LAB1:











LAB2:

LAB3:

**Use Case Name:** Sign in.

**Scope:** A user login system to access the functionality of the system.

**Level:** User-goal.

**Primary Actor:** Customer.

**Stakeholders and Interests:**

**-Customer:** Access to products on e-commerce site.

**-System:** Provides access to customer after successful entry of credentials.

**Preconditions:**  System should be connected to the network.

**Success**  **Guarantee:** Valid entry of matching username and password.

**Main** **Success** **Scenario:**

1. Click on Login.
2. Actor/User enters username and password.
3. Actor/User validates username and password.
4. Allow access to system

**Extensions:**

1a. Invalid Username, system shows an error message

2b. Invalid Username, system shows an error message

3c. Invalid Password for 4 times system forces application shutdown.

**Special** **Requirements:**

1. Should follow required format for valid username.
2. Should follow required format for valid password.
3. System should process validation within given time frame.

**Use Case Name:** Search Products.

**Scope:** Allows users to search for products available in the e-commerce website.

**Level:** User-goal.

**Primary Actor:** Customer.

**Stakeholders and Interests:**

1. **Customer:** Access to products on e-commerce site.
2. **System:** Provides access to customer after successful entry of credentials.

**Preconditions:**  System should be connected to the network.

**Success**  **Guarantee:** Product to be found.

**Main Success Scenario:**

1. Actor/User searches for product(s).
2. Actor/User finds the product(s).
3. Actor/User places into the cart.

**Extensions:**

2a. System displays similar products.

2b. System displays error message.

**Special Requirements:**

1. Search bar must be available.
2. System should process search within a given time frame.

**Use Case Name:** Add to Cart.

**Scope:** Allows users to place products into cart for purchasing purposes.

**Level:** User-goal.

**Primary-Actor:** Customer.

**Stakeholders and Interests:**

1. **Customer:** Selects products to add to cart.
2. **System:** Processes items to User demands accordingly.

**Preconditions:** Customer should be connected to the network.

**Success Guarantee:** Product is added to cart.

**Main Success Scenario:**

1. Customer selects item to add to cart.
2. System adds to Cart.

**Extensions:**

1a. Customer edits quantity.

1b. Customer removes item.

1c. Customer adds to wishlist.

2a. System conveys a message regarding product not available.

2b. System conveys a approval message.

**Special Requirements:**

1. Availability of product.
2. Authentication for the interfaces.
3. System information must be available.

**Use Case Name:** Process Sale.

**Primary Actor:** System.

**Stakeholders and Interests:**

1. **System:** Wants accurate entry and no payment errors.
2. **Salesperson**: Wants sales commissions updated.

**Customer**: Wants purchase and fast service with minimal effort. Wants proof of purchase to support returns.

1. **Company:** Wants to accurately record transactions and satisfy customer interests. Wants to ensure that Payment Authorization Service payment receivables are recorded. Wants some fault tolerance to allow sales capture even if server components (e.g., remote credit validation) are unavailable. Wants automatic and fast update of accounting and inventory.
2. **Government Tax Agencies**: Want to collect tax from every sale. May be multiple agencies, such as national, state, and county.
3. **Payment Authorization Service:** Wants to receive digital authorization requests in the correct format and protocol. Wants to accurately account for their payables to the store.

**Preconditions:** System is identified and authenticated.

**Succes Guarantee:** Sale is saved. Tax is correctly calculated. Accounting and Inventory are updated. Commissions recorded. Receipt is generated. Payment authorization approvals are recorded.

**Main Success Scenario:**

1. Customer arrives at checkout page.
2. System starts a new sale.
3. System confirms item identifier.
4. System records sale line item and presents item description, price, and running total. Price calculated from a set of price rules. Cashier repeats steps 3-4 until indicates done.
5. System presents total with taxes calculated.
6. System displays the total and asks for payment.
7. Customer pays and System handles payment.
8. System logs completed sale and sends sale and payment information to the external Accounting system and Inventory system.
9. System presents digital receipt.
10. Customer receives digital receipt and gets tracking order number.

**Extensions:**

**2a.** System has error in starting new sale.

**3a.** System signals invalid identifier.

**3b.** System displays item identifier is not unique.

**4a.** Customer provides promocode for a discounted value on product.

**5a.** System detects failure to communicate with external tax calculation system service.

**7a.** Paying by cash.

**7b.** Paying by credit.

**7c.** Paying by debit.

**Special Requirements:**

1. Credit authorization response within a given time frame.
2. Language internationalization on the text displayed.

LAB4&5:

