Software Requirements Specification

for

ARMakeUp Web Store

Version 1.0 approved

Prepared by Ronald Quiroz

Made for Software Specification (CEN 3073) course at FGCU

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1. Introduction

1.1 Purpose

This software is to be developed so the business of ARMakeUp can thrive to its true and maximum potential. After talking with the business owners, we reached the conclusion it will be better for them to take their business and make it an online business store as well. This web store /mobile application will serve the purpose to connect different potential customers around the globe with ARMakeUp. Thus, increasing the sales that the business makes. Also, this solution will help the business in quality as it will look and feel more professional for its customers. It will give more confidence to buy in the business, and it will help to store data about the customers so that it is easier to satisfy their needs later on. The solution will also help automate the business processes so that it easier to satisfy the bigger and increasing demand.

1.2 Scope

Product Name

- ‘Foundation’ will be called the web store as it is the backbone of this project.
- 'Lipstick' will be the name for the mobile application as it is a store on the go for make-up products just like the lipstick that women always carry with them.
- ‘Nail Polish’ will be the name assigned to the database as it will “polish” the project make it seemed more robust and completed.

Overview

- The web store will be the backbone of the project. Here we will have all the products for display, so customers can look order them online.
- The mobile application will have the web store of ARMakeUp in a pocket version, so customers can look and order the same quality products on the go.
- The database will store the web store information about products, orders, and customers, so it is easily trackable.

Goals

Once the software solution is implemented the ARMakeUp will improve considerably as a business in general. The business will be an online business as well as a local one. This will allow the business to have the whole world as a potential customer because they can order online from the business and the items can be shipped pretty much everywhere. This will satisfy the main objective of any business that is to have exposure to as many customers as they can be. Another benefit that will come out of this software solution is that it will automate the business, so it is more scalable. The operational process of the business at the moment is quite tedious for each order, which makes it not manageable if the demand increases. However, with the software solution implemented this will not be a problem as the operational process will be more efficient

Out of Scope

- The solution will not be able to track orders shipped at its first version.
- Live chat support will not be available.
- Different languages besides English will not be available in the first version.

