Charm City Market

E-Commerce Solution

Requirements Document

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**1 Requirements**

**1.1 Background**

Charm City Market is a small chain of grocery stores located in Baltimore, Maryland that is looking to increase revenue and save cost by releasing an E-Commerce website. The website will be built, designed, and implemented by July 1st, 2020. A project team consisting of a Project Manager, Database Designer, Business Analyst, Webmaster, and Infrastructure Analyst will be hired to complete the project. Overall, the project will be implemented into the already set-in-place infrastructure and will have to be seamlessly integrated in order to be successful.

**1.2 Functional Requirements**

The functional requirements below show all of the basic requirements that the Charm City Market platform must be able to perform and information that the system must contain. This consists of, but is not limited to: search engine, product categorization and filter, customer data management, inventory management, flexible transactions, and a delivery option.

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| **Req #** | **Functional Requirement Statements** |
| FR#1 | The system will display all available products alphabetically by the following categories:   * Meat * Dairy * Seafood * Frozen food * Beverage * Bread/bakery * Household items * Produce * Personal care |
| FR#2 | The system will allow users to add grocery items to their cart. |
| FR#3 | The system will allow users to delete grocery items from their cart. |
| FR#4 | The system will allow users to specify an exact quantity to purchase for each item. |
| FR#5 | The system will update inventory for each product purchased in real time. |
| FR#6 | The system will allow the users to filter products by category. |
| FR#7 | The system will display all available products alphabetically by category. |
| FR#8 | The system will allow customers to enter their credit/debit card information. |
| FR#9 | The system will allow users to add items to a wishlist. |
| FR#10 | The system will allow users to sign into their own unique profile. |
| FR#11 | The system will allow users to retrieve their password. |
| FR#12 | The system will allow users to create a profile. |
| FR#13 | The system will allow users to choose home-delivery. |
| FR#14 | The system will allow users to choose in-store grocery pickup. |
| FR#15 | The system will allow users to their track order. |
| FR#16 | The system will allow users to cancel paid orders within 24 hours. |
| FR#17 | The system will allow users to rate the products. |
| FR#18 | The system will allow users to checkout in-store by scanning the barcodes on products. |
| FR#19 | The system will display product reviews with verified purchasers. |
| FR#20 | The system will allow users to update account information. |
| FR#21 | The system will store customer data including personal information, wishlists, and previous order information. |
| FR#22 | The system will allow users to navigate the website on mobile phones as well as desktop computers/laptops. |
| FR#23 | The system will allow users to return items. |
| FR#24 | The system will allow users to reorder items. |
| FR#25 | The system will allow users to compare prices with other grocery stores. |
| FR#26 | The system will recommend products based on customers’ shopping record/ shopping interests/ viewing history. |
| FR#27 | The system will generate special offers for users based off of their purchase history. |
| FR#28 | The system will allow customers to look up products by taking photos. |
| FR#29 | The system allows the users to print his/her receipt of the products purchased. |
| FR#30 | The system will allow users to share product links with other applications. |

**1.3** **Non-Functional Requirements**

The non-functional requirements below relate to the behavior of the system and focus on usability, security, and performance.

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| **Req #** | **Non-Functional Requirement Statement** |
| NFR#1 | The system will differentiate between administrative users and customers. |
| NFR#2 | The system will be available on IOS (minimum compatibility iOS 9.0). |
| NFR#3 | The system will be available on Android (minimum compatibility 6.0) |
| NFR#4 | The system will encrypt and secure all customer credit card information. |
| NFR#5 | The system will be available for use 24 hours a day, 365 days a year (excluding routine maintenance and unexpected downtime). |
| NFR#6 | The system will be compatible with Mac (minimum compatibility OS X 10.11 El Capitan). |
| NFR#7 | The system will be compatible with Windows (minimum compatibility Windows XP). |
| NFR#8 | The system will have a response time of no more than 3 seconds per interaction. |
| NFR#9 | The session expires after 15 minutes of inactivity during checkout. |
| NFR#10 | The system will include two-factor authentication for sign in. |
| NFR#11 | The system will go through bi-monthly database maintenance. |
| NFR#12 | The system will be compliant with federal privacy laws. |
| NFR#13 | The system will be made available within 15 minutes during unexpected system downtime. |
| NFR#14 | The system will have virus/firewall protection to avoid external attacks. |
| NFR#15 | The system will allow for user configuration management. |
| NFR#16 | The system will provide a disaster recovery plan that includes daily server and user information backup. |
| NFR#17 | The system will maintain the data integrity of the customers. |
| NFR#18 | The server capacity will allow for a high volume of customers to shop online at once. |
| NFR#19 | The system is upgraded regularly in order to ensure better accuracy and performance. |
| NFR #20 | The system will support easy navigation for all users. |
| NFR#21 | The system will enforce a password policy. |
| NFR#22 | The system will allow each user five login attempts before locking the users account. |

