



ZN TECH

Title: ZN TECH

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Introduction

Brief Overview of ZN TECH:

ZN TECH is an e-commerce website offering functional technologies, electronics, and accessories to Mauritian customers at fair prices. ZN TECH will differentiate itself from the competition by offering lightning-fast customer support and comprehensive product reviews.

Purpose of the Document:

This document contains every detail about our business concept, website features, and implementation plans. It will also act as a reference for all project stakeholders and a guide for the development process.

Scope of the Project:

The project covers the design of a fully functional e-commerce website for ZN TECH, including:

- User-friendly browsing and purchasing
- Secure payment processing
- Customer account management
- Admin tools for inventory and orders
- AI chatbot for customer support
- Platform for product video demonstration
- Advertising framework
- Mobile-responsive design

Objectives of the E-commerce Platform:

- **Accessibility:** Make technology accessible to all Mauritians through competitive pricing.
- **User Experience:** Provide a safe and easy-to-use online shopping experience.

- **Delivery:** Offer free delivery for orders above a set amount.
- **Warranty:** Implement a dependable warranty program.
- **Education:** Provide free product demo videos to educate clients.
- **Loyalty:** Build customer loyalty through quality service.
- **Market Position:** Establish ZN TECH as Mauritius's go-to online tech retailer.

By achieving these goals, ZN TECH hopes to become a reliable source for technology-related information and products while also enhancing the tech retail scene in Mauritius.

Business Scenario

Detailed Description of ZN TECH:

ZN TECH provides the latest technology products at competitive prices, tailored to the Mauritian market. Our platform offers a wide range of electronics, gadgets, and accessories, ensuring that customers have access to the newest and most innovative products.

Target Market Analysis:

Our target market includes tech enthusiasts, professionals, students, and general consumers in Mauritius who are looking for reliable and affordable tech products.

Competitive Advantage:

ZN TECH stands out by offering free product demonstration videos, competitive pricing, and regular promotional offers. Our commitment to customer education and support sets us apart from other e-commerce platforms.

Key Features of the Platform:

- Extensive product catalogue with detailed descriptions
- User-friendly navigation and search functionality

- Secure checkout process with a variety of payment options
- AI chatbot for immediate customer service
- Regular sales and promotions

Business Goals and Objectives:

- Increase market share in the Mauritian tech retail sector
- Improving customer satisfaction and loyalty
- Achieve sustainable growth through cutting-edge product and excellent service

User Types & Functional Requirements

User-Centric Requirements:

Regular Customers:

- Account registration and login
- Product browsing and search
- Adding products to cart and wishlist
- Secure checkout and payment processing
- Order tracking and history
- Access to product demonstration videos
- Participation in promotions and discounts

Premium Customers:

- All regular customer functionalities
- Access to exclusive discounts and promotions
- Early access to new products

Administrators:

- User account management
- Product catalog management
- Order and inventory management
- Sales and performance analytics
- Promotion and discount management

Customer Support Representatives:

