Use-Case

**Customer** visits the welcome page and selects a product **category**. **Customer** browses **products** within the selected category page, then adds a **product** to his or her **shopping cart**. **Customer** continues shopping and selects a different **category**. **Customer** adds several **products** from this **category** to **shopping cart**. **Customer** selects 'view cart' option and updates quantities for cart **products** in the cart page. **Customer** verifies shopping cart contents and proceeds to checkout. In the checkout page, **customer** views the cost of the **order** and other information, fills in personal data, then submits his or her details. The **order** is processed and **customer** is taken to a confirmation page. The confirmation page provides a unique reference number for tracking the customer **order**, as well as a summary of the **order**.

index page or product page

The index page requires data for the five product categories. Meat, Egg, Cassava Proccessed, Fruits&juices transformed and Vegetables.

category page

The [category page](https://netbeans.apache.org/tutorial/main/kb/docs/javaee/ecommerce/design/#category) requires three pieces of data in order to render properly:

1. **category data:** for left column category buttons
2. **selected category:** the selected category is highlighted in the left column, and the name of the selected category displays above the product table
3. **product data for selected category:** for products displayed in the product table

Let’s approach each of the three pieces of data individually.

* [category data](https://netbeans.apache.org/tutorial/main/kb/docs/javaee/ecommerce/entity-session/#categoryData)
* [selected category](https://netbeans.apache.org/tutorial/main/kb/docs/javaee/ecommerce/entity-session/#selectedCategoryData)
* [product data for selected category](https://netbeans.apache.org/tutorial/main/kb/docs/javaee/ecommerce/entity-session/#productData)

Use Case: Online Grocery Shopping

Actor: Customer

Goal: Purchase groceries online.

Preconditions:

* Customer has an account and is logged in.
* The online grocery store is accessible.

Steps:

1. Access the Index Page:

* **Input:** Customer navigates to the online grocery store's homepage.
* **Output:** The index page displays a list of the five product categories (Meat, Egg, Cassava Processed, Fruits&Juices Transformed, Vegetables).

2. Select a Category:

* **Input:** Customer clicks on a category button (e.g., "Meat").
* **Output:** The page displays the selected category (Meat) highlighted in the left column, along with a list of products within that category.

3. Browse and Add Products:

* **Input:** Customer browses the products within the selected category.
* **Input:** Customer selects a product and clicks "Add to Cart".
* **Output:** The product is added to the shopping cart, and the cart quantity updates.

4. Continue Shopping (Optional):

* **Input:** Customer selects a different category.
* **Output:** The page displays the new selected category and its products.
* **Input:** Customer adds more products to the shopping cart.

5. View and Update Cart:

* **Input:** Customer clicks "View Cart".
* **Output:** The shopping cart page displays the list of added products with their quantities.
* **Input:** Customer modifies the quantity of a product by entering a new value and clicking "Update".
* **Output:** The cart updates with the revised quantity.

6. Checkout:

* **Input:** Customer clicks "Checkout".
* **Output:** The checkout page displays the order summary, including total cost, shipping address, and payment options.
* **Input:** Customer fills in their personal and delivery details.
* **Input:** Customer selects a payment method and completes the payment.
* **Output:** The order is processed, and the customer is redirected to a confirmation page.

7. Confirmation:

* **Output:** The confirmation page displays a unique order reference number and a summary of the purchased items.

Data Requirements:

* **Index Page:**
  + List of product categories (Meat, Egg, Cassava Processed, Fruits&Juices Transformed, Vegetables)
* **Category Page:**
  + Category data (for left column buttons)
  + Selected category data (highlighted in left column and displayed above product table)
  + Product data for selected category (displayed in product table)

System Responses:

* **Error Handling:**
  + Invalid input (e.g., non-numeric quantity) should display an error message and allow the user to correct it.
  + Out-of-stock items should display an error message and suggest alternatives.
  + Payment failures should display an error message and guide the customer to retry.

Assumptions:

* The customer already has an account and is logged in.
* The system supports secure payment processing.
* Shipping and tax calculations are handled automatically.

For a more visual representation of this use case, consider creating a UML activity diagram or flowchart.