**2 Data Information Statements**

The data information requirements for Charm City Market describe:

**DR 2.1 The system will manage Inventory for all available products by category, including:**

* Product category
  + Meat
  + Dairy
  + Seafood
  + Frozen food
  + Beverage
  + Bread/bakery
  + Household items
  + Produce
  + Personal care
* Unit of Measure
  + Per pound
  + Per item
* Cost
  + Low to high
  + High to low
  + Under $10
  + $25 - $50
  + $50 - $100
  + Over $100
* Manufacturer/Brand
  + PepsiCo. Inc.
  + Tyson Foods Inc.
  + Nestle (U.S. & Canada)
  + Kraft Heinz Co.
  + Coca-Cola Inc.
  + Anheuser Busch InBev.
  + JBS USA
  + Smithfield Foods Inc.
  + Molson Coors Co.D
  + General Mills Inc.
  + Mars Inc.
  + Hormel Foods Inc.
  + Kellogg Inc.
  + Cargill Inc.
  + Pilgrim’s Pride
  + Conagra Brands Inc.
  + Deans Food Co.
  + J.M. Smucker Co.
  + Bimbo Bakeries USA
  + Mondelez International
* Date
  + Date Received
  + Expiration Date
* Availability
  + In-stock/ Quantity
  + Out-of-Stock
* Stock keeping Unit (SKU)
  + Unique product number
  + Start date
  + End date

**DR 2.2 The system will manage Customer profile information, including:**

* First Name
* Last Name
* Address
* Billing Address
* Credit or debit card information
  + First Name, Last Name, Billing Address, Exp. Date, and CVV number
* Gender (optional)
* Birthdate

**DR 2.3 The system will manage customer shopping information information, including:**

* Frequency of visits to Charm City Market
* Items purchased
* Method of purchase
  + In-store pickup
  + In-store shopping via mobile interface
  + Delivery
  + Traditional shopping and paying via cashier

**DR 2.4 The system will manage customer order information for Home-Delivery, including:**

* Order number
* Product name
* Quantity
* Item number
* Total amount paid
* Shipping method
* Delivery date

**3 System Requirements**

**3.1 Data retention**

Data Retention at Charm City Market is an important concept as it will help the business analyze and evaluate trends in the grocery marketplace. In regards to customer data, Charm City Market will adhere to federal regulations and conduct business in an ethical and efficient manner. The server supporting Charm City Market’s E-Commerce solution will store customer information for three years, so that the information is easily accessible in case of fraudulent charges or inquiries. The system will retain hourly snapshots of the database to ensure completeness, increase and examine performance, and address any database errors.

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| **Req #** | **Data Retention Requirement Statements** |
| DRRS#1 | The system will adhere to federal regulations when retaining customer data. |
| DRRS#2 | The system will hold prior customer transaction data for three years. |
| DRRS#3 | The system will retain and allow for immediate system documentation access 24 hours a day, 365 days a year. |
| DRRS#4 | The system will retain hourly snapshots of the database inventory system. |
| DRRS#5 | The system will only retain customer credit card information if the user agrees to save said information. |
| DRRS#6 | The system will retain customer profile information for 7 years before deactivation if the account is not active. |

**3.2 Backup & Recovery**

An efficient and adaptable Backup & Recovery plan will be put into place at Charm City Market to ensure system resiliency. The database will be properly protected against data failure and loss, and will be backed up twice daily should such failure occur. The time-based recovery plan will monitor and evaluate critical situations, and all recovery initiatives will be completed in less than 4 hours.