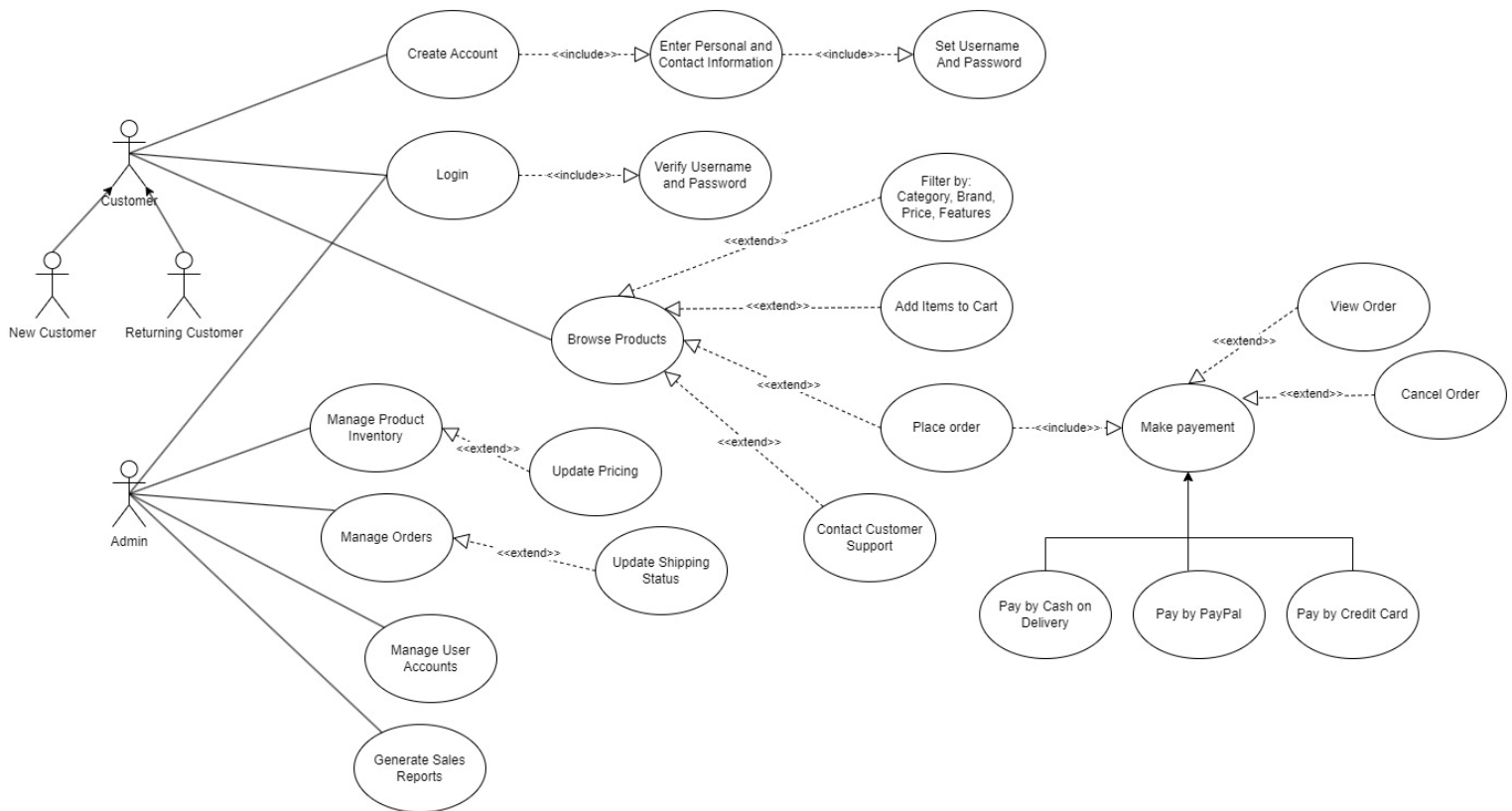
- Access to customer accounts and order details
- Respond to customer inquiries and issues
- Manage support tickets and chat logs

