Integration Test Report

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Github link: https://github.com/itsnurayyy/Bookstore-crud-app.git, there are 2 branches

This Integration Testing Report provides an overview of the integration testing conducted on my bookstore web application, developed using JavaScript and PHP. The primary objective of this testing was to ensure that individual components of the application work seamlessly when integrated and that the application as a whole functions as expected.

Project Information

- Project Name:Bookstore Web Application
- Technology Stack: JavaScript, PHP

Testing Scope

The integration testing focused on verifying the interactions and collaborations between different modules and components of the bookstore web application. The primary areas covered include:

1. Frontend-Backend Integration: Ensuring proper communication and data exchange between the frontend (JavaScript) and backend (PHP) components.

2. Database Integration: Verifying the integration of the application with the underlying database to ensure accurate data storage and retrieval.

3. Third-Party Integrations: Checking the integration of any third-party services or APIs used in the application

Testing Environment

- Browser Compatibility: Chrome
- Operating Systems: Windows

- Devices: Desktop

Testing Approach

1. Frontend-Backend Integration Testing

- Scenario 1: User Authentication
  - Validate user login functionality.
  - Ensure user registration and authentication processes are seamless.

- Scenario 2: Book Catalog
  - Confirm that book information is accurately retrieved from the backend.
  - Verify the display and navigation of the book catalog on the frontend.

- Scenario 3: Cart Functionality
  - Test the addition and removal of books fromm the shopping cart.
  - Ensure the accurate calculation of the total order amount.

2. Database Integration Testing

- Scenario 1: Data Integrity
  - Verify that the data entered through the frontend is correctly stored in the database.
  - Confirm that the data retrieved from the database matches the expected values.

3. Third-Party Integration Testing

- Scenario 1: Payment Gateway Integration
  - Confirm the integration of the payment gateway for seamless payment processing.
  - Verify that payment-related data is securely handled.

Test Results

Frontend-Backend Integration

- User Authentication: All test cases passed, and users can successfully register, log in, and log out.
- Product Catalog: The frontend accurately displays product information retrieved from the backend.
- Cart Functionality: Adding and removing items from the cart works as expected, and total order amount calculations are accurate.

Database Integration

- Data Integrity: Data entered through the frontend is correctly stored in the database, and retrieval is accurate.
- Transaction Handling: Transactions are handled appropriately, ensuring data consistency.

Third-Party Integration

- Payment Gateway: Integration with the payment gateway is successful, and payment processing is seamless.

Issues Identified

- No critical issues were identified during the integration testing.
- Minor issues related to user interface responsiveness on certain devices were noted and will be addressed in subsequent releases.

Conclusion

The integration testing of my bookstore web application demonstrated that the different components work harmoniously together. No critical issues were found, and the application is deemed ready for further testing phases, such as system testing and user acceptance testing. For further development, the below recommendations can be applied:

Recommendations

- Conduct thorough system testing to validate end-to-end functionality.

- Initiate user acceptance testing with real users to gather feedback on usability and overall satisfaction.
- Performance testing to ensure the application can handle expected user loads.