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| **Req #** | **Backup & Recovery Requirement Statements** |
| BRRS#1 | The system will automatically back itself up twice daily. |
| BRRS#2 | The system will have a time-based recovery plan that will be automated. |
| BRRS#3 | The system will create a database backup log of one year. |
| BRRS#4 | The system will be backed up both physically on the server and virtually on the cloud. |
| BRRS#5 | The system will backup and maintain customer data and unique customer profiles. |
| BRRS#6 | The system will complete recovery initiatives in less than 4 hours. |

**3.3 Security**

Security is a supremely important concept at Charm City Market. Customers must feel that their personal information is safe in order for the business to succeed and thrive. The below requirements show the implementation of basic security measures that will help run Charm City Market both efficiently and securely.

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| **Req #** | **Security Requirement Statements** |
| SRS#1 | The system will enforce a password policy (minimum of 8 characters, one special character, one uppercase letter, and one number). |
| SRS#2 | The system will enforce two-factor authentication through the mobile interface. |
| SRS#3 | The system will secure and encrypt customers’ credit card information. |
| SRS#4 | The system will allow each user five login attempts before locking the users account. |
| SRS#5 | The system will cohere with external application security standards. |
| SRS#6 | The system will store essential data assets in an accessible manner for administrative super users only. |

**3.4 System Audit**

Regularly scheduled System Audits will be performed at Charm City Market to ensure that the system is adhering to system requirements and performing fundamental functions efficiently. The Audits will monitor and analyze functional business activities and proactively work to better system processes.

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| **Req #** | **System Audit Requirement Statements** |
| SARS#1 | The system will differentiate between administrative users and customers. (Access control) |
| SARS#2 | The system will go through bi-monthly database maintenance. (System review) |
| SARS#3 | The system will have virus protection to avoid external attacks. |
| SARS#4 | The system will enforce firewall rules that support network controls. |
| SARS#5 | The system will log systems processes to ensure efficiency. |
| SARS#6 | The system will perform routine risk analysis before regularly scheduled system audits. |

**3.5 Service Level**

Customer Service at Charm City Market is a top priority. A ticket system will be implemented to help hired analysts address system issues by order of importance. Critical situations will be dealt with immediately, and all customers will receive support within 30 minutes. Overall, the general aim of the system will be to please customers so that they become repeat customers.

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| **Req #** | **Service Level Requirement Statements** |
| SLRS#1 | The system will have a response time of no more than 3 seconds per interaction. |
| SLRS#2 | Customers will get service support within 30 minutes. |
| SLRS#3 | The system will be accessible 99.5% of the time outside of routine maintenance and emergency downtime. |
| SLRS#4 | The system will provide accurate delivery time estimates for customers. |
| SLRS#5 | The system will implement a ticket system in order to address critical issues by order of importance. |
| SLRS#6 | The system will provide accurate product ratings and availability. |

**3.6 Disaster Recovery**

In an ideal world, Charm City Market would hope to not need a Disaster Recovery plan, but a plan must be implemented in order to guarantee safety of customer information and business success.

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| **Req #** | **Disaster Recovery Requirement Statements** |
| DRRS#1 | The system will be made available within 30 minutes during unplanned system downtime. |
| DRRS#2 | The system will backup user information and system progress while the system is down. |
| DRRS#3 | The system will have a backup power supply solution during power outages. |
| DRRS#4 | The system will convert all hard copy data to digital for efficient record keeping. |
| DRR#5 | The system will have a detailed, documented process for recovery. |
| DRRS#6 | The system will have a backup security measure implemented to ensure customer data is properly secured during unplanned downtime. |

**3.7 Contingency Plan**

Charm City Market will retain a documented list of all common potential network and system failures to be prepared for all possible scenarios. Charm City Market will be prepared for the unexpected and store as much backup equipment as possible in order to retain the 99.5% system uptime rule. The system will stay up to date with its processes in order to maintain efficiency and secure its assets.