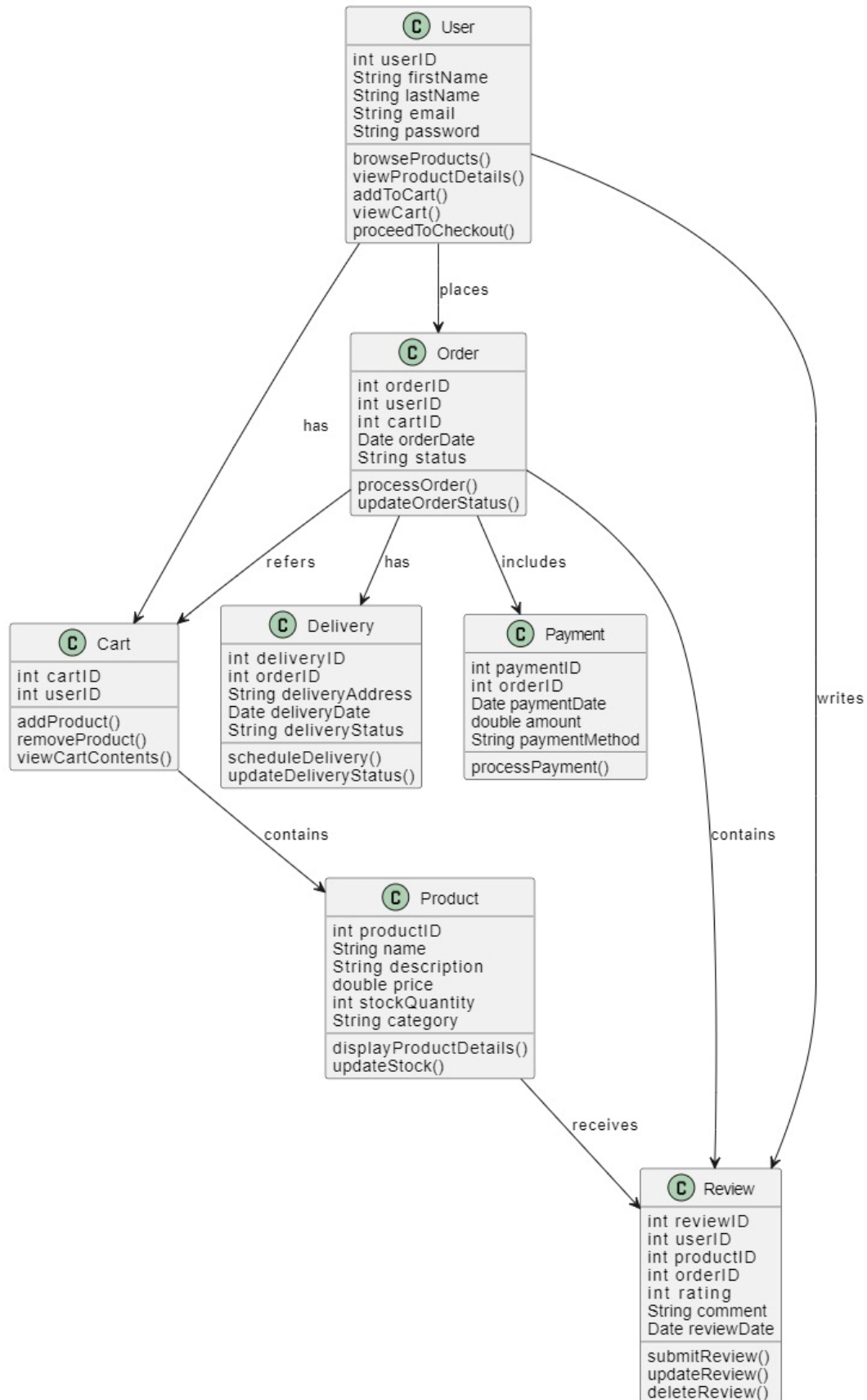
AI Chatbot:

- Answer frequently asked questions
- Assist with product recommendations
- Provide order status updates
- Escalate complex issues to human representatives

Use Case Diagram

Visual Representation of System Functionalities:



