

Requirement Specification for E-commerce Store

Version 1.0

P1 = MVP

P2 = Wants

P3 = Nice to have

Functional Requirements

1. Browsing products
 - 1.1. Product Search
 - 1.1.1. The system should allow customers enter a search query and give back relevant products. P1
 - 1.1.2. The system should allow customers to search for properties in a product where name weighs most for relevance. P3
 - 1.2. Suggested products at start page
 - 1.2.1. The system should display suggested products in the start page. P1
 - 1.2.2. The system should display suggested products based on purchases history if logged in. P2
 - 1.2.3. The system should display suggested products based on products reviewed. P3
2. Provide product details
 - 2.1. Product information
 - 2.1.1. The system should display product information to customers such as physical properties, name, and description. P1
 - 2.2. Availability (stock and where)
 - 2.2.1. The system should allow customers to check the total available stock available for purchase. P1
 - 2.2.2. The system should allow customers to check the stock available for purchase in each warehouse. P1
 - 2.3. View product reviews
 - 2.3.1. The system should allow customers to check a total rating for a product of 1-5 stars where half stars are allowed. P2
 - 2.3.2. The system should allow customers to read individual reviews with their star rating included. P3
3. Browse product categories (data-driven)
 - 3.1. The system should build the product categories in the store based on all registered categories in the database. P1
4. Purchase product
 - 4.1. Shopping cart
 - 4.1.1. The system should allow customers to add products to a shopping cart if it is available. P1
 - 4.1.2. The system should allow customers to remove products from a shopping cart. P1
 - 4.2. Checkout
 - 4.2.1. The system should bring the customer to a checkout page listing the name, price, and quantity selected of each item. P1
 - 4.2.2. The system should display and take into account tax (here 25%) in the total price. P3
 - 4.2.3. The system should give the customer an order confirmation after confirming the purchase, this is also stored in the database. P1
 - 4.2.4. The system should allow the customer to cancel their order if done within a given timeframe. P2
 - 4.3. Pick products from the closest warehouse available.
 - 4.3.1. The system should display to the customer which warehouse each product is sent from after confirming the order. P1
5. Registration for customer to view order history
 - 5.1. The system should allow the customer to register an user account by providing a username and password. (your own implementation or 3rd party) P1 (3rd party P3)
 - 5.2. The system should allow the customer to log in to the page. P1

- 5.3. The system should allow the customer to change their password. P3
- 5.4. The system should display all completed orders for a customer. P2
- 5.5. The system should let a logged in user submit a review with a rating (1-5) and comment of a product. P2
- 6. Administration pages
 - 6.1. The system should allow an administrator to log into administration pages. P2
 - 6.2. The system should allow an administrator to add, remove, and update product information in any warehouse. P2
- 7. Warehouse
 - 7.1. The system should have its own database (cannot share with other instances) and be its own application instance. P1
 - 7.2. The system should only be able to communicate with other applications through HTTP(S) and it is not allowed to access other warehouse databases directly. P1
 - 7.3. The system should have a way of automatically generating test products at scale. P2
 - 7.4. The system should tell the store its stock on start and as it updates. P1
 - 7.5. The system should allow reading product information without authentication. P1
 - 7.6. The system should only allow writing to production data by an authenticated administrator. P2

Non-functional Requirements

- 1. Usability
 - a. The user should only have to visit one URL to reach the store. P1
 - b. The user should always know the content of the shopping cart. P2
 - c. The user should know if he/she is logged in. P2
 - d. The user should reach the order history page using maximum 2 clicks. P3
- 2. Reliability & Availability
 - a. The stock in the store should not be out of sync longer than 5 seconds. P2
- 3. Performance
 - a. Any user interaction should take no longer than 2 seconds to give feedback to the user. P2
- 4. Security
 - a. User credentials must be secured when in storage. P1
 - b. User credentials must be secured at transport. P3
- 5. Scalability
 - a. The system should have at least 3 warehouses. P1
 - b. The system should be able have more warehouses with minimal work. P2