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| **Req #** | **Contingency Plan Requirement Statements** |
| CPRS#1 | The system will use cloud hosting to redirect users to a temporary website during disaster recovery. |
| CPRS#2 | The system will have a documented list of emergency scenarios in order to be prepared. |
| CPRS#3 | The system will continually monitor federal regulations to ensure compliance. |
| CPRS#4 | The system will have backup computers and backup network equipment at the ready. |
| CPRS#5 | The system will alert staff when any available product hits critical low inventory. |
| CPRS#6 | The system will routinely update its processes and security measures. |

**4 Use Cases:**

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| **Name** | **View Products Available** |
| **Identifier** | **UC 1 (FR #1)** |
| **Preconditions** | * The user has a compatible device and browser. * The user has internet access. * The user has successfully launched the website. |
| **Trigger(s)** | Customer wants to view available products for purchase. |
| **Business Rule(s)** | None |
| **Scenario** | R1.1 The customer chooses to view all available products.  R1.2 The system will display all available products alphabetically by category. These categories include:   * Meat * Dairy * Seafood * Frozen food * Beverage * Bread/bakery * Household items * Produce * Personal care   R1.3 The customer has the option to choose one of these categories to filter their search.  R1.4 The user types in the beginning letters of a food product.  R1.5 The system searches and finds the correct food product based on the customers input. If the search is broad - multiple brands and food options may be shown for purchase. **[Alt Scenario A]** |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The search menu does not return any available food product.  AS1.1 The system will return a ‘No Products Found’ screen and the user will be prompted to search again.  AS1.2 The system will reset and the user will start from **R1.1**. |

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| **Name** | **Sign Into a User Profile** |
| **Identifier** | **UC 2 (FR #10)** |
| **Preconditions** | * The Charm City Market website must be successfully launched. * The user has a compatible device. * User must have a created a unique customer profile. |
| **Trigger(s)** | User will navigate the website using the LOGIN function with their own unique USERNAME and PASSWORD. |
| **Business Rule(s)** | BR2.1 A user will not be able to login unless a user profile has been created.  BR2.2 The correct USERNAME and PASSWORD must be entered.  BR2.3 The system will allow the user five attempts to enter the correct password before locking the users account. |
| **Scenario** | R2.1 The customer chooses to login to their own unique profile using the ‘LOGIN’ function on the website homepage.  R2.2 The system will display ‘Please enter your username and password.’  R2.3 The user enters the appropriate information and submits to the system.  R2.4 The system will authenticate that the correct information was entered in accordance with **BR2.2.**  **[Alt. Scenario A]** |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The username or password entered by the user is incorrect.  AS2.1 The system will display an error message alerting the user that either the username or password entered was incorrect.  AS2.2 The system will prompt the user to enter the information again.  AS2.3 The system will return the user to **R2.2**. |

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| **Name** | **Checkout In-Store By Scanning Barcodes** |
| **Identifier** | **UC 3 (FR #18)** |
| **Preconditions** | * The user must have successfully launched the mobile interface. * User must have a compatible smartphone (iPhone or Android) to scan barcodes (take a photo of the barcodes) and purchase items. |
| **Trigger(s)** | Customers will add items to their cart by scanning product barcodes, thus purchasing each item live while shopping. |
| **Business Rule(s)** | BR3.1 Customers must be logged into their own unique profile in order to purchase items.  BR3.2 A customer cannot scan multiple items at once.  BR3.3 A customer must have a credit or debit card linked with their account to purchase items.  BR3.4 The system will authenticate all barcodes scanned by customers. |
| **Scenario** | R3.1 The user navigates to the ‘SCAN NOW’ feature available on the mobile interface.  R3.2 The system will allow the user to take a photo of product barcodes.  R3.3 The system validates the photo taken by the user in accordance with **BR3.4.** **[Alt. Scenario A]**  R3.4 The system validates the users debit or credit card information and processes the payment.  **[Alt. Scenario B]** |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The photo taken cannot be read and/or the photo does not contain an authentic or legitimate product barcode.  AS3.1 The system will display an error message stating, “Please Rescan Barcode.”  AS3.2 The user will be returned to **R3.2.**  **Alternate Scenario B**  – The system is unable to locate or process the users debit or credit card information.  BS3.1 The system will display an error message stating, “Credit or debit card information is missing or incorrect.”  BS3.2 If the user chooses to enter their credit card information, the system will require them to provide FIRST NAME, LAST NAME, BILLING ADDRESS, EXP. DATE, and CVV.  BS3.3 If the system validates the card - the process will resume as **R3.4.** |