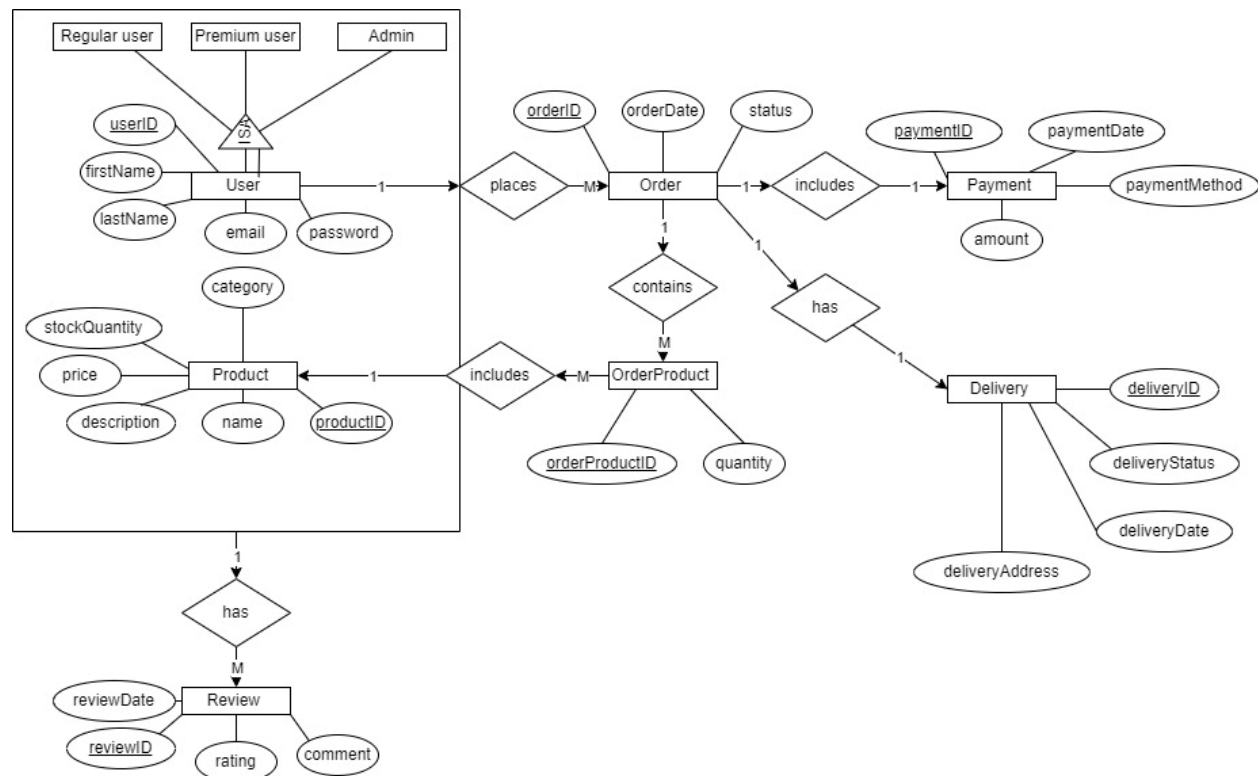


Detailed Description of Each Use Case:

- **User Registration and Login:** Users can create accounts and log in to access personalized features.
- **Product Browsing and Search:** Users can browse and search for products using filters.
- **Add to Cart and Checkout:** Users can add products to their cart and proceed to checkout.
- **Order Management:** Admins can manage orders, inventory, and user accounts.
- **Customer Support:** The AI chatbot and support representatives assist users with questions and issues.

Entity-Relationship Diagram (ERD)

Visual Representation of Database Structure:



Detailed Description of Each Entity and Relationship

- **User:** Stores user account information, including first name, last name, email, and password.
- **Product:** Contains product details such as name, description, price, stock quantity, and category.
- **Order:** Records order information, including userID, order date, and status.
- **OrderProduct:** Represents the products in an order, including orderID, productID, and quantity.
- **Delivery:** Manages delivery details for orders, including delivery address, date, and status.
- **Payment:** Stores payment details related to orders, including payment date, amount, and method.
- **Review:** Captures user reviews for products, including userID, productID, rating, comment, and review date.

AI Chatbot Integration

Overview of AI Chatbot Functionality:

The AI chatbot provides immediate customer support, answering common questions and assisting with product recommendations.

Integration with Existing Systems:

The chatbot will be integrated with the website's backend, accessing user accounts, order details, and product information.

