

**A WEB-BASED CULTURAL MARKETING AND EVENT BOOKING  
SYSTEM FOR PLATEAU STATE TRADITIONAL ATTIRE**

**BY**

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## **APPROVAL**

This research work has been read and approved having satisfied the requirements of the Department of Computer Science, Faculty of Natural Sciences, University of Jos, for the Award of Bachelor of Science (B.Sc) Degree in Computer Science.

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## **DECLARATION**

I, Gershon Maktong Okotshak with the matriculation number UJ/2019/NS/1197, hereby declare that this project work was carried out by me and every other external work used in this project has been duly acknowledged

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## **ACKNOWLEDGMENT**

I am always grateful to God for granting me the strength, knowledge, and understanding throughout my educational pursuits. His unfailing love, and protection has really kept me in tract.

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Thank you all for your immense contributions to my success, may God Almighty blessed you all.

## **DEDICATION**

I am dedicating this project to God Almighty for the total protection and understanding, He granted me throughout the time of this project, thanking him for seeing me throughout time my stay in this university. The love, the unmerited favor, and grace that brought me this far.

I also dedicate this project to my family. Most especially my Parents and siblings. For always being by my side You all are loved.

## **ABSTRACT**

This is a study about a web-based cultural marketing and event booking system that promotes the cultural heritage of plateau state, through parading and showcasing the beauty of the traditional attire of its multi-ethnic groups, using this technology will create a chance to also tell the world about its rich cultural heritage. The system consists of a blog module for publishing cultural stories and attire history, an e-commerce module for showcasing and selling traditional attire, with this it will be easy to connect buyers or people in need of a particular traditional attire that initially could locate where to get one, it also has an event booking module that tells people about coming events and enable them to successfully book any available event. Events like cultural festivals plus attire showcasing, wedding ceremonies, and etc. It bridges the gap between tradition and modern digital systems, contributing both to cultural preservation and economic empowerment. Recommendations include Incorporating AI-powered personalization for attire recommendations in the system, Partnerships with payment gateways and logistics companies to scale commercial use, Government and cultural organizations should adopt such platforms for broader heritage promotion. Limitations are Limited financial and infrastructural resources constrained to integrate a large-scales payment gateways, Internet access limitations may affect usability in rural communities. The system is a reliable tool for promoting cultural heritage in Plateau state and even Nigeria at large.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

Cultural heritage is a vital component of identity and societal continuity. In Plateau State, Nigeria, traditional attire represents not only aesthetics but also history, tribal belonging, and values. However, globalization and changing lifestyle patterns have contributed to reduced visibility and appreciation of indigenous attire, particularly among younger generations. The rapid growth of digital technologies presents new opportunities to preserve, promote, and market cultural heritage through innovative web platforms (Technology and Cultural Heritage, 2022).

E-commerce and event platforms have successfully boosted global exposure for cultural products, while digital marketing has enabled local artisans to reach wider audiences (E-Commerce for Traditional Crafts, 2021). This project leverages these technologies by proposing a web-based platform that integrates blogging, cultural attire e-commerce, event booking-tickets, and digital marketing features. The platform aims to provide a modern solution that connects tradition with technology, promoting Plateau State's heritage while creating new economic opportunities.

### **1.2 Problem Statement**

Despite the richness of Plateau State's traditional attire, there is limited digital representation and accessibility. Existing systems are often fragmented: blogs focus on storytelling but lack e-commerce, while event platforms are rarely integrated with cultural promotion. Additionally, local artisans face challenges in showcasing and selling attire beyond physical markets. Event organizers lack localized platforms for easy booking, and marketing efforts for cultural products

often remain underdeveloped. These limitations hinder the preservation, promotion, and commercial potential of Plateau State's cultural attire.

### **1.3 Aim and Objectives of the Study**

#### **Aim:**

To design and implement a web-based cultural marketing and event booking system for Plateau State traditional attire using React and Node.js.

