Rahulshetty Academy - Protocommerse

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✅ Abstract:

This document outlines the comprehensive requirements for the Protocommerse website of Rahulshetty Academy. The website aims to facilitate students in shopping for devices and registering for the forum. It includes features such as a user registration form, a shop page with specific products, a checkout process, and a payment page. The document covers functional and non-functional requirements, user interfaces, data requirements, risks, and mitigation strategies.

📕 Context:

Rahulshetty Academy's Protocommerse website is designed to enhance the user experience by offering a seamless shopping and forum registration process. The website's primary focus is to engage students and provide them with a platform to shop for devices and interact with the community. The project team includes the client, Rahulshetty Academy, and members such as the QA Tester (You) and Developer (XYZ).

ℹ️ Introduction:

The Rahulshetty Academy - Protocommerse project aims to create a platform where students can shop for devices and register for the ProtoCommerse Forum. The website will feature a user-friendly interface comprising various pages such as the Protocommerce Home Page, Shop Page, Checkout Page, and Payment Page. This document outlines the detailed requirements for each of these components to ensure the successful implementation of the project.

🎯 Objective

The scope of this project encompasses the development of a user-friendly website that caters to students' shopping needs and forum registration. The website features a Protocommerce home page for user registration, a shop page for browsing and adding items to the cart, a checkout page for validating prices and initiating payments, and a payment page for finalizing transactions. The project aims to deliver a seamless and secure shopping experience while ensuring user satisfaction.

🤔 Assumptions

Assumptions:

- Users are assumed to have stable internet connections to ensure smooth browsing and transaction processing.
- The system assumes a certain level of user familiarity with online shopping processes and forms.

Constraints:

- The project operates under a limited budget, restricting the implementation of additional features beyond the specified requirements.
- Time constraints may limit the extent of testing and development, necessitating prioritization of critical functionalities.

📑 Requirements

Protocommerce Home Page:

- The Protocommerce Home Page will serve as the entry point for users to register for the ProtoCommerse Forum.
- The user interface form on this page will include fields for Name, Email, Password, Gender, Employment status (Student, Working Professional, Entrepreneur - currently disabled), and Date of Birth.
- Upon successful form submission, a message stating "Success!" should be displayed.
- Error handling:
  - Users should not be allowed to provide null values or single characters in the Name and Email fields.
  - The Password field should display hidden text format (e.g., "*****").

Shop Page:

- Clicking on the Shop option on the Protocommerse Home Page will navigate users to the Shop Page.
- The Shop Page will display available items for purchase, initially showcasing assets of the Academy and later featuring specific items in the UAT phase.
- In the UAT phase, the available items will include Mobile Phones such as iPhone X, Samsung Galaxy 8, Nokia Edge, and Blackberry, with prices listed in Indian format.

- Users can add items to their cart, and the Check out button will display the total count of items selected.

Checkout Page:

- Upon clicking the Checkout button on the Shop Page, users will be directed to the Checkout Page.
- The Checkout Page will validate the actual prices of the selected products against the predefined price list:
  - iPhone X: 100000 INR
  - Samsung Galaxy 8: 85000 INR
  - Nokia Edge: 65000 INR
  - Blackberry: 50000 INR
- Users can review their selected items and proceed to the payment page.

Payment Page:

- The Payment Page will feature a text box for users to select their country, a Consent checkbox, and a submission button.
- Validation checks will ensure that all fields are filled out correctly, and upon successful submission, a message confirming the payment will be displayed.

Additional Requirements:

- The website should be responsive to ensure compatibility across various devices and screen sizes.
- User authentication and session management should be implemented to secure user data and transactions.
- Error handling mechanisms should be in place to handle unexpected user inputs or system errors gracefully.
- Regular testing, including unit testing, integration testing, and user acceptance testing, should be conducted to ensure the functionality and reliability of the website.

Non-Functional Requirements:

- Security: Ensure data privacy and secure payment processing.
- Performance: Optimize website speed and response time.
- Usability: Intuitive user interfaces for seamless navigation.
- Reliability: Ensure system availability and data integrity.

📊 Data Requirements

Data Input Requirements: The system will gather and handle the subsequent types of data:

1. **User Registration Details:** This includes information such as Name, Email, Password, Gender, Employment status, and Date of Birth (DOB) provided by users during the registration process.
2. **Product Selections:** Data related to the products chosen by users while browsing and shopping on the platform.
3. **Payment Information:** Details regarding payment methods chosen by users, as well as billing information necessary for completing transactions.

Data Output Requirements: The system will produce the following types of data outputs:

1. **Success/Failure Messages:** These messages are generated in response to user interactions, such as successful form submissions, payment processing, or actions that encounter errors.
2. **Order Confirmation Messages:** Sent to users following successful transactions, containing comprehensive information about the purchased items, transaction IDs, and any other pertinent details related to the order.

🎨 User interaction and design

UI Requirement 1: Protocommerce Home Page

- The design of the Protocommerce Home Page should prioritize user-friendliness, ensuring that users can easily navigate and understand the interface.
- Clear labels should be provided for each input field on the registration form to guide users in providing accurate information.
- Error messages triggered by invalid inputs should be informative and clearly explain the issue to users, aiding them in correcting their input.

UI Requirement 2: Shop Page

- Items displayed on the Shop Page should have clear descriptions and prices visible to users, facilitating informed decision-making during the shopping process.
- The "Add to cart" button and the "Checkout(count)" button, indicating the number of items in the cart, should be prominently displayed, encouraging users to add items to their cart and proceed to checkout easily.

System Interface

Internal Interfaces:

- The system's internal interfaces will interact with a database responsible for storing and managing various types of data, including user information (e.g., registration details), product details (e.g., descriptions, prices), and pricing information.

External Interfaces:

- The system's external interfaces will integrate with a payment gateway to facilitate secure and efficient processing of payments. This integration will enable users to complete transactions seamlessly and securely within the Protocommerce platform.

These user interface requirements and system interfaces are crucial components of the Protocommerse platform, ensuring a seamless user experience and efficient data management and processing.

⏱ Risks and Mitigation Strategies

Risk 1: Technical Issues

- **Mitigation:** Thorough testing procedures will be implemented to identify and address technical issues before deployment.
- **Backup Plan:** A contingency plan will be established to mitigate system downtime, ensuring minimal disruption to user experience.

Risk 2: Security Breaches

- **Mitigation:** Robust security measures, including data encryption and regular security audits, will be implemented to prevent and detect security breaches.
- **Security Audits:** Regular audits will be conducted to assess the system's security posture and address any vulnerabilities promptly.

Risk 3: Work-life balance concerns for QA Tester:

- Mitigation: Define working hours (Saturday and Sunday, 9 AM to 12 Noon) and prioritize tasks accordingly.