**Name of the Store: Book Haven**

**SDLC Approach:**

Given the significance of security, data management, and user experience in transitioning from a brick-and-mortar bookstore to an online-only platform, a combination of Agile and DevOps methodologies will be employed.

**Justification:**

1. Agile Methodology: Agile methodology emphasizes iterative development, collaboration, and customer feedback throughout the software development lifecycle (SDLC). It enables teams to respond quickly to changing requirements and deliver high-quality software incrementally (Beck et al., 2001).

2. DevOps Practices: DevOps is a set of practices that combines software development (Dev) and IT operations (Ops) to shorten the development lifecycle and deliver software continuously. It emphasizes automation, collaboration, and feedback loops between development and operations teams (Kim et al., 2016).

**Application to Scenario:**

In transitioning from a brick-and-mortar bookstore to an online-only platform, Agile methodology will facilitate iterative development cycles, allowing for frequent updates and adjustments based on customer feedback. DevOps practices will streamline collaboration between development and operations teams, enabling continuous integration, deployment, and monitoring of the e-commerce platform (Humble & Molesky, 2014).

By adopting Agile and DevOps methodologies, the transition process will be agile, efficient, and responsive to market demands, ensuring the success of the online bookstore venture.

**Programming Languages:**

Programming Languages and Frameworks:

1. Frontend: HTML, CSS, JavaScript (with React framework)

- HTML (Hypertext Markup Language): HTML is the standard markup language for creating web pages and web applications. It provides the structure and content of the web pages.

- CSS (Cascading Style Sheets): CSS is used to style the HTML elements, providing layout, colors, fonts, and other visual aspects to enhance the user interface.

- JavaScript (with React framework): JavaScript is a versatile programming language used for adding interactivity and dynamic behavior to web pages. React is a popular JavaScript library for building user interfaces, offering reusable components and efficient rendering (Kothari et al., 2018).

2. Backend: Python (with Django framework)

- Python: Python is a high-level, interpreted programming language known for its simplicity and readability. It offers extensive libraries and frameworks for web development, making it suitable for rapid application development (Lutz, 2013).

- Django Framework: Django is a powerful Python web framework that follows the Model-View-Controller (MVC) architectural pattern. It provides built-in features for handling authentication, database management, and URL routing, allowing for efficient development of complex web applications (Holovaty & Kaplan-Moss, 2007).

3. Mobile App: Flutter

- Flutter: Flutter is an open-source UI software development kit (SDK) created by Google for building natively compiled applications for mobile, web, and desktop from a single codebase. It offers a rich set of pre-built widgets, fast development cycles, and expressive UI designs (Sells & Hamilton, 2020).

These programming languages and frameworks were selected based on their popularity, community support, scalability, and suitability for building a robust and user-friendly online bookstore and mobile application.

**Requirements:**

1. Data Security: Implement encryption protocols for securing customer data, including personal information, payment details, and order history (Bertino & Sandhu, 2005).

2. Database Management: Develop a robust database management system (DBMS) to efficiently store and retrieve product information, customer data, and transaction records (Date, 2004).

3. Mobile Shopping Application: Create a mobile app compatible with iOS and Android platforms, offering seamless browsing, purchasing, and order tracking functionalities (Mishra, 2016).

4. User Authentication: Implement secure authentication mechanisms, such as multi-factor authentication (MFA), to verify user identity and prevent unauthorized access to accounts (Meyer & Whateley, 2017).

5. Inventory Management: Incorporate inventory tracking features to monitor stock levels, manage product listings, and automate reordering processes (Fisher et al., 2017).

6. Payment Gateway Integration: Integrate reliable payment gateways, such as PayPal or Stripe, to facilitate secure online transactions and support multiple payment methods (Pramanik & Ghosh, 2014).

7. Responsive Web Design: Ensure the website and mobile app are responsive and optimized for various devices and screen sizes to enhance user experience (Gustafson, 2015).

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