Benefits and Features of the AI Chatbot:

- 24/7 customer support
- Quick response times
- Reduces workload on human support representatives

- Enhances user experience with immediate assistance

Technical Considerations and Implementation Strategy:

- Use of natural language processing (NLP) for understanding customer queries
- Integration with the website's API for real-time data access
- Continuous learning and improvement based on user interactions

User Flow Flowchart

Overview:

- The user flow flowchart provides a visual representation of the user's journey through the ZN TECH e-commerce platform, highlighting key steps from visiting the website to completing an order and requesting customer support.

User Flow Steps:

- **Landing Page:**
Visit homepage with key features and promotions.
- **Account Registration/Login:**
Register a new account or log in.
- **Product Browsing:**
Browse products, view details, and watch demo videos.
- **Adding to Cart:**
Add products to the cart and continue shopping or proceed to checkout.
- **Checkout Process:**
Enter shipping details, choose payment method, and review order.
- **Order Confirmation:**

Receive order confirmation and tracking details.

- **Customer Support:**

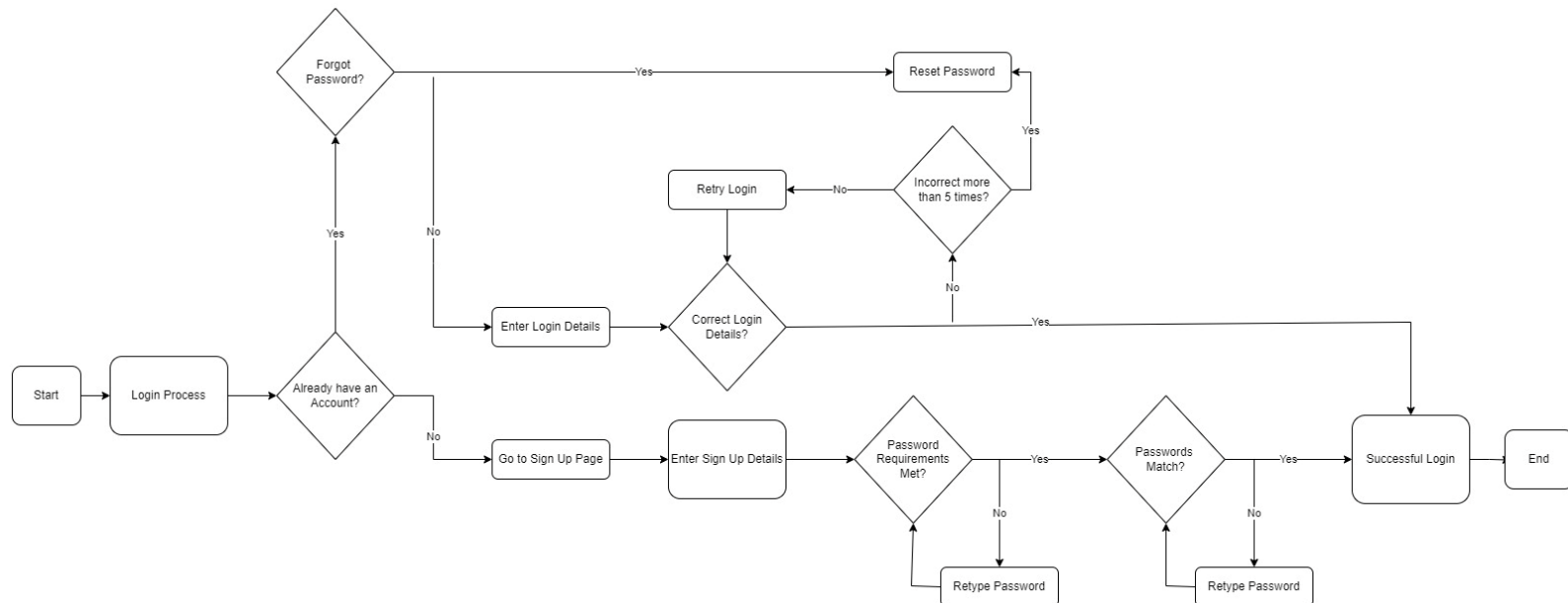
Access AI chatbot or human support for assistance.

