while the owners can view and change anything.	☰		⬆	nonfunctional
MPC-48	The system shall organize all product information into categories to allow users the option of viewing specific information alone.	Categories help organize and filter product information.	☰		⬇	nonfunctional
MPC-47	The system shall be updated regularly to check and fix bugs.	Any app can face small issues and updates can be used to fix them.	☰		⬇	nonfunctional
MPC-46	The system shall provide a user manual on a page to help users navigate the app.	A user manual is helpful to users so that they may learn about all the features of the app and how to properly use them.	☰		⬇	nonfunctional
MPC-45	The system shall allow all authorized users to create an account.	All users should be able to register for an account to grant them access to the app.	☰		⬆	functional
MPC-44	The system shall provide language options to the owner to ensure they can understand what information is being displayed.	The owners should be allowed language options for ease of use.	☰	MPC-28	⬆	functional
MPC-43	The system shall display all product		☰		⬇	nonfunctional

	information in an organized manner to allow users to easily read information.	Product information should be categorized to easily identify things. If someone were trying to find a specific detail about a product, it could be difficult to do so because everything is just grouped together. Categories help prevent this.				onal
MPC-42	The system shall backup all data in the cloud to prevent a loss of any data.	Backing up data will prevent data from getting lost easily.	☰		⬆	functiona l
MPC-41	The system shall allow the owners to edit all product information to keep items updated.	Editing and updating product information is what will help the owners improve the management of the company.	☰	MPC-18	⬆	functiona l
MPC-40	The system shall provide security settings to prevent security breaches.	The security settings of the app can be customized by the owners so that they can have control over who can and can't view things or other security issues.	☰		⬆	nonfunct onal
MPC-39	The system shall display product images to users, so that users can easily identify products.	Product images help users who are not proficient in reading characters.	☰	MPC-27	⬆	functiona l
MPC-38	The system shall provide language options to employees, so that employees may assist customers.	A language option allows users to select a language that they understand so that they can use the app effectively.	☰	MPC-28	⬆	functiona l
MPC-37	The system shall provide password-protected access to accounts that are to be viewed only by authorized employees.	Password-protected accounts prevent unauthorized users from accessing company information.	☰		⬆	nonfunct onal

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## Use Case:

ID and Name:	1. Log in		
Created By:	Rosa Reynoso	Date Created:	5/4/22
Actor:	Owner		
Description:	The owner opens the mobile app and logs in to their account to gain access.		
Preconditions:	PRE-1. Already have an account (Register for one)		
Postconditions:	POST-1 Access mobile app POST-2 View app information		
Normal Flow:	<ol style="list-style-type: none"> <li>1. App prompts owner to login</li> <li>2. App display login boxes (boxes to input info)</li> <li>3. Owner inputs login credentials</li> <li>4. Log in info is verified</li> <li>5. Once successfully verified, they are logged in</li> <li>6. App allows owner to access app</li> </ol>		
Alternative Flows:	<ol style="list-style-type: none"> <li>1. App asks owner to login</li> <li>2. App display login boxes (boxes to input info)</li> <li>3. Owner inputs login credentials</li> <li>4. App prompts that log in info is incorrect</li> <li>5. App denies access</li> </ol>		

ID and Name:	2. View Product		
Created By:	Rosa Reynoso	Date Created:	5/4/22
Actor:	Employee		
Description:	The owner access the app and views products.		
Preconditions:	PRE-1. Already have an account PRE-2 Log in to account		
Postconditions:	POST-1 Select products POST-2 View specific product information		
Normal Flow:	<ol style="list-style-type: none"> <li>1. App prompts employee to login</li> </ol>		