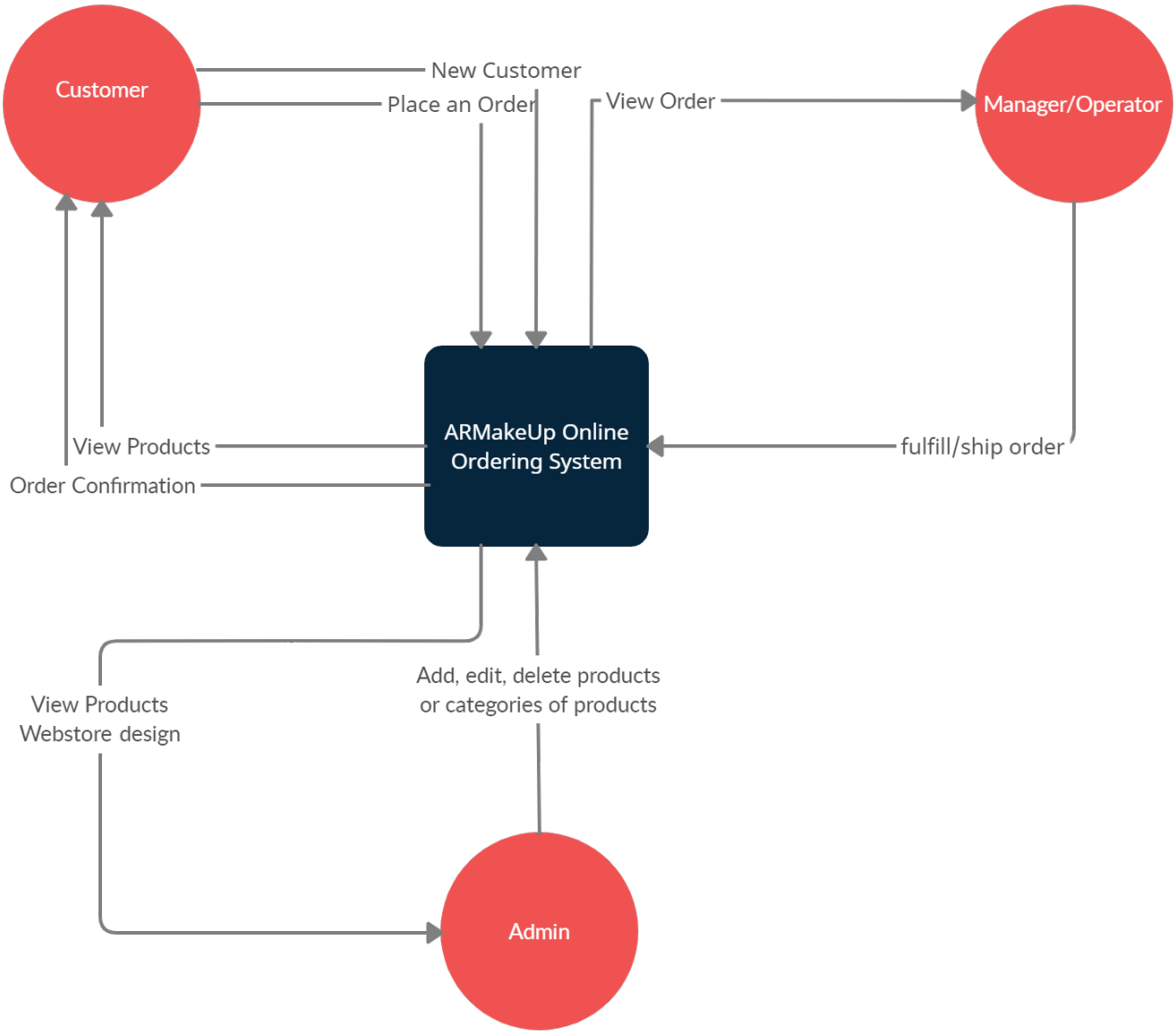
1.3 Product overview

1.3.1 Product perspective

The software system is conformed by three major elements: the web store, the mobile application, and a database to store products and customers' information. Of course, they are to be related between them as they need to work together. The mobile application will be just an optimized, pocket version of the web store. Thus, they must be synced up, so customers do not prefer one over the other. In addition, both of them need to be connected to the database to gather the products' information, or to check for the customer’s credentials when signing in, for example. Thus, all three elements work together to make this larger system of software that will help ARMakeUp to reach its goals.

As far as interfaces go, there will probably be two databases: one for products' details and the other for the customers’ information. The information of the products will be available through the web store and the mobile application as customers need to know the details of a product they are buying. However, customers' information will never be display in any of these for security purposes. The web store will have an option to access the mobile application if it is installed on the phone accessing the web store. Otherwise, it will launch the AppStore so the customer can download it.

- Placing an order: The customer comes into the online website and the website outputs the numerous products ARmakeUp has to offer. Then, the customer places an order of the products he would like to buy. Finally, immediately after the order was placed, the online ordering system of the store would email the customer automatically the order confirmation.
- Fulfilling an order: After the customer has placed an order, the operator will review the order. Then, he will ship the products from the order to the appropriate customer.
- Editing web store design: When an administrator of the web store signs in, he will be able to see the current design and the products offered at the moment in the web store. Then, he will be also able of editing, adding or deleting any products he might want.



Some constraints that I could identify with the help of my client are:

Key	Summary	T	P
ARM-43	The mobile application should have no cost for the customers to download it.		
ARM-42	The customers shall be able to click on ARMakeUp's logo to go back the home page.		
ARM-41	The mobile application shall adapt to the smartphone's screen size.		
ARM-40	The web store payment methods must support cards from both visa and mastercard, as well as PayPal.		
ARM-39	The web store must be supported by most, if not all, modern used internet browsers, even mobile ones.		
ARM-28	A customer cannot be logged into the web store longer than an hour at a time, else the system would log him off automatically. [design constraint]		

ARM-27	Customers must be logged into the web store in order to make purchases[design constraint.]		
ARM-26	The web store must have both a regular desktop version and a smartphone version. [design constraint]		
ARM-25	The customer must be able to change the sorting of the products. [design constraint]		
ARM-24	Online payments may be made only through a debit/credit card or Paypal. [design constraint]		

10 issues

1.3.2 Product functions

- The web store will be full of products so customers can look at and order them.
- Will have a shopping cart where customers will include all the products they want to buy before processing the order.
- When processing the order it will have a super secured window to make the transaction.
- It will generate invoices for the products.
- The web store will keep track of the inventory of the products.
- It Will sorted and categorize the products.