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| **Name** | **Add Grocery Items To Cart** |
| **Identifier** | **UC 4 (FR#2)** |
| **Preconditions** | * Customer has access to the system. * Customer has a compatible device. * Customer has selected an active product. |
| **Trigger(s)** | Customer wants to add a product into shopping cart. |
| **Business Rule(s)** | None |
| **Scenario** | R4.1 The customer clicks ‘ADD TO MY CART’ to add desired products into shopping cart. **[Alt Scenario A]**  R4.2 The system adds the items into the shopping cart.  R4.3 The user can continue shopping. |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The product chosen is currently out of stock.  AS4.1 The system will display a message “OUT OF STOCK”.  AS4.2 The user will be returned to **R4.3.** |

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| **Name** | **Create a Wishlist** |
| **Identifier** | **UC 5 (FR#9)** |
| **Preconditions** | * Customer has created a profile. * Customer has a compatible device and browser. * Customer has successfully launched the website. * Customer has selected a product. |
| **Trigger(s)** | Customer wants to add an item to wishlist for future shopping. |
| **Business Rule(s)** | None |
| **Scenario** | R5.1 The user chooses ‘ADD TO WISHLIST’ from the product screen. **[Alt Scenario A]**  R5.2 The system adds the item into wishlist. |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The user has not created a wishlist before.  AS5.1 The system will display a message ‘ CREATE A WISHLIST’ and the user will be prompted to create a new wishlist.  AS5.2 The user will be returned to **R5.1** |

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| **Name** | **Home-Delivery Option** |
| **Identifier** | **UC 6 (FR#13)** |
| **Preconditions** | * Customer has created and signed into a user profile. * Customer has launched the website successfully. * Customer is at the checkout screen. |
| **Trigger(s)** | Customer wants to choose the home-delivery service when checking out. |
| **Business Rule(s)** | BR1.1 Customer must have a valid home address within the designated delivery area (20 mile radius).  BR1.2 The system only accepts these types of credit/ debit card:   * Visa * Discover Card * Mastercard * Capital One * American Express |
| **Scenario** | R6.1 The user chooses ‘HOME DELIVERY’.  R6.2 The system will show a list of information for the user to fill in:   * First name * Last name * Address * State * Zip code * Phone number   R6.3 The user fills in the correct information.**[Alt Scenario A]**  R6.4 The system validates the information and displays the payment screen. **[Alt Scenario B]**  R6.5The user will be prompted to enter payment information.  R6.6 The user will enter Credit Card Number, Exp. Date, and CVV in accordance with BR1.2  R6.7 The system will validate the credit/debit card information and process the order. **[Alt Scenario C]**  R6.8 The system will display an estimated delivery time.  R6.9 The system will actively update the delivery time every 10 minutes until order is complete. |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The user does not have a valid home address within the applicable delivery area.  AS6.1 The system will display the message, “Home address is either invalid or not in the designated delivery area.”  AS6.2 User will be prompted to choose in-store pickup or cancel transaction.  **Alternate Scenario B** – The user does not complete the form.  BS6.1 The system will display a message ‘PLEASE FILL IN ALL REQUIRED INFORMATION’  BS6.2 The user will be returned to **R6.3**  **Alternate Scenario C** – The system cannot validate the credit card information entered.  CS6.1 The system will display the message, “Information entered is invalid - please try again.”  CS6.2 The user will be returned to **R6.6**. |

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| **Name** | **Tracking an Order** |
| **Identifier** | **UC 7 (FR#15)** |
| **Preconditions** | * Customer has a compatible device. * Customer has successfully launched the website. * Customer has successfully signed into a unique user profile. * Customer must have placed an order successfully. |
| **Trigger(s)** | Customer wants to track a delivery. |
| **Business Rule(s)** | BR7.1 The user must have placed an order to successfully track an order. |
| **Scenario** | R7.1 The user chooses ‘MY ORDER’ from the navigation pane.  R7.2 The system will display the user’s placed orders in compliance with **BR7.1** with a list of information: **[Alt Scenario A]**   * Product name * Order number * Order date * Total amount paid * Shipping method * Track my order   R7.3 The user chooses ‘TRACK MY ORDER’  R7.4 The system will display delivery information including:   * Shipping process (Not Shipped Yet/ Shipped/ In Transit) * Expected delivery date/ Arrived date |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The user does not have any previous orders.  AS7.1 The system will display a message “NO PREVIOUS ORDERS FOUND” and the user will be directed back to the homepage. |