#### **Objectives:**

1. To develop a blog module for publishing cultural stories and attire history.
2. To implement an e-commerce module for showcasing and selling traditional attire.
3. To design an event booking module integrated with QR e-ticketing.
4. To integrate digital marketing tools (social media links, analytics, promotional banners).
5. To evaluate the performance and usability of the system.

### **1.4 Significance of the Study**

The study provides cultural, academic, and economic significance. Culturally, it preserves and promotes Plateau State's traditions. Academically, it contributes to research on cultural digitization and integrated web systems. Economically, it supports artisans and event organizers by expanding market reach and improving event participation. The project also aligns with Nigeria's broader goals of cultural preservation and digital transformation.

## **1.5 Scope of the Study**

The project is limited to Plateau State traditional attire and events. Features include blogging, attire display and sales, event booking, QR e-ticketing, and basic digital marketing. Advanced AI features (e.g., recommendation engines) and multi-language support are outside the current scope.

## **1.6 Limitations of the Study**

- Limited financial and infrastructural resources constrained the integration of large-scale payment gateways.
- The platform was developed and tested on a small dataset due to time constraints.
- Internet access limitations may affect usability in rural communities.

## **1.7 Definition of Terms**

- **Web-Based**

**Web-based** refers to any application, system, or service that operates through a web browser and is accessed via the internet (or sometimes an intranet), rather than being installed directly on a local device. Web-based applications run on a remote server, and users interact with them using browsers such as Chrome, Firefox, or Edge.

- **Cultural Marketing**

**Cultural marketing** is a marketing strategy that leverages the traditions, values, beliefs, and practices of a particular culture or

community to promote products, services, or events. It involves tailoring marketing messages and campaigns in ways that resonate with the cultural identity of the target audience, thereby enhancing relevance, trust, and emotional connection. Cultural marketing often emphasizes heritage, language, attire, art, and festivals to strengthen consumer engagement and brand loyalty.

- **Digital Marketing**

**Digital Marketing** is the use of digital channels, platforms, and technologies to promote products, services, or brands to consumers. It includes strategies such as social media marketing, search engine optimization (SEO), pay-per-click advertising (PPC), email marketing, and content marketing.

- **Event Booking**

**Event booking** refers to the process of reserving or securing a place, service, or resource for a planned event through a structured system, typically involving scheduling, confirmation, and sometimes payment. It enables individuals or organizations to register attendance, hire venues, or engage service providers for events such as weddings, conferences, festivals, and cultural ceremonies (Zhang & Kim, 2020).

In a **digital context**, event booking is facilitated by **online booking systems**, which allow users to select dates, view availability, make reservations, and process payments in real time via web or mobile platforms. Such systems increase efficiency, reduce manual errors, and enhance user convenience compared to traditional booking methods (Adewale &

- **E-commerce**

**E-commerce (Electronic Commerce)** refers to the buying and selling of goods or services over the internet. It includes online retail stores, digital marketplaces, mobile commerce (m-commerce), and electronic payments. Popular examples include Amazon, Jumia, and eBay.

- **Plateau State**

**Plateau State** is located in north-central Nigeria and is known for its rich cultural diversity, housing over forty ethno-linguistic groups such as the Berom, Ngas, Mwaghavul, Mushere, Tarok, Goemai, and many others. This diversity makes the state an ideal focus for developing a web-based cultural marketing and event-booking system. For its colorful traditional attires.

- **Traditional Attire**

**Traditional attire** refers to clothing styles, garments, and accessories that are historically and culturally associated with a specific community, ethnic group, or region. These attires often symbolize cultural heritage, identity, values, and social status, and they are commonly worn during ceremonies, festivals, rituals, or important cultural events. Traditional attire varies widely across societies and is typically characterized by unique fabrics, patterns, colors, and designs that reflect the traditions and history of the people.

- **React**

**React** is an open-source JavaScript library developed by Facebook, used for building interactive and dynamic user interfaces, especially for single-page applications (SPAs). It allows developers to build reusable UI components and efficiently update the user interface when data changes through its virtual DOM.

