

Pineapple Inc. - Online Pre-built Computer Store

Mario Garcilazo

Problem Statement

In today's fast-paced world, convenience is highly valued. Traditional methods of purchasing pre-built computers often involve visiting physical stores, which can be time-consuming and inconvenient, especially for busy professionals, individuals with specific needs, or those who prefer the ease of online shopping. Existing online options might lack a user-friendly experience or a curated selection tailored to enthusiasts.

Specific Issues:

- **Time Constraints:** Many individuals lack the time to research components, build their own PCs, or visit multiple stores to find the right pre-built system.
- **Limited Choices and Information:** Physical stores may have limited inventory and lack detailed specifications easily accessible to customers. Online options can sometimes be overwhelming or difficult to navigate.
- **Lack of a Tailored Experience:** Consumers might struggle to find pre-built systems that perfectly match their specific needs and preferences without extensive searching.

Proposed Solution

The proposed solution is an online platform, Pineapple Inc., that offers a user-friendly interface for customers to browse, select, and purchase pre-built computers online. The system will streamline the process of buying a PC, providing convenience, a curated selection, detailed product information, and a tailored shopping experience.

Technology Stack:

- **Programming Languages:** PHP, JavaScript
- **Frontend:** HTML, CSS, JavaScript
- **Backend:** PHP
- **Database:** MySQL

Key Features and Techniques:

- **Database Management:** MySQL will store product information, customer data, and orders. PHP will be used to interact with the database.
- **User Interface:** HTML, CSS, and JavaScript will provide a responsive and intuitive user interface.
- **Search and Filtering:** MySQL's search capabilities will be used for product search and filtering based on various criteria (e.g., price, specifications).

Interventions and Business Value:

- **Convenience:** Shop for pre-built computers anytime, anywhere with an internet connection.
- **Wider Selection:** Offer a diverse range of pre-built systems catering to different needs and budgets.
- **Detailed Product Information:** Provide comprehensive specifications and descriptions to help customers make informed decisions.
- **Time Savings:** Eliminate the need for physical store visits and extensive research.
- **Improved Customer Experience:** Offer a user-friendly and efficient platform for purchasing computers online.

Objectives

- Develop a user-friendly online platform for purchasing pre-built computers.
- Provide a wide selection of computers with detailed specifications.
- Ensure secure payment processing.
- Offer a seamless and efficient online shopping experience.
- Achieve high customer satisfaction and adoption rates among computer enthusiasts and general users.

System Requirements

- **User Account Management:** User registration, login, and profile management.
- **Product Catalog:** Browse, searching, and filtering of pre-built computers.
- **Product Details:** Display of detailed specifications, images, and pricing for each computer.
- **Shopping Cart:** Adding, removing, and managing items in the cart.
- **Checkout and Payment:** Secure online payment processing.
- **Order Management:** Order tracking, history, and management for users and administrators.
- **Admin Panel:** Managing products (add, edit, delete), orders, and potentially users.
- **Inventory Management:** Tracking the availability of computer models.

Typical Customers

- Individuals looking to purchase pre-built desktop computers for gaming, work, or general use.
- Computer enthusiasts seeking a convenient way to buy high-quality systems.
- Users who prefer the simplicity of buying a ready-to-use computer.

Project Planning

Software:

- **Frontend:** HTML, CSS, JavaScript
- **Backend:** PHP
- **Database:** MySQL
- **Other tools:** Git

Hardware:

- Development machines (PCs/laptops)
- Server for hosting the application and database (cloud-based or dedicated)

Network:

- Reliable internet connection for development and deployment.

Development Approach

Development Methodology: Agile (iterative development with sprints)

Technical Stack:

- **Frontend:** HTML, CSS, JavaScript for the user interface.
- **Backend:** PHP for handling application logic and database interactions.
- **Database:** MySQL for storing product, user, and order data.

Development Plan

- **Requirements Gathering and Analysis (Weeks 1-2):**
 - Define detailed system requirements and functionalities specific to an online computer store.
 - Design the user interface based on wireframes and mockups.
 - Plan the database schema for products, users, and orders.
- **Database Design and Setup (Weeks 3-4):**
 - Design the database schema (tables, relationships) using a database modeling tool.
 - Create the tables in the MySQL database.
 - Populate the database with initial product data.
 - Implement user registration and login features.
- **Frontend Development (Weeks 5-7):**
 - Develop the user interface using HTML, CSS, and JavaScript, creating pages for product listing, product details, shopping cart, and checkout.
 - Implement Browse, search, and filtering functionalities for the product catalog.
 - Create the shopping cart and checkout process, interacting with the backend.
- **Backend Development (Weeks 8-9):**
 - Develop PHP scripts to handle product display, user authentication, shopping cart management, and order processing.
 - Implement the admin panel with features for product and order management.
- **Integration and Testing (Weeks 10-11):**
 - Integrate the frontend with the backend, ensuring seamless communication.

- Conduct thorough testing of all features, including user flows and admin functionalities.
- **Deployment (Week 12):**
 - Deploy the PHP application and MySQL database to a production server.
 - Configure the server environment.
 - Conduct final testing in the production environment.
- **Post-Launch (Weeks 13-15):**
 - Address any issues or bugs that arise.
 - Gather user feedback and plan for future improvements or new features.

Conclusion

Pineapple Inc. offers a convenient and user-friendly solution for individuals looking to purchase pre-built computers online. By providing a curated selection, detailed product information, and a streamlined shopping experience, Pineapple Inc. aims to become the preferred platform for computer enthusiasts and general users seeking their next PC.