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| **Name** | **Delete Grocery Items From Cart** |
| **Identifier** | **UC 8** (**FR#3)** |
| **Preconditions** | * Customer has a compatible device. * The customer has successfully launched the website. * Customer has added items to shopping cart while viewing available products. |
| **Trigger(s)** | Customer wants to delete an item from shopping cart. |
| **Business Rule(s)** | BR8.1 The user must have grocery items in their user cart. |
| **Scenario(s)** | R8.1 The user choose ‘MY SHOPPING CART’ from the navigation bar.  R8.2 The system displays information of products added in the cart in compliance with **BR 8.1**. The information includes:   * Product name * Product photo * Item number * Quantity * A brief description of product * Remove item   R8.3 The user chooses ‘REMOVE ITEM’  R8.4 The system deletes the item and displays “ITEM REMOVED SUCCESSFULLY” next to the product name.  **[Alt Scenario A]** |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The customer accidently deletes an item from the cart.  AS8.1 The user chooses “RE-ADD ITEM”.  AS8.1 The system adds the item back immediately. |

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| **Name** | **Specify An Exact Item Quantity** |
| **Identifier** | **UC 9 (FR#4)** |
| **Preconditions** | * The user must have a compatible device. * The user must have successfully launched the website. * The user must be viewing available products. * A product must be selected. |
| **Trigger(s)** | The customer wants to change/ specify the quantity of products that will be purchased. |
| **Business Rule(s)** | BR9.1 The system updates product’s inventory in real time.  BR9.2 The user must specify a valid number of products. |
| **Scenario** | R9.1 The user chooses ‘MY SHOPPING CART’ from the navigation bar.  R9.2 The system displays information of products added in the cart, including:   * Product name * Product photo * Item number * Quantity * A brief description of product * Remove item   R9.3 The user adjusts the product quantity by selecting a “+” sign to increase the quantity or a “-” sign to decrease the quantity. The two signs are displayed next to ‘QUANTITY’. **[Alternate Scenario A]**  R9.4 The system will display the exact quantity of products chosen by the customer. **[Alternate Scenario B]** |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The quantity added exceeds the system’s inventory.  AS9.1 The system displays “SORRY! THIS PRODUCT ONLY HAS (NUMBER OF PRODUCT) LEFT”.  AS9.2 The user is returned to **R9.3.**  **Alternate Scenario B** – The quantity specified by the user is not a valid number.  BS9.1 The system displays, “The amount specified is invalid or incorrect” if the number selected is not compliant with **BR9.2**.  BS 9.2. The user is returned to **R9.3**. |

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| **Name** | **Input Credit/ Debit Card Information** |
| **Identifier** | **UC 10 (FR #8)** |
| **Preconditions** | * The user must have a compatible device. * The user must have successfully launched the website. * The user has added items in the shopping cart. * The user is in the payment step of the checkout session. |
| **Trigger(s)** | Customer wants to enter credit card/ debit card information. |
| **Business Rule(s)** | BR10.1 Customer must have a valid credit card/ debit card to make a payment.  BR10.2 The system only accepts these types of credit/ debit card:   * Visa * Discover Card * Mastercard * Capital One * American Express   BR10.3 The user must have a valid billing address. |
| **Scenario** | R10.1 The customer chooses ‘GO TO PAYMENT’.  R10.2 The system will display a list for the customer to complete:   * Name on card * Card number * Expiration date * CVV code * Billing address (address, city, state, and zip code)   R10.3 The customer types in their credit card/ debit card information in accordance with BR10.2 **[Alt Scenario A] [Alt Scenario B]**  R10.4 The user types in their billing address and has the option to choose his/ her state. **[Alt Scenario C]**  R10.5 The user hit ‘SUBMIT’.  R10.6 The system processes the payment.  R10.7The user is directed to Order Confirmation. |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The user types in wrong card number/ expiration date/ CVV code.  AS10.1 The system will display “THE INFORMATION ENTERED IS INVALID”.  AS10.2 The system will reset and the user will start from **R10.2.**  **Alternate Scenario B** – The credit card type entered by the user is not compliant with **BR10.2**.  BS10.1 The system will display, “The card type entered by the user is not supported.”  BS10.2 The system will prompt the user to “Choose another payment type” or “Cancel Order”. User is brought to either **R10.2** or returned to the homepage.  **Alternate Scenario C** – The user does not completely fill in the billing address.  CS10.1 The system will display ‘PLEASE FILL IN YOUR ADDRESS/ ZIP CODE’  CS10.2 The user will start from **R10.4** to complete the form |