- **Node.js**

**Node.js** is an open-source, cross-platform JavaScript runtime environment that allows developers to run JavaScript code outside of a web browser (on the server side). It is widely used for building scalable, fast, and event-driven web applications, thanks to its non-blocking I/O model.

## 1.8 Structure of the Study

This study is organized into five chapters:

- Chapter One introduces the study, including background, problem statement, objectives, and scope.
- Chapter Two presents a literature review.
- Chapter Three discusses the methodology, including system design and implementation tools.
- Chapter Four describes the system implementation, testing, and results.
- Chapter Five concludes the study with a summary, contributions, and recommendations.

# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **2.1 Introduction**

This chapter reviews existing literature related to digital cultural platforms, e-commerce for traditional attire and crafts, event ticketing technologies, digital marketing strategies for cultural products, and the application of modern web technologies such as React and Node.js. The review identifies gaps in current research and highlights how the proposed system contributes to bridging these gaps.

### **2.2 Digital Platforms and Cultural Heritage**

Digital platforms have become essential tools in the preservation, documentation, and dissemination of cultural heritage. They provide new avenues for accessibility, education, and sustainable tourism. Research emphasizes that cultural heritage digitization, when paired with community engagement, can both preserve intangible heritage and enhance its global visibility (Technology and Cultural Heritage, 2022). Emerging approaches such as metaverse applications further illustrate how immersive technologies can extend cultural experiences into interactive and educational dimensions (Digitalizing Cultural Heritage, 2024). However, scholars caution that digitization must balance accessibility with authenticity and community consent.

### **2.3 E-Commerce and Traditional Crafts**

E-commerce platforms are increasingly leveraged to support traditional artisans by providing global market access, thereby improving income and ensuring cultural continuity. Studies demonstrate that online platforms are effective when

they integrate cultural narratives, authenticity verification, and equitable revenue distribution for artisans (E-Commerce for the Preservation of Traditional Crafts, 2021). However, challenges include risks of cultural commodification and unequal power relations between platform owners and cultural practitioners. To mitigate these, researchers recommend designing platforms with embedded safeguards to protect intellectual property and community ownership of traditions.

## **2.4 Event Ticketing Systems**

The adoption of digital ticketing, has transformed event management and participation. enable real-time tracking, and improve user convenience compared to paper tickets. Empirical studies in both transportation and cultural events confirm that E-Ticketing systems increase efficiency, facilitate crowd control, and support data-driven analytics for event organizers (Effectiveness of E-Ticket Systems, 2022; Ticketing Studies, 2023). Despite these benefits, integration with secure payment gateways and mobile platforms remains a technical and organizational challenge in some contexts.

## **2.5 Digital Marketing for Cultural Heritage and Products**

Digital marketing strategies, including social media campaigns, influencer partnerships, and targeted advertising, are recognized as effective tools for promoting cultural heritage and creative industries. Evidence suggests that campaigns combining authenticity-focused storytelling with digital targeting strategies yield stronger user engagement and conversion rates (Cultural and Tourism Promotion Through Digital Marketing, 2021). Furthermore, personalization through analytics—such as recommending tribe-specific attire or sending event reminders—has been shown to significantly improve sales and participation (Analytics and Conversion in Tourism Marketing, 2022). Ethical considerations, such as the representation of cultural identities, remain a critical area of concern.

## **2.6 Technical Choices: React and Node.js**

Recent literature highlights the efficiency of full-stack JavaScript frameworks, particularly the MERN stack (MongoDB, Express.js, React, Node.js), in developing scalable cultural and e-commerce platforms. React provides a responsive and modular frontend interface, while Node.js with Express ensures lightweight and efficient backend processing. The unified use of JavaScript across the stack simplifies development and maintenance, while allowing integration with modern tools such as real-time notifications, payment systems, and QR code generation (Using React with Node.js, 2023). This makes the stack particularly suitable for dynamic systems involving event booking and marketing automation.

