# Functional Requirement

1.1 Customer Registration Function   
 Function ID: FR-01   
 Description: Allows a new customer to register an account by providing valid personal information. The system validates the email format and password complexity, and sends a confirmation email.   
 Input: Name, Email, Password   
 Output: Active customer account with a confirmation email sent to the provided email address.  
  
1.2 Customer Login Function   
 Function ID: FR-02   
 Description: Authenticates a customer using their email and password. A successful login creates a session and redirects the customer to their account dashboard.   
 Input: Email, Password   
 Output: Active session for the customer, redirected to the account dashboard.  
  
1.3 Customer Logout Function   
 Function ID: FR-03   
 Description: Terminates an active customer session and clears session-related data.   
 Input: Active customer session   
 Output: Session terminated, customer redirected to login or home page.  
  
1.4 Product Information Viewing Function   
 Function ID: FR-04   
 Description: Allows a customer to view detailed product information, including name, description, price, and stock status.   
 Input: ProductID or search query   
 Output: Displayed product details including name, description, price, and availability.  
  
1.5 Add Product to Cart Function   
 Function ID: FR-05   
 Description: Enables a customer to add a selected product to their shopping cart, provided the product is in stock.   
 Input: ProductID, CustomerID (optional), Quantity   
 Output: Updated shopping cart with the added product and confirmation message.  
  
1.6 Create Order Function   
 Function ID: FR-06   
 Description: Allows a customer to proceed with checkout and create a new order after confirming their shipping details and selecting a payment method.   
 Input: CustomerID, ProductID list, Quantity list, Shipping Address, Payment Method   
 Output: Created order record, updated product inventory, and initiation of payment processing.  
  
1.7 View Order Details Function   
 Function ID: FR-07   
 Description: Enables a customer to view the details of a specific order, including product list, order status, and total amount.   
 Input: OrderID, CustomerID   
 Output: Displayed order details including product list, quantities, prices, date, and status.  
  
1.8 Update Order Status Function   
 Function ID: FR-08   
 Description: Allows an administrator to update the status of an order, such as from "Processing" to "Shipped" or "Delivered," and notify the customer via email.   
 Input: OrderID, New Status   
 Output: Updated order status and a notification email sent to the customer.  
  
1.9 Delete Order Function   
 Function ID: FR-09   
 Description: Enables an administrator to delete an order from the system if it is in a cancellable or deletable status and updates the inventory accordingly.   
 Input: OrderID, CustomerID, Current Order Status   
 Output: Deleted order record, updated product inventory, and a notification email sent to the customer.  
  
1.10 Create Payment Function   
 Function ID: FR-10   
 Description: Facilitates the creation of a payment record for a specific order after the customer confirms the payment method and provides the necessary payment details.   
 Input: OrderID, Payment Method, Payment Details (e.g., card information)   
 Output: Created payment record, updated order status to "Paid," and a confirmation email sent to the customer.  
  
1.11 Process Payment Function   
 Function ID: FR-11   
 Description: Processes the payment using the configured payment gateway API and updates the payment and order status accordingly.   
 Input: PaymentID, Transaction Details   
 Output: Processed payment record, updated order status, and logs for payment processing.  
  
1.12 View Payment History Function   
 Function ID: FR-12   
 Description: Allows a customer to view their historical payment records, including payment dates, amounts, and associated order information.   
 Input: CustomerID   
 Output: Displayed list of payment records with details such as date, amount, method, and order ID.  
  
1.13 Administrator Registration Function   
 Function ID: FR-13   
 Description: Enables a new administrator to register an account by providing valid personal information. The system validates the email format and password complexity and sends a confirmation email.   
 Input: Name, Email, Password   
 Output: Active administrator account with a confirmation email sent to the provided email address.  
  
1.14 Administrator Login Function   
 Function ID: FR-14   
 Description: Authenticates an administrator using their email and password. A successful login creates a session and redirects the administrator to the admin dashboard.   
 Input: Email, Password   
 Output: Active session for the administrator, redirected to the admin dashboard.  
  
1.15 Administrator Logout Function   
 Function ID: FR-15   
 Description: Terminates an active administrator session and clears session-related data.   
 Input: Active administrator session   
 Output: Session terminated, administrator redirected to login or home page.  
  
1.16 Add Product Function   
 Function ID: FR-16   
 Description: Enables an administrator to add a new product to the system database by providing product details and uploading an image.   
 Input: Product name, description, price, category, image   
 Output: New product record added to the database and a confirmation message displayed to the administrator.  
  
1.17 Update Product Information Function   
 Function ID: FR-17   
 Description: Allows an administrator to modify an existing product's details, such as name, description, price, or image.   
 Input: ProductID, updated product details, new image (optional)   
 Output: Updated product record in the database and a confirmation message displayed to the administrator.  
  
1.18 Delete Product Function   
 Function ID: FR-18   
 Description: Enables an administrator to delete a product from the system if it is not associated with any active orders.   
 Input: ProductID, current product status, list of associated orders   
 Output: Deleted product record from the database and a confirmation message displayed to the administrator.  
  
1.19 View Email Template Function   
 Function ID: FR-19   
 Description: Allows an administrator to view the content and structure of an email template used for notifications such as order confirmation or registration.   
 Input: TemplateID or template name   
 Output: Displayed email template content including subject, body, and placeholders for dynamic data.  
  
1.20 Send Order Confirmation Email Function   
 Function ID: FR-20   
 Description: Triggers the system to send a confirmation email to a customer after their order has been successfully processed.   
 Input: OrderID, CustomerID, Email Template   
 Output: Sent order confirmation email and a log entry for the email delivery status.  
  
1.21 Manage Plugin Function   
 Function ID: FR-21   
 Description: Enables an administrator to manage plugins by enabling, disabling, or configuring them based on system needs.   
 Input: PluginID, configuration parameters   
 Output: Updated plugin status or configuration in the database and a confirmation message to the administrator.  
  
1.22 View API Documentation Function   
 Function ID: FR-22   
 Description: Allows an administrator to view API documentation for the plugins integrated into the system.   
 Input: APID or API name   
 Output: Displayed API documentation in a structured format, including endpoints and usage examples.