**Online Electronics Store**

**1. General Description**

The project is an online store specializing in the sale of electronic equipment. This store will allow users to browse, search, select, and purchase electronic products such as smartphones, laptops, cameras and accessories. Additionally, it will include functions for inventory management, payment processing, and customer support.

**2. Project Objectives**

* Facilitate the purchase of electronic equipment through an intuitive and secure online platform.
* Offer a personalized user experience through recommendations and promotions.
* Optimize inventory and order management to improve operational efficiency.

**3. Functional Requirements**

1. **User Management**
   * User registration and authentication.
   * User profile management (personal information, purchase history, etc.).
   * Password recovery.
2. **Product Catalog**
   * Product display by categories (smartphones, laptops, etc.).
   * Advanced search filters (by brand, price, features).
   * Detailed product descriptions with images, videos, and technical specifications.
3. **Shopping Cart**
   * Add or remove products from the cart.
   * Update product quantities in the cart.
   * Save carts for future purchases.
4. **Order Processing**
   * Secure checkout with multiple payment options (credit cards, PayPal, etc.).
   * Validation of shipping addresses.
   * Order and shipping confirmations via email.
5. **Inventory Management**
   * Automatic inventory updates with each sale.
   * Notifications of out-of-stock or low-inventory products.
   * Restocking system for popular products.
6. **Customer Support**
   * FAQ and product guides.
7. **Recommendation System**
   * Product recommendations based on browsing and purchase history.
   * Personalized offers and promotions.
8. **Reviews and Ratings**
   * Allow users to leave reviews and rate products.
   * Display average ratings on product pages.
9. **Notifications**
   * Email or SMS notifications about order status.
   * Reminders of abandoned cart items.

**4. Non-Functional Requirements**

1. **Security**
   * Encryption of sensitive data (payment information, passwords).
   * Two-factor authentication for account access.
2. **Scalability**
   * Ability to handle a large number of simultaneous users.
   * Modular architecture to facilitate expansion and addition of new features.
3. **Performance**
   * Fast page loading, with a response time of less than 2 seconds.
   * Optimization of images and multimedia to improve speed.
4. **Availability**
   * High availability (99.9% uptime).
   * Automatic backup system for critical data.
5. **Usability**
   * Intuitive and easy-to-navigate user interface.
   * Compatible with mobile devices and popular browsers.
6. **Maintenance**
   * Clear documentation for system maintenance and updates.
7. **Compatibility**
   * Integration with local and international payment and shipping systems.
   * Support for multiple currencies and languages.

Some modules that the system could have.

**5. System Modules**

1. **Authentication and User Management Module**
   * Registration, login, profile management, and password recovery.
   * This module allows users to register on the platform, log in, and manage their personal profiles, including updating information such as addresses and payment details. In addition, it offers functionality to retrieve passwords via an emailed link, and optionally provides two-factor authentication to enhance account security.
2. **Product Catalog Module**
   * Management of categories, products, and their descriptions.
   * This module manages the organization and visualization of the products available in the store, allowing the categorization of items, and the management of their descriptions, images, and technical specifications. In addition, it includes an advanced search system that allows users to find specific products through filters such as brand, price, and technical characteristics.
3. **Shopping Cart Module**
   * Cart management, total calculation, and update processes.
   * This module makes it easy for users to manage their product selections in a shopping cart, allowing them to add, delete or modify the quantity of items. It also takes care of the automatic calculation of the purchase total, including taxes and possible discounts, and saves the cart for future visits, improving the shopping experience.
4. **Order Processing Module**
   * Checkout, payment methods integration, and order confirmation.
   * This module covers the entire checkout process, from shipping address validation and payment method selection to final order confirmation.It integrates multiple payment options such as credit cards and PayPal, and sends automatic email confirmations to ensure that customers receive details about their orders and shipments.
5. **Inventory Management Module**
   * Inventory control and updates, notifications, and restocking.
   * This module allows real-time monitoring and updating of product inventory, ensuring that stock is automatically adjusted with each sale. It also generates notifications for managers when inventory levels are low or when a product is out of stock, facilitating automatic replenishment of popular items.
6. **Customer Support Module**
   * FAQ management.
   * Chat for special needs
   * This module provides several customer support channels, including live chat, ticketing system for more complex queries, and a knowledge base with frequently asked questions (FAQ). Its objective is to offer fast and effective assistance, solving problems or doubts that may arise before, during or after the purchase.
7. **Reviews and Ratings Module**
   * Management of user reviews and display of ratings.
   * This module allows users to leave reviews and ratings of products they have purchased, providing a space to share their experiences. The ratings are displayed on product pages, helping other users in their purchase decision process by showing aggregated opinions and ratings.
8. **Promotions and Discounts Module**
   * Creation and management of coupons, discounts, and offers.
9. **Notifications Module**
   * Sending notifications via email and SMS.
   * This module is responsible for sending automatic notifications to users, either by email or SMS, to keep them informed about the status of their orders, important updates, or reminders of abandoned carts.
10. **Reports and Analytics Module**
    * Generation of sales reports, inventory analysis, and customer insights.
    * This module enables the generation of detailed reports on sales, inventory management, and customer behavior. It uses data analysis to provide insights on store performance, identify buying trends, and assist in decision making to optimize the operation and increase sales.

This online store project will be designed to provide a seamless and secure shopping experience, ensuring customer satisfaction and facilitating the store's operational management.

**Number of people involved**

For the software development we would need at least 3 developers who can work in the different modules, in the project administration 1 Project Manager to coordinate the activities, times and resources and finally a person in charge of the design and so that it can create an intuitive and attractive interface.

**Necessary Resources**

Technological:

* Cloud servers to host the store and database.
* Development tools (IDE, version control).
* Integrated payment and shipping management services.

Human resources:

* Development team, design and project manager.

Financial:

* Budget for servers and development tools.

**Time**

Planning: 2 weeks.

Development: 4 months, depending on complexity and number of functionalities.

Testing: 1 month to ensure product quality.

Launch: 2 weeks to launch.

**Main Activities**

Project Planning: Define requirements and scope of the project.

System Development: Coding of system modules.

Testing and Validation: Unit and integration testing to ensure software quality.

System Release: Deployment on production servers.

**Maintenance and Support:** Incident management and post-launch updates.

**Resources**

Hardware and Software: Servers, database, development tools.

Time and Budget: The time needed is estimated in 6 months with a budget that covers development, testing, and launching, as well as maintenance expenses.