## **2.7 Gaps in Existing Literature**

Although numerous studies explore digital cultural heritage platforms, e-commerce for crafts, and event ticketing systems, three significant gaps emerge:

1. Local specificity: There is limited research addressing *state-level* or *tribe-level* cultural promotion platforms, particularly in Nigeria and Plateau State.
2. Integrated platforms: Few systems integrate storytelling (blogs), commerce, event booking with QR tickets, and marketing automation in a unified solution.
3. Ethical and governance models: Limited work addresses how platforms ensure fair revenue distribution, cultural sensitivity, and community consent in digitizing attire and events.

## **2.8 Contribution of the Proposed System**

The proposed project seeks to address these gaps by:

1. Designing a localized platform tailored to Plateau State's traditional attire and cultural groups.

2. Developing an integrated system that combines blog content, e-commerce for traditional attire, QR-based event booking, and built-in digital marketing tools.
3. Implementing the system using React and Node.js, ensuring scalability, responsiveness, and seamless integration with modern web technologies and analytics frameworks.

In doing so, the system contributes to both the academic discourse and the practical field of cultural heritage digitization and marketing.

# CHAPTER THREE

## METHODOLOGY

### 3.1 Introduction

This chapter describes the methodology applied in developing the *Culturally-Inspired Digital Experience Platform for Cultural Marketing and Event Booking*. It outlines the **system design approach, tools and technologies**, and the **modeling techniques** employed to represent system processes. Various diagrams such as **flowcharts, use case diagrams, data flow diagrams (DFD), entity-relationship diagrams (ERD), and database schemas** are used to provide a structured understanding of the system's design and data handling (Pressman & Maxim, 2020).

### 3.2 System Design Methodology

The Agile Development Model was adopted because of its iterative nature, ability to incorporate user feedback, and flexibility to adapt to evolving requirements in cultural marketing and event booking systems (Beck et al., 2001). The design is divided into incremental phases, each delivering functional modules such as user authentication, event booking, product marketing, and payment integration.

### 3.3 Tools and Technologies

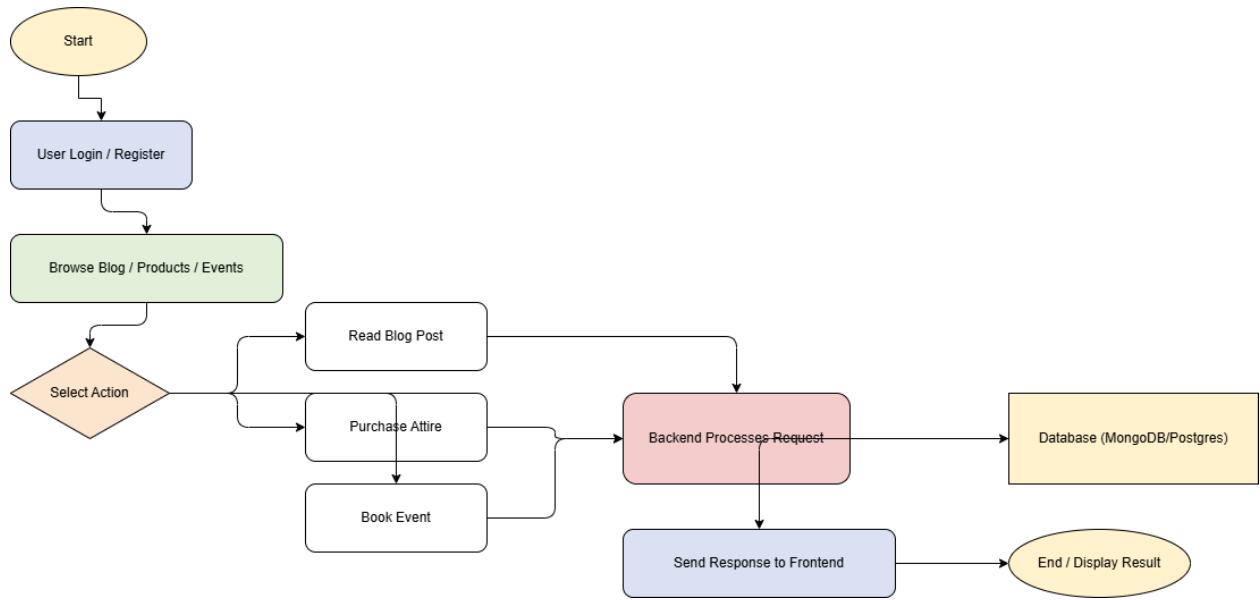
- **Frontend:** React.js for building interactive interfaces (Griffiths, 2021).
- **Backend:** Node.js with Express.js for handling server-side logic (Tilkov & Vinoski, 2010).
- **Database:** MongoDB with Mongoose ODM for schema modeling (Chodorow, 2013).
- **Version Control:** GitHub for collaborative coding (Loeliger & McCullough, 2012).
- **Design & Diagrams:** draw.io for UML and schema representation.

## 3.4 System Modeling Diagrams

### 3.4.1 Flowchart

The system flowchart shows the sequence of user interactions from login to cultural attire marketing and event booking.

**Figure 3.0: System Flowchart**

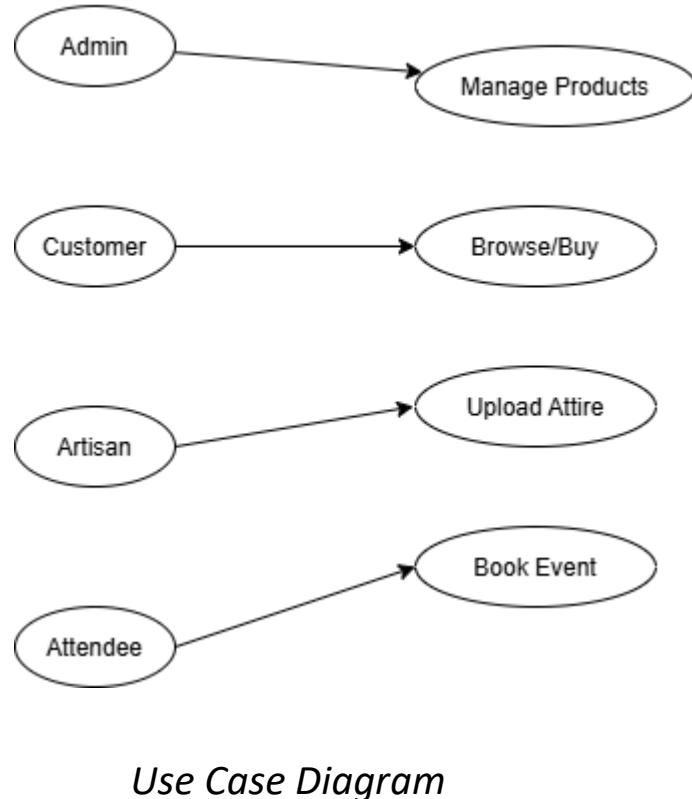


*Flowchart Diagram here*

### 3.4.2 Use Case Diagram

The use case diagram identifies the actors—**Admin, Customer, Artisan, and Attendee**—and their interactions with the system.

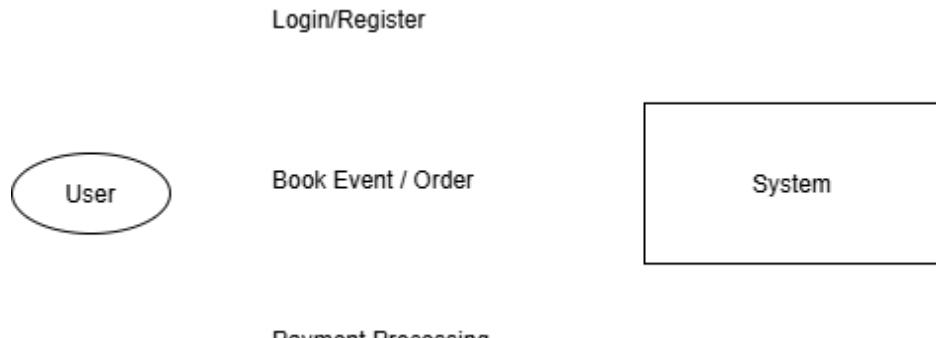
**Figure 3.1: Use Case Diagram**



### 3.4.3 Data Flow Diagram (DFD)

The Level-0 DFD shows data exchanges between users and system processes such as login, product browsing, event booking, and payment handling (Yourdon, 1989).