- **Post-Purchase:**

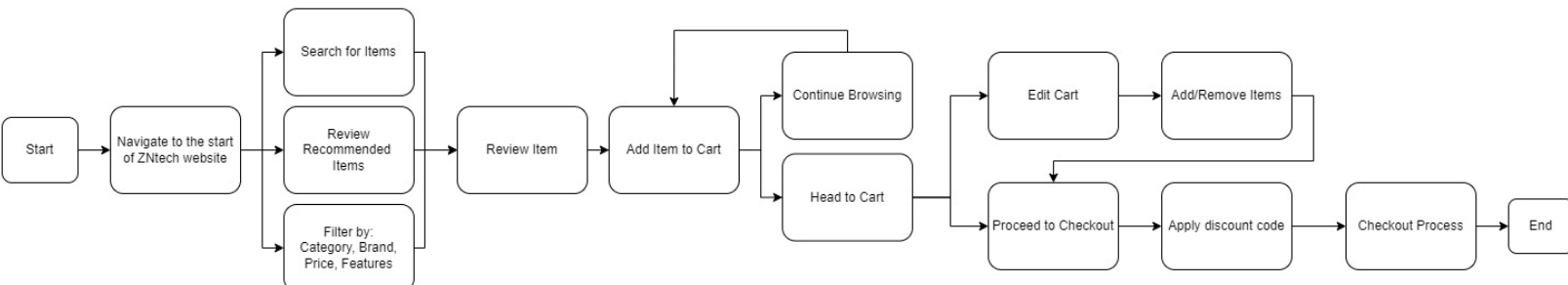
Receive products, view demo videos, leave reviews, and participate in promotions.

Flowchart Diagram:

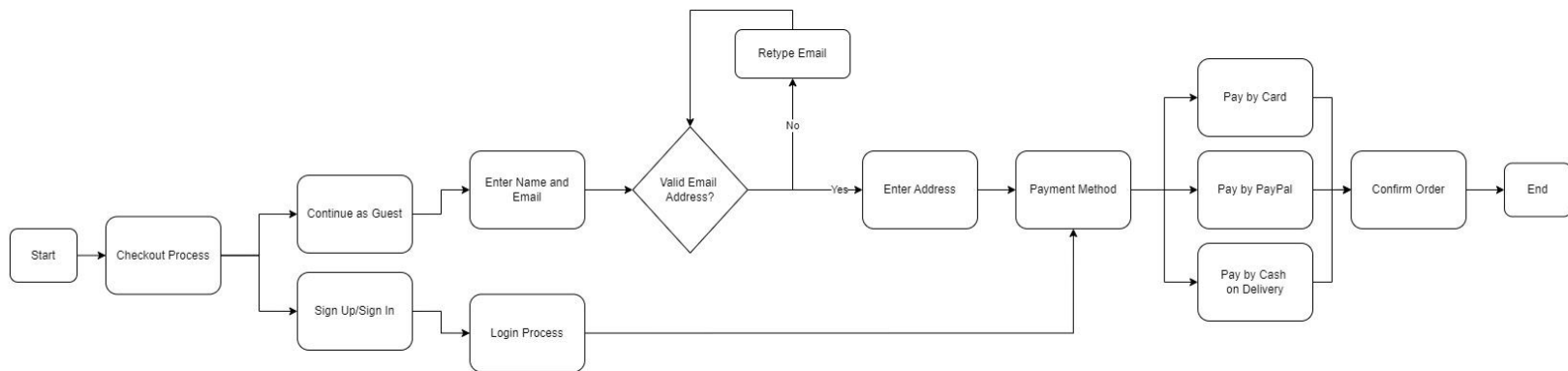
Account Registration/Login:



