CampusVendor

…...Your One-Stop Marketplace for Campus

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PROBLEM STATEMENT

At the University of Ghana, Legon, student entrepreneurship is thriving. Many students engage in small-scale "skull-life" businesses, offering essential products and services such as stationery, thrift clothing, personal care (hair braiding, haircuts), mobile money services, food, and other student-centered necessities. These businesses not only support campus life but also serve as vital income streams for students.

However, most of these vendors rely on informal marketing channels such as word-of-mouth referrals, WhatsApp status updates, or posters on notice boards. This fragmented system limits their visibility, making it difficult for potential customers to quickly discover and access the goods and services they need. As a result, students often waste valuable time searching for vendors, while vendors miss opportunities to expand their customer base and grow their businesses.

The absence of a centralized, accessible, and reliable digital marketplace for campus-specific needs creates a significant gap in efficiency, convenience, and economic opportunity. Without an integrated platform, both students and vendors face friction in connecting, transacting, and building sustainable micro-businesses within the university community.

SYSTEM VISION

The vision of ***CampusVendor*** is to become the go-to digital marketplace for campus life, starting with the University of Ghana, Legon, and expanding to other campuses nationwide. The platform seeks to transform how students discover, access, and support peer-led businesses, while giving student vendors a reliable digital space to showcase and grow their enterprises.

At its core, *CampusVendor* aims to:

i. Centralize student businesses by providing a single platform where products and services (stationery, thrift clothing, grooming services, food, mobile money, and more) can be listed and accessed.

ii. Simplify discovery for students through robust search and categorization features, allowing them to quickly find vendors that meet their needs.

iii. Ensure free delivery of products on campus

iv. Enable simple, secure transactions, starting with cash-on-delivery or direct contact, with potential integration of mobile money and digital wallets.

v. Promote student entrepreneurship, offering visibility, growth opportunities, and the chance to build brand credibility on campus.

vi. Lay the foundation for scale, with the long-term vision of connecting campuses across Ghana into one unified marketplace for student-driven commerce.

By merging convenience for customers with opportunity for vendors, CampusVendor envisions a more connected, efficient, and economically vibrant campus ecosystem.

USER PERSONAS

To design a platform that is both useful and intuitive, it is essential to understand the key user groups who will interact with the system. Each persona represents a primary or secondary user, their needs, and their role in the platform's ecosystem.

1. Customers (Primary Users)

Description: Undergraduate, postgraduate, Staff, or other stakeholders seeking affordable, convenient products and services on campus.

Goals: Quickly find what they need (stationery, food, thrift items, grooming services, etc.), make contact or place orders, and pay conveniently (primarily via MOMO).

Pain Points: Time wasted searching for vendors, lack of trusted information, and fragmented communication channels.

2. Student Vendors / Small Businesses (Primary Users)

Description: Student entrepreneurs selling products (stationery, thrifts, food, gadgets, cosmetics, etc.) or offering services (hair braiding, barbing, printing, laundry, delivery).

Goals: Increase visibility, attract more customers, simplify transactions, and manage demand more efficiently.

Pain Points: Limited marketing reach (word of mouth, posters, WhatsApp statuses), inconsistent demand, lack of tools for showcasing products/services.

3. CampusVendor Admins (Secondary Users)

Description: The platform managers (development team or designated operators).

Goals: Verify vendors, maintain trust and security, monitor transactions, and ensure smooth operations.

Pain Points: Preventing fraudulent listings, managing complaints, and maintaining system performance.

4. University Community Stakeholders (Secondary Users)

Description: University clubs, associations, or even departments that may want to promote events, products, or services via the platform.

Goals: Use the platform for awareness campaigns, student engagement, or special offers.

Pain Points: Limited reach beyond notice boards or social media.

REQUIREMENTS

FUNCTIONAL REQUIREMENTS

1. User Registration & Authentication

- o Students can sign up/log in with email, phone number, or student ID.
- o Vendors register with basic details (name, phone, product/service category).

2. Vendor Listings Management

- o Vendors can create, edit, and delete listings (products or services).
- o Upload pictures, descriptions, prices, and availability.

3. Product/Service Browsing

- o Students can search by keyword, category (e.g., food, stationery, grooming, thrift