1.3.3 User characteristics

The software is intended to be very intuitive. However, we will provide different tips on how to use it, especially the first time the mobile application is downloaded by the user. We intend to use the latest IOS and Android developer kits, so the mobile application is compatible with the latest iPhones and Androids cellphones. Both the web store as well as the mobile application will be able to change its language, so even people from other countries feel comfortable buying from them. The mobile application will be set up to the language the user has as his preferred language in his phone, so it will be immediately familiar to them and they can start buying right away. Also, both the mobile application and the web store will be able to access the device's location so information can be provided in real-time, such as shipment times, and cost conversion to the local currency. That is if the user allows sharing his locations of course.

1.3.4 Limitations

Among the different limitations that come up for the ARMakeUp project are:

Key	Summary	Description	Labels
ARM-13	Maintenance must be done between 12 am and 7 am.	Maintenance must be done in the hours of less traffic of the day, so people will not be stopped from shopping in the business.	limitation
ARM-12	The mobile application must run on both Android and IOS.	We need to support both of the most used operating mobile systems, so more people is within the business reach.	limitation
ARM-11	The web store must run on any browser.	Any web browser must be capable to run the web store, so people do not have any problems trying to access to it.	limitation
ARM-10	Technical Support can only be provided by the developers team.	It is to ensure that only the right, capable people are the ones doing the maintenance.	limitation

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1.4 Definitions

There were not any special words or ways within the business or organization.

2. References

As my main source of information about the ARMakeUp business, I spoke to the two main people founders and in charge of this operation: Ana Ramirez and Ricaudy Jaquez.

For my mockup and all the diagrams used during the process, I used a website called creately.com

For my prototype of the ARMakeUp web store, I created an actual web store using the web platform Shopify.

3. Specific requirements

The requirements that I came up with for ARMakeUp with the help of Ana Ramirez were the followings:

Key	Summary	Description	T	Linked Issues	P	Labels
ARM-38	The system shall automatically send follow up emails the to customers after placing an order.	This is so the customer is aware and informed of what is happening with his order. For example, order confirmation, invoices, tracking links, etc.				Functional, Usability
ARM-37	When placing an order for more than 300$ usd, the system shall require an extra verification step via email.	Big orders shall require an extra layer of security to avoid inconveniences.				Functional
ARM-36	The system shall take less than a second to verify the customer's credentials (user and password).	The web store shall be efficient when verifying credentials so customers can keep with their shopping right away.				Nonfunctional, Performance
ARM-35	The system shall request the customer to log in before placing an order.	An extra layer of security to the web store.				Functional, Usability
ARM-34	The system shall ask the customer for the password when placing an order for security purposes.	This is to confirm that the right person is placing the order.				Interface, Nonfunctional
ARM-33	The web store and the mobile application shall allow to store and display as many products as the database has.	The web store is the implementation of the database, so one cannot hold more or less than the other.				Database, Interface, Nonfunctional
ARM-32	The database's information shall be stored locally, so we have access to it even offline.	We need to have access to the database offline also in case the internet is down.				Database, Nonfunctional
ARM-31	The database's information shall be backed up at the end of each week.	The database shall be backed up often, so if it gets hacked we can save most of the information.				Database, Nonfunctional
ARM-30	The database behind the system shall be able to be expanded if needed.	The clients shall be able to add as many products as they want without worrying about the database being full.				Database, Nonfunctional
ARM-29	At any point in time the web store shall be customizable.	The client shall be able to customize the store to its taste.				Functional
ARM-23	The support team shall provide maintenance to the system in the hours of less traffic.	Maintenance is needed in every system. Thus, it should be done in hours of less traffic to avoid postponing or interrupting any possible sales for the business.				Nonfunctional
ARM-22	The mobile application shall have the same products and features as the web store so customers do not feel like they are being punished for having the mobile app.	There would not be any reason to have a mobile application if is not updated as often as the web store. Otherwise, customers would prefer using the web store and not the app.				Functional
ARM-21	When placing an order, the process from beginning to end shall be easy and quick to execute.	It should be easy and quick for customers to place an order and buy products.				Nonfunctional
ARM-20	The web store payment system shall be highly secured so that customer's credit cards are not to be leaked.	In order to gain the trust of the people to buy with us, we need to make sure that trust isn't betrayed ever. Thus, we need to protect our customers' payment information as if it is ours.				Nonfunctional
ARM-19	Products on the web store shall be easy to modify so that only one person can edit the products to fit the business' needs.	Fixing a small editing issue, or adding pictures of the product should not be a task too complicated. Only one person should be able to do these small features related to products.				Nonfunctional