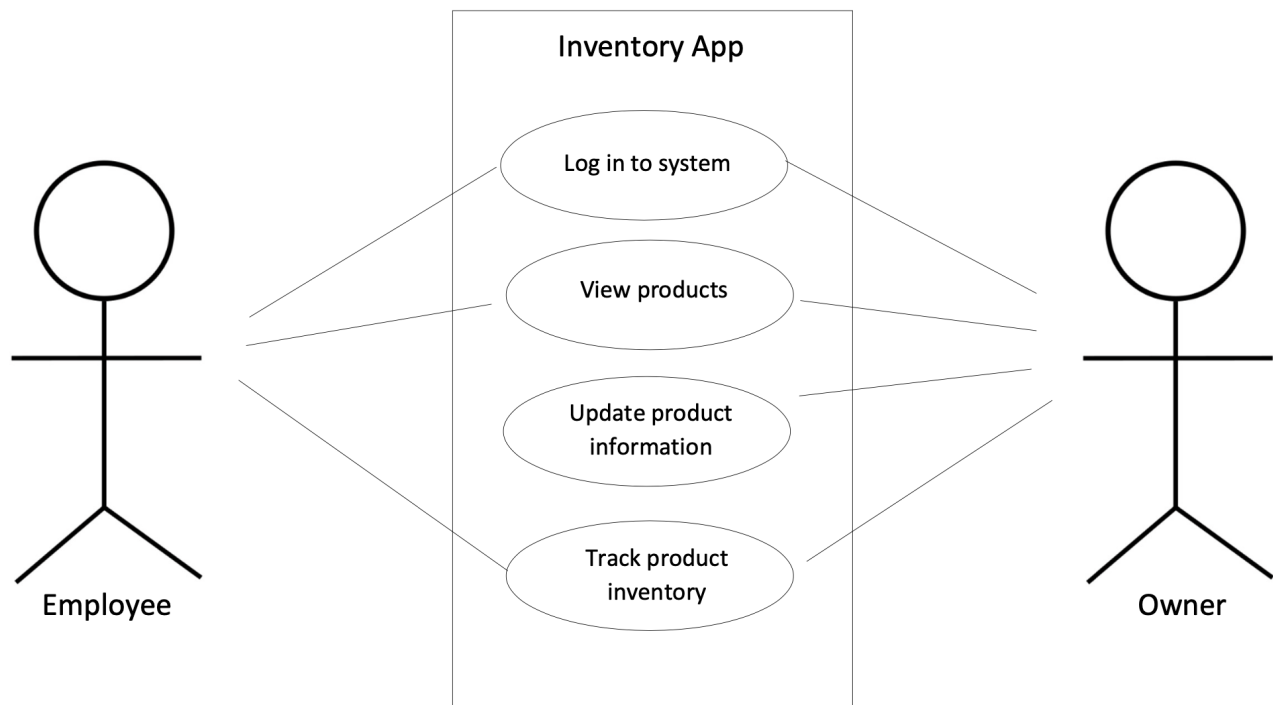
	<ol style="list-style-type: none"> <li>2. App display login boxes (boxes to input info)</li> <li>3. Employee inputs login credentials</li> <li>4. Log in info is verified</li> <li>5. Once successfully verified, they are logged in</li> <li>6. App allows employee to access the app</li> <li>7. Employee views home page</li> <li>8. Employee views products</li> <li>9. Employee selects product</li> <li>10. 10. Employee views specific product information</li> </ol>
Alternative Flows:	<ol style="list-style-type: none"> <li>1. App asks employee to login</li> <li>2. App display login boxes (boxes to input info)</li> <li>3. Employee inputs login credentials</li> <li>4. App prompts that log in info is incorrect</li> <li>5. App denies access</li> <li>6. Employee exits app</li> </ol>

ID and Name:	3. Update Product Info		
Created By:	Rosa Reynoso	Date Created:	5/4/22
Actor:	Owner		
Description:	The owner logs in and updates product information.		
Preconditions:	PRE-1. Already have an account PRE-2 Log in		
Postconditions:	POST-1 Product info is updated POST-2 Product info is saved		
Normal Flow:	<ol style="list-style-type: none"> <li>1. App prompts owner to login</li> <li>2. App display login boxes (boxes to input info)</li> <li>3. Owner inputs login credentials</li> <li>4. Log in info is verified</li> <li>5. Once successfully verified, they are logged in</li> <li>6. App allows owner to access app</li> <li>7. Owners selects product</li> <li>8. Edits product info</li> <li>9. New Product info is saved</li> <li>10. 10. Data is backed up</li> </ol>		
Alternative Flows:	<ol style="list-style-type: none"> <li>1. App asks owner to login</li> <li>2. App display login boxes (boxes to input info)</li> <li>3. Owner inputs login credentials</li> <li>4. App prompts that log in info is incorrect</li> <li>5. App denies access</li> </ol> <ol style="list-style-type: none"> <li>1. App asks owner to login</li> <li>2. App display login boxes (boxes to input info)</li> <li>3. Owner inputs login credentials</li> <li>4. App prompts that log in info is correct</li> <li>5. Owner access app</li> <li>6. Owner selects product</li> <li>7. Owner decides not to edit product info</li> <li>8. No product info changes</li> </ol>		