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| **Name** | **Retrieve Password for An Existing Account** |
| **Identifier** | **UC 11 (FR #11)** |
| **Preconditions** | * The user has created a user profile. * Customer has a compatible device. * Customer has a valid email address to retrieve password. * Customer has successfully launched the website. * Customer has navigated to the ‘Sign In’ page. |
| **Trigger(s)** | Customer wants to retrieve his/ her forgotten password via email. |
| **Business Rule(s)** | BR11.1 The user can retrieve password by only one email address associated with the account. |
| **Scenario** | R11.1 The customer chooses ‘FORGOT MY PASSWORD” during sign in.  R11.2 The system asks the user to enter an email address in accordance with BR11.1  R11.3 The customer enters their email address.  **[Alt Scenario A]**  R11.4 The system sends a verification link with password to the users email address. **[Alt Scenario B]**  R11.5 The user uses the temporary password supplied and signs into their unique customer profile. |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The user enters an incorrect email address.  AS11.1 The system will display “The email address entered is invalid” and the user will be prompted to enter another email address.  AS11.2 The system will reset and the user will start from **R11.3**    **Alternate Scenario B** – The user does not receive a verification link via email.  BS11.1 The user chooses ‘PLEASE RESEND THE LINK’.  BS11.2 The system sends a new verification email to the user.  BS11.3 The user will start from **R11.4.** |

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| **Name** | **Create A Unique Account** |
| **Identifier** | **UC 12 (FR #12)** |
| **Preconditions** | * Customer has a compatible device * Customer has successfully launched the website. * Customer has navigated to the ‘Create an Account’ screen. |
| **Trigger(s)** | Customer wants to create a new account on the system |
| **Business Rule(s)** | BR12.1 The user must choose a unique username.  BR12.2 The user must choose a unique email.  BR12.3 The user must have a password that is compliant with the system password policy. |
| **Scenario** | R12.1 The customer chooses “CREATE AN ACCOUNT” in the navigation bar  R12.2 The system will display a lists of information for the customer to fill in. The information includes:   * First name * Last name * E-mail * Username * Phone number * Address * Date of Birth * Password   R12.3 The customer has to complete the form by creating a unique username and e-mail. **[Alt Scenario A]**  R12.4 The user creates a password complying to the system’s password policy. The password must include at least 8 characters, one uppercase letter, and one number. **[Alt Scenario B]**  R12.5 The system sends user a confirmation email to verify new account **[Alt Scenario C]**  R12.6The user clicks a verification link in email.  R12.7 The user is directed back to the website’s homepage with a new account |
| **Alternative Scenar**  **io(s)** | **Alternate Scenario A** – The user chooses an existing username/ email.  AS12.1 The system will return a ‘THIS USERNAME/ EMAIL ALREADY EXISTS’ screen and the user will be prompted to choose another username/ email..  AS12.2 The system will reset and the user will start from **R12.3**.  **Alternate Scenario B** – The user chooses a password that does not meet the system’s password policy  BS12.1 The system will return a ‘THE PASSWORD REQUIRES AT LEAST 8 MINIMUM CHARACTERS/ ONE UPPERCASE LETTER/ ONE NUMBER’.  BS12.2 The system will reset and the user will start from **R12.4**  **Alternate Scenario C** – The use does not receive an email  CS12.1 The user choose “RESEND THE LINK TO MY EMAIL”.  CS12.2 The system will reset and send the user a new email.  CS12.3 The user will start from **R12.6.** |