**Figure 3.2: Data Flow Diagram**

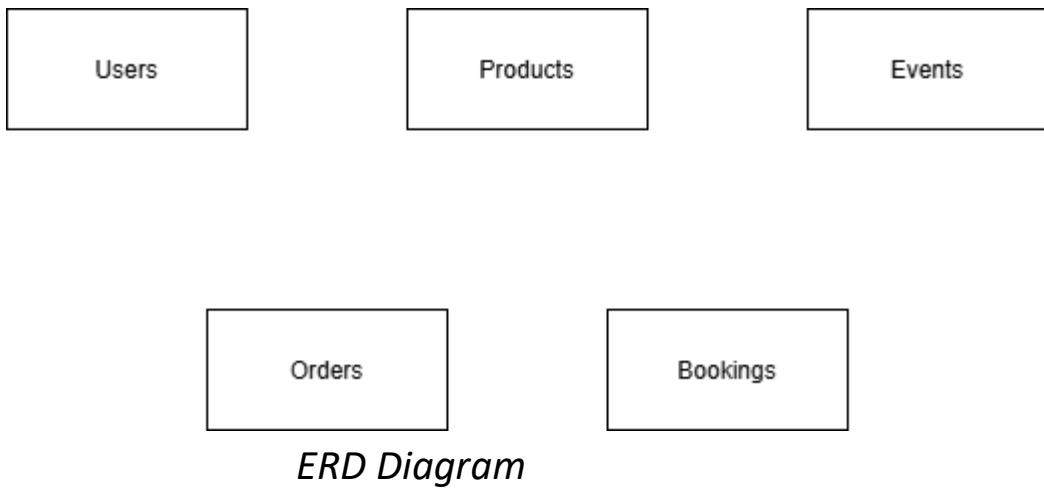


*DFD Diagram*

#### 3.4.4 Entity Relationship Diagram (ERD)

The ERD illustrates relationships among entities such as **Users**, **Products**, **Events**, **Orders**, and **Bookings**, capturing their attributes and relationships (Elmasri & Navathe, 2015).