ID and Name:	4. Track product inventory		
Created By:	Rosa Reynoso	Date Created:	5/4/22
Actor:	Owner		
Description:	The owner views and track product inventory information. Such as how many units they have available.		
Preconditions:	PRE-1. Already have an account PRE-2 Log in		
Postconditions:	POST-1 Knowing product availability POST-2 Owner is up to date with information about products		
Normal Flow:	<ol style="list-style-type: none"> <li>1. App prompts owner to login</li> <li>2. App display login boxes (boxes to input info)</li> <li>3. Owner inputs login credentials</li> <li>4. Log in info is verified</li> <li>5. Once successfully verified, they are logged in</li> </ol>		

	6. App allows owner to access app 7. Owners selects product 8. View product information 9. View inventory numbers
Alternative Flows:	1. App asks owner to login 2. App display login boxes (boxes to input info) 3. Owner inputs login credentials 4. App prompts that log in info is incorrect 5. App denies access  1. App asks owner to login 2. App display login boxes (boxes to input info) 3. Owner inputs login credentials 4. App prompts that log in info is correct 5. Owner access app 6. Owner selects product 7. App prompts an error warning 8. Owner cannot view product info 9. Owner does not know product availability 10. 10. Owner contacts IT to fix issue

Use Case Diagram:



#### 4. Verification

Key	Summary	Verification Approach
MPC-65	The system shall display product names under the images.	Demonstration
MPC-63	The system shall include an instructional page in the app about how to use it.	Demonstration
MPC-62	The system shall backup data in the cloud everyday.	Test
MPC-61	The system shall notify users when a product is out of stock.	Inspection
MPC-60	The system shall allow administrators to delete any product information.	Test
MPC-59	The system shall allow administrators to input product information.	Test
MPC-58	The system shall accept JPG and PNG files from the administrator of the app.	Test

MPC-57	The system shall include high quality photos of all products.	Demonstration
MPC-56	The system shall run maintenance at scheduled times.	Test
MPC-55	The system shall provide a search tool to easily find information.	Inspection
MPC-49	The system shall identify the two types of users and restrict their access according to their security level clearance using their credentials.	Test
MPC-48	The system shall organize all product information into categories to allow users the option of viewing specific information alone.	Demonstration
MPC-47	The system shall be updated regularly to check and fix bugs.	Test
MPC-46	The system shall provide a user manual on a page to help users navigate the app.	Test
MPC-45	The system shall allow all authorized users to create an account.	Test
MPC-44	The system shall provide language options to the owner to ensure they can understand what information is being displayed.	Test
MPC-43	The system shall display all product information in an organized manner to allow users to easily read information.	Demonstration
MPC-42	The system shall backup all data in the cloud to prevent a loss of any data.	Test
MPC-41	The system shall allow the owners to edit all product information to keep items updated.	Test
MPC-40	The system shall provide security settings to prevent security breaches.	Inspection
MPC-39	The system shall display product images to users, so that users can easily identify products.	Demonstration
MPC-38	The system shall provide language options to employees, so that employees may assist customers.	Test
MPC-37	The system shall provide password-protected access to accounts that are to be viewed only by authorized employees.	Demonstration

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## 5. Appendices

### 5.1 Assumptions and dependencies

- The app will be easy to use.
- The app will be easy to access by users.
- Users will know how to use the app.
- The app will improve the company's daily operations.
- Customers will have general knowledge about Micaela's Produce Center.
- Users have a general understanding of how to use technology.
- The app will organize data in an easy way.
- There will be an increase in sales profits once the app is implemented.
- Customer satisfaction will increase.
- The management of the company budget will be improved.
- The app will help the owners be well informed of product inventory so that they can place orders from suppliers and avoid overstocking.

### 5.2 Acronyms and abbreviations

IT - Information Technology

iOS - Apple's Operating System

MPC - Micaela's Produce Center