*Use cases are numbered according to their issue number in*

#### **Search for Products**

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| **ID** | 1 |
| **Name** | **Search for Products** |
| **Priority** | High |
| **Description** | This use case allows users to search for specific grocery products within the application. |
| **Actor** | Shopper |
| **Precondition** | User is logged in. |
| **Scenario** | 1. User opens the Smart Shopper app. 2. User enters a product name or keyword in the search bar. 3. The application displays a list of products matching the search query. 4. User selects a product from the list to view more details. |
| **Exceptions** | If no results match the search query, the application displays a message indicating that no products were found. |
| **Extensions** | None |
| **Postconditions** | User can view product details or proceed to add the product to their shopping list. |

#### **Compare Prices**

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| **ID** | 2 |
| **Name** | **Compare Prices** |
| **Priority** | High |
| **Description** | This use case allows users to compare prices of a selected product across different supermarkets. |
| **Actor** | Shopper |
| **Precondition** | User is logged in and has selected a product to compare. |
| **Scenario** | 1. User selects a product from the search results or their shopping list. 2. The application displays a list of supermarkets that offer the selected product. 3. User selects one or more supermarkets to compare prices. 4. The application shows a price comparison table with prices for the selected product at the chosen supermarkets. |
| **Exceptions** | If the selected product is not available at one or more supermarkets, the application displays a message indicating which supermarkets do not have the product. |
| **Extensions** | None |
| **Postconditions** | User can make an informed decision about where to purchase the product based on price comparison. |

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| **ID** | 3 |
| **Name** | User Registration |
| **Priority** | High |
| **Description** | This use case describes the process by which a new user registers for an account in the Smart Shopper application to access its features. |
| **Actor** | * **Primary Actor**: New User * **Secondary Actors**: None |
| **Precondition** | * The user has downloaded and installed the Smart Shopper application. * The user has not yet registered for an account. |
| **Scenario** | 1. The user opens the Smart Shopper application. 2. The application presents the user with a registration screen. 3. The user enters their personal information, including their name, email address, and password. 4. The user confirms their password to ensure accuracy. 5. The user submits the registration form. 6. The application validates the user's inputs. 7. If the inputs are valid, the application creates a new user account. 8. The application logs the user into their new account. 9. The user is redirected to the application's main screen. |
| **Exceptions** | **User Already Registered**:   * If the user's email address is already registered in the system, the application displays an error message, indicating that the email is already in use.   **Invalid Inputs**:   * If the user provides invalid or incomplete information, the application displays an error message and prompts the user to correct the information. |
| **Extensions** | None |
| **Postconditions** | * The user's registration information is saved in the system. * The user is logged into their new account. |

Certainly! Here are the complete use case descriptions for all the identified use cases in the Smart Shopper application:

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| **ID** | 4 |
| **Name** | User Login |
| **Priority** | High |
| **Description** | This use case outlines the process of an already registered user logging into their Smart Shopper account. |
| **Actor** | User |
| **Precondition** | The user has a registered account in the Smart Shopper application. |
| **Scenario** | 1. The user opens the application. 2. The user selects the "Log In" option. 3. The application prompts the user to enter their username and password. 4. The user provides their credentials. 5. The application verifies the user's identity. 6. If the credentials are correct, the application grants access to the user. |
| **Exceptions** | If the entered credentials are incorrect, the application displays an error message. |
| **Extensions** | n/a |
| **Postconditions** | The user is logged in and can use the application's features. |

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| **ID** | 5 |
| **Name** | Creating a Shopping List |
| **Priority** | High |
| **Description** | This use case explains how users can create and manage shopping lists within the Smart Shopper application. |
| **Actor** | User |
| **Precondition** | The user has logged in to the Smart Shopper application. |
| **Scenario** | 1. The user navigates to the "Shopping List" section of the application. 2. The user selects the "Create New List" option. 3. The application opens a new shopping list. 4. The user can search for and add products to the list. 5. The user can set quantities and notes for each item. 6. The user saves the shopping list. |
| **Exceptions** | - If there are technical issues, the user may not be able to save the list. |
| **Extensions** | The user can edit and delete items from the shopping list. |
| **Postconditions** | The user has a saved shopping list that can be used for future reference. |

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| **ID** | 6 |
| **Name** | Sharing a Shopping List |
| **Priority** | Medium |
| **Description** | This use case describes how users can share their created shopping lists with others via different communication channels. |
| **Actor** | User |
| **Precondition** | The user has a saved shopping list in the Smart Shopper application. |
| **Scenario** | * 1. The user opens a saved shopping list.   2. The application displays the list of products.   3. The user selects the "Share" option.   4. The user chooses a sharing method (e.g., email, messaging app).   5. The application generates a shareable link or message.   6. The user shares the link/message with others. |
| **Exceptions** | - If there are issues with the chosen sharing method (e.g., no internet connection), sharing may fail. |
| **Extensions** |  |
| **Postconditions** | The shopping list is shared with others for collaborative use. |

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| **ID** | 7 |
| **Name** | Locating Supermarkets |
| **Priority** | High |
| **Description** | This use case outlines how users can find the locations of nearby supermarkets within the application. |
| **Actor** | User |
| **Precondition** | The user has logged in to the Smart Shopper application. |
| **Scenario** | 1. The user is on the application's home screen.  2. The user selects the "Find Supermarkets" option.  3. The application identifies the user's current location.  4. The application displays a map with nearby supermarkets marked.  5. The user can select a supermarket to view details and directions. |
| **Exceptions** |  |
| **Extensions** | - If location services are disabled, the application prompts the user to enable them. |
| **Postconditions** | The user can view and navigate to nearby supermarkets. |