ARM-18	The system shall store each customer's data only once so that placing an order is quicker and easier for the customer.	The customer will need to enter his info only once. After that, he will be able to place as many orders as he wants using the data stored.			↑	Nonfunctional
ARM-17	Before the web store is live, the developers shall provide appropriate training to the operational users so they can effectively take care of the web store's operations on a daily basis.	Training is essential for the people that will be operating the web store on a daily basis.		ARM-8	↑	nonfunctional
ARM-16	When a product gets out of stock, the inventory system shall immediately block that product from being bought by anyone until it gets restocked again.	This is done so we do not compromise to inaccurate shipping times or so we do not have to offer a refund to the customer.		ARM-6	↑	Functional
ARM-15	The invoice system shall display past customer's orders in descending order from the most recent up to the oldest one.	This is so the customer can buy again the products he loves quicker and easier.		ARM-3	↑	Functional
ARM-14	The user shall have access to check their 'shopping cart' in order to confirm and pay for the products previously selected.	One of the main features of the web store /mobile app because without this the customer cannot place its order.			↑	Functional

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I also came up with a use case list of some of the most important use cases that represent what the ARMakeUp online ordering system would look like:

UC ID and Name:	**UC-1 Order a Product**		
Created By:	Ronald Quiroz	Date Created:	2/19/2021
Primary Actor:	Customer	Secondary Actors:	Website Inventory System
Trigger:	A customer add products to his shopping cart and place the order.		
Description:	A customer accesses the web store online from any of his devices, views the catalog of products, selects the products he wants to order, add them to his cart and places the order for the product to be delivered to his house /apartment.		
Preconditions:	1. Customer is logged into the web store. 2. Customer has a shipping address saved in the system. 3. Customer has a payment method saved in the system.		
Postconditions:	1. Product order is stored with a status of "Accepted". 2. The inventory is updated to reflect items bought in this order. 3. Items are shipped to the customer's address.		
Normal Flow:	**1.0 Order a Single Product** 1. Customer see the catalog of products. 2. Customer selects the product he would like to buy. 3. Customer add the product to the shopping cart. 4. Web store system displays a confirmation page with the product to be bought, individual prices, taxes, delivery fee, total price, and estimated delivery time. 5. Customer confirms the order. 6. Web store prompt to add the payment method. 7. Customer accepts and pay for the order. 8. Web store sends a confirmation email to the customers with the order details. 9. Web store sends the order to be fulfilled.		
Alternative Flows:	**1.1 Order multiple identical Product** 1. When adding the product to the shopping cart, customer is prompt to specify how many of the same product are to be bought. 2. return to step 4 of normal flow. **1.2 Order multiple meals** 1. Customer is asked to keep shopping for more products. 2. Return to step 1 of normal flow.		
Exceptions:	**1.1.E1 Insufficient inventory to fulfill multiple meal order**		

	1. Web store informs the customer the maximun number of identical meals he can order, based on current available inventory. 2. If customer modifies number of products ordered, then return to step 4 of normal flow. 3. Else if customer cancels the order process, then web store terminates use case.
Priority:	Highest
Frequency of Use:	As often as possible.

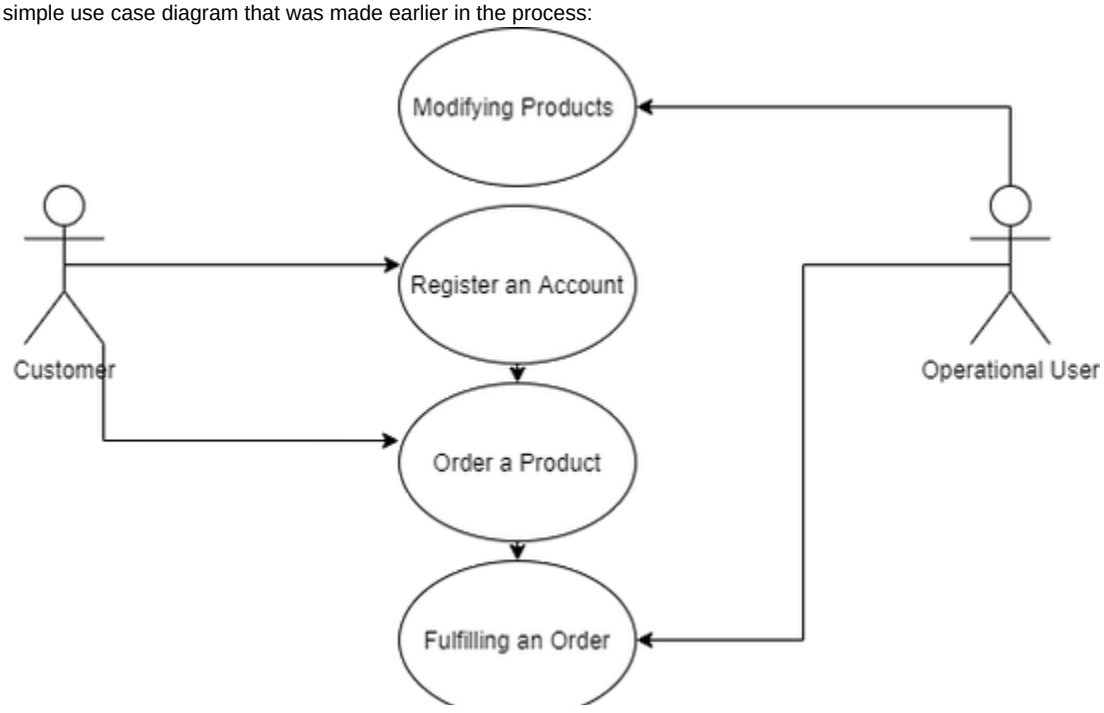
UC ID and Name:	**UC-2 Register an Account for ARMakeUp**		
Created By:	Ronald Quiroz	Date Created:	2/19/2021
Primary Actor:	Customer	Secondary Actors:	Website Inventory System
Trigger:	A customer wants to register on the web store.		
Description:	For the customer to place an order they must be registered in the system of ARMakeUp web store. This allows the web store to have the customer's information such as billing and shipping address, payment methods, email, and others stored. Thus, making the process of ordering products easier and quicker.		
Preconditions:	1. Customer needs a valid email.		
Postconditions:	1. Customer's information is stored and he is stogged so he can place orders.		
Normal Flow:	**2.0 Register an Account** 1. Customer clicks on register. 2. System asks for the customer's basic info such as email, user name, password. 3. System sends a verification email to the customer's email. 4. Customer verifies the email. 5. The system asks customer's address and payment method. 6. System informs the customer that he is all set.		
Alternative Flows:	none		
Exceptions:	**2.1.E1 Customer does not have a valid email.** 1. System let the customer know that the email is not valid. **2.2.E2 There is an account registered with that email.** 1. System let the customer know that the email is being used. 2. System asks if the customer forgot his username or password.		
Priority:	High		
Frequency of Use:	Must be available everytime.		

UC ID and Name:	**UC-3 Modify Products Catalog**		
Created By:	Ronald Quiroz	Date Created:	2/19/2021
Primary Actor:	Operational support	Secondary Actors:	Website Inventory System
Trigger:	Needs to happen whenever the catalog needs to be updated		
Description:	The catalog of products may need to be updated. In this case any of the operational support users can do this by inserting new products, editing or deleting existing ones.		
Preconditions:	none.		
Postconditions:	1. Product and therefore the catalog of products will be updated.		
Normal Flow:	**3.0 Modifying Catalog of Products.** 1. The support users needs to login into the web store. 2. Edit the product he is supposed to edit. 3. Confirm the changes were made successfully.		
Alternative Flows:	none		

Exceptions:	none
Priority:	High
Frequency of Use:	Must be available everytime.

UC ID and Name:	**UC-4 Fulfilling an Order**		
Created By:	Ronald Quiroz	Date Created:	2/19/2021
Primary Actor:	Operational support	Secondary Actors:	Website Inventory System
Trigger:	When a order is placed.		
Description:	Once a order is placed, then the operational support user in shift will need to fulfilled the order. This means to take the prepare the products of the order for shipping and ship them away to its rightful new owner.		
Preconditions:	1. An order must be placed so it can be fulfilled.		
Postconditions:	1. The products will be on their way. 2. The order will be marked as “fulfilled”.		
Normal Flow:	**4.0 Fulfilling an Order.** 1. The support users needs to login into the web store. 2. Check the status of all orders and proceed to fulfilled the ones marked down as “unfulfilled”. 3. Afterwards mark the respective order as “fulfilled”. 4. The system will automatically send an email to the customer let him know that its order has been shipped.		
Alternative Flows:	none		
Exceptions:	**4.1.E1 The order is cancelled before it gets fulfilled.** 1. The operational support user will not fulfilled the order. 2. Then he will proceed to cancelled the order from the system, so it does not stay as “unfulfilled”. 3. Then he need to start the process of the refund to the customer. 4. Ultimately the system will alert the customer through email that the refund is on the way.		
Priority:	High		
Frequency of Use:	Must be available everytime.		

Also here is a simple use case diagram that was made earlier in the process:



4. Verification

After long consideration and reviewing the requirements many times during the process, I have come to the realization of the best verification approach for each requirement:

Key	Summary	Verification Approach
ARM-38	The system shall automatically send follow up emails the to customers after placing an order.	Test
ARM-37	When placing an order for more than 300$ usd, the system shall require an extra verification step via email.	Demonstration
ARM-36	The system shall take less than a second to verify the customer's credentials (user and password).	Analysis
ARM-35	The system shall request the customer to log in before placing an order.	Demonstration
ARM-34	The system shall ask the customer for the password when placing an order for security purposes.	Demonstration
ARM-33	The web store and the mobile application shall allow to store and display as many products as the database has.	Test
ARM-32	The database's information shall be stored locally, so we have access to it even offline.	Test
ARM-31	The database's information shall be backed up at the end of each week.	Inspection
ARM-30	The database behind the system shall be able to be expanded if needed.	Test
ARM-29	At any point in time the web store shall be customizable.	Demonstration
ARM-23	The support team shall provide maintenance to the system in the hours of less traffic.	Analysis
ARM-22	The mobile application shall have the same products and features as the web store so customers do not feel like they are being punished for having the mobile app.	Inspection
ARM-21	When placing an order, the process from beginning to end shall be easy and quick to execute.	Analysis
ARM-20	The web store payment system shall be highly secured so that customer's credit cards are not to be leaked.	Analysis
ARM-19	Products on the web store shall be easy to modify so that only one person can edit the products to fit the business' needs.	Test
ARM-18	The system shall store each customer's data only once so that placing an order is quicker and easier for the customer.	Analysis
ARM-17	Before the web store is live, the developers shall provide appropriate training to the operational users so they can effectively take care of the web store's operations on a daily basis.	Inspection
ARM-16	When a product gets out of stock, the inventory system shall immediately block that product from being bought by anyone until it gets restocked again.	Inspection
ARM-15	The invoice system shall display past customer's orders in descending order from the most recent up to the oldest one.	Demonstration
ARM-14	The user shall have access to check their ‘shopping cart’ in order to confirm and pay for the products previously selected.	Demonstration

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5. Appendices

5.1 Assumptions and dependencies

- The website will definitely draw more people and generate more sales to the business.
- The software solution will come out flawless.
- The solution will be easy to maintain and support.
- The development of the solution will be straightforward.
- An agile methodology will be best.

5.2 Acronyms and abbreviations

There were no acronyms or abbreviations used during the BRS or here (SRS).