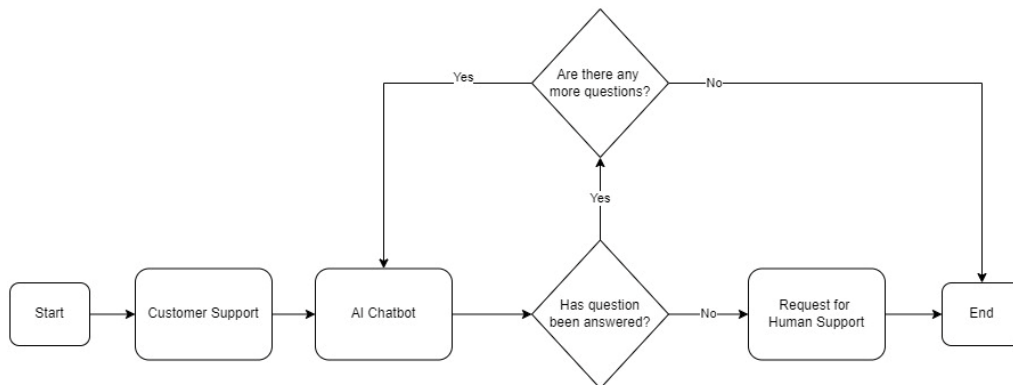
Landing Page/Product Browsing/Adding to Cart:



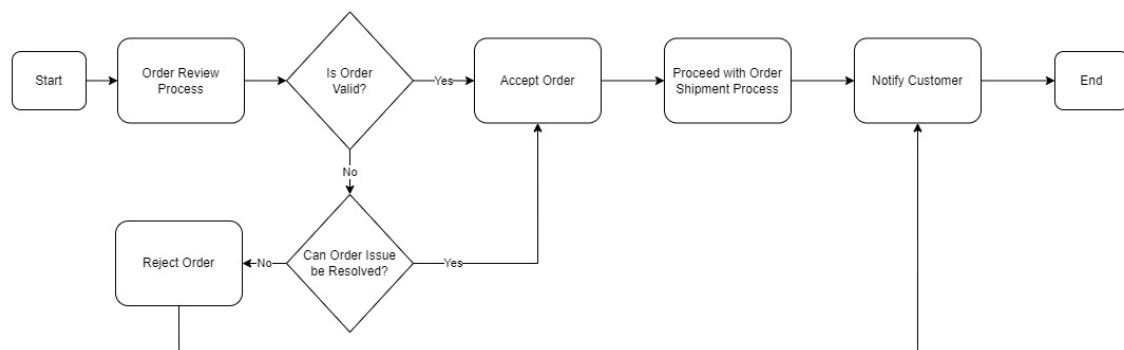
Checkout Process:



Customer Support:



Order Review Process (As Admin):



These concise user flows ensure a clear understanding of the user journey, facilitating the design of a smooth and intuitive shopping experience on the ZN TECH platform.

Technology Stack

Technologies Used:

- **HTML:** For structuring the web pages.
- **CSS:** For styling and layout design.
- **JavaScript:** For adding interactivity and dynamic content.
- **Bootstrap:** For responsive design and pre-built components.
- **jQuery:** For simplifying DOM manipulation and event handling.
- **p5.js:** For creative coding and interactive visuals.
- **Three.js:** For 3D graphics and animations.
- **Apache:** As the web server.
- **MySQL:** For database management.
- **PHP:** For server-side scripting and backend development.

Conclusion

Summary of Key Points:

- ZN TECH aims to provide a complete and user-friendly e-commerce platform for trendy technologies in Mauritius.
- The platform will offer secure payment options, customer account management, and AI-powered customer support.
- Free product demonstration videos and regular promotions will enhance the customer experience.

Future Development Possibilities:

- Expansion of product categories
- Introduction of a mobile app
- Enhanced AI capabilities for the chatbot
- International shipping options

Expected Impact on Business Operations:

- Increased market presence and customer loyalty
- Improved operational efficiency through automation
- Higher customer satisfaction and retention rates

References

Drawings and Flowcharts

draw.io available at: <https://app.diagrams.net/>

Use Case Diagrams

available at: <https://venngage.com/blog/use-case-diagram-example/>

available at: <http://www.programsformca.com/2012/03/uml-retail-store-mgmt-diagrams-case.html>