**Figure 3.3: Entity Relationship Diagram (ERD)**



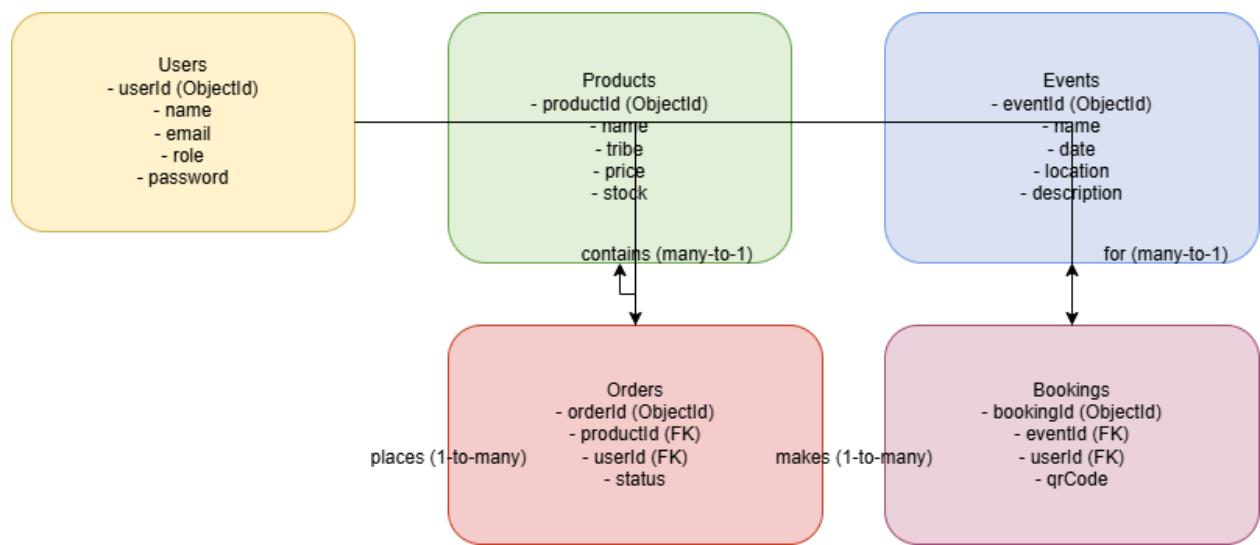
*ERD Diagram*

### 3.4.5 Database Schema

The schema defines how MongoDB collections are structured:

- **Users** (userId, name, email, role, password)
- **Products** (productId, name, tribe, price, stock)
- **Events** (eventId, name, date, location, description)
- **Bookings** (bookingId, eventId, userId, qrCode)
- **Orders** (orderId, productId, userId, status)

**Figure 3.4: Database Schema**



### **3.5 Conclusion**

This chapter has presented the methodological framework for designing the system. By using Agile methodology and modern tools, the system ensures flexibility and cultural adaptability. Modeling diagrams provide a visual roadmap for system development, ensuring clarity in implementation and scalability.

# **Chapter Four**

## **System Implementation and Results**

### **4.1 Development Tools**

- **Frontend: React, Tailwind CSS**
- **Backend: Node.js, Express.js**
- **Database: MongoDB with Mongoose**
- **Version Control: Git/GitHub**

### **4.2 Implementation**

The system was implemented in two main modules:

- **Frontend (React):** User interface for blog, e-commerce, event booking.
- **Backend (Node.js + Express):** APIs for authentication, event booking, product management.
- **Database (MongoDB):** Storage of users, attire products, events, and bookings.

### **4.3 Features Implemented**

1. Blog posts with multimedia support.
2. palaces & tribes with LGA-based categories.

3. Event booking.
4. Marketing features such as promotional banners and social media integration.

#### 4.4 Testing

- **Unit Testing:** Verified each component (login, booking, payments).
- **Integration Testing:** Ensured smooth flow between frontend, backend, and database.
- **User Acceptance Testing (UAT):** Involved test users evaluating usability and cultural relevance.

#### 4.5 Results

The system successfully:

- Displays cultural attire.
- Handles event bookings.
- Marketing features improved engagement compared to a baseline static website.
- Provides admin management tools.

# **Chapter Five**

## **Summary, Recommendations, and Conclusion**

### **5.1 Introduction**

This project was carried out to implement a web-based cultural marketing and event-booking system for plateau state traditional attire, with the objective of developing a blog module for publishing cultural stories and attire history, to implement an e-commerce module for showcasing and selling traditional attire, to design an event booking module, and to integrate digital marketing tools (social media links, analytics, promotional banners), to evaluate the performance and usability of the system. That can effectively promote the cultural heritage of plateau state despite its multi-ethno-linguistic groups.

### **5.2 Summary**

This study designed and implemented a cultural marketing and event booking system using React and Node.js. The system integrated storytelling (blogs), commerce (attire sales), and event management (QR tickets) with basic marketing tools.

### **5.3 Recommendations**

1. Future systems should incorporate AI-powered personalization for attire recommendations.

2. Partnerships with payment gateways and logistics companies will scale commercial use.
3. Government and cultural organizations should adopt such platforms for broader heritage promotion.

#### **5.4 Contribution to Knowledge**

The study contributes to the body of knowledge by presenting an integrated model that combines cultural blogging, e-commerce, QR e-ticketing, and digital marketing into a unified platform, tailored to a local Nigerian context.

#### **5.5 Conclusion**

The platform demonstrates that digital technologies can effectively promote cultural heritage while offering practical benefits to artisans and event organizers. It bridges the gap between tradition and modern digital systems, contributing both to cultural preservation and economic empowerment.

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