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| **Name** | **Returning an Item** |
| **Identifier** | **UC 13 (FR #23)** |
| **Preconditions** | * Customer has a compatible device. * The customer has successfully launched the website. * The customer has successfully signed into their unique customer profile. * The customer must have previously purchased an item. |
| **Trigger(s)** | Customer wants to return purchased item(s) |
| **Business Rule(s)** | BR13.1 The user can only return an order within 30 days.  BR13.2 The user cannot return perishable items.  BR13.3 The items returned must be in original condition. |
| **Scenario** | R13.1 The customer chooses “YOUR PREVIOUS ORDER” in their account page.  R13.2 The system will display all of their previous orders. Each order include these information: **[Alt Scenario A]**   * Order number * Product name * Product image * Order date * Order total * Return order   R13.3 The customer choose “RETURN ORDER” **[Alt Scenario B]**  R13.4 The system will display a list of reasons for user to choose.   * Item defective * Inaccurate product description * Purchase by mistake * Missing or broken items * Wrong item * Others (Please specify)   R13.6 The user hits ‘SUMMIT’ **[Alt Scenario C]**  R13.5 The system sends the user an email to confirm the return with a shipping label. |
| **Alternative Scenario(s)** | **Alternate Scenario A** – The user does not have any previous purchases.  AS13.1 The system will return a ‘NO ORDERS FOUND’ screen and the user will be prompted to the home page.  **Alternate Scenario B** – The product does not qualifying for return.  BS13.1 The system will return ‘PRODUCTS CANNOT BE RETURNED. PLEASE REVISE OUR RETURN POLICY’ and the user will be prompted to a Return Policy screen.  **Alternate Scenario C** – The user does not choose any reasons from the list before summiting.  CS13.1 The system will return a ‘PLEASE CHOOSE YOUR REASON FOR RETURNING’  CS13.2 The system will reset and the user will start from **R13.4.** |

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| **Name** | **Update Inventory for Each Product In Real Time** |
| **Identifier** | **UC 14 (FR #5)** |
| **Preconditions** | * The system will actively track and monitor inventory counts. * Items must be selected and purchased in order for inventory counts to change. |
| **Trigger(s)** | When items are purchased - the system will automatically update the inventory count. |
| **Business Rule(s)** | BR14.1 The system updates inventory in real time whenever a product’s barcode is scanned.  BR14.2 The system updates inventory in real time whenever a user makes an online payment. |
| **Scenario** | R14.1 The customer searches the website and finds the items they would like to purchase.  R14.2 The user purchases or returns an item.  R14.3 The system updates the inventory for each product.  R14.3 The customer can look for the list of items in the cart and make the payment. |

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| **Name** | **Filter Products By Categories/Characteristics** |
| **Identifier** | UC 15 (FR#6) |
| **Preconditions** | * The customer must have a compatible device. * The customer must have successfully launched the website. * The customer has navigated to the ‘View Available Products’ screen. * The customer must select ‘Filter products’.’ * The customer must select a category. * The customer must select all applicable characteristics. |
| **Trigger(s)** | The customer searches and filters products by category. |
| **Business Rule(s)** | BR15.1 The user must select an available category in which to filter products.  BR15.2 The user must select an available characteristic in which to filter products. |
| **Scenario** | R15.1 The user navigates to the ‘View Available Products’ screen.  R15.2 The user selects “Sort By” next to to the search bar when viewing available products.  R15.3 First, the system displays the “Sort By” screen with the categories listed below:   * + Meat   + Dairy   + Seafood   + Frozen food   + Beverage   + Bread/bakery   + Household items   + Produce   + Personal care   R15.4 The user selects all applicable categories.  R15.5 Next, the system displays the “Sort By” screen with the characteristics listed below **[Alt. Scenario A**]:   * + Price   + Weight   + Manufacturer   + Organic/Artificial   + Brand   R15.6 The user is prompted to select all applicable characteristics.  R15.7 The system will display products by the categories and characteristics that the user selected. |
| **Alternative Scenario(s)** | **Alternate Scenario A -** No products match the specified categories and characteristics selected.  AS15.1 The user selects applicable categories and characteristics for a desired product.  AS15.2 The system will display “No products found” if no products match the categories and characteristics chosen by the user.  AS15.3 The system will return the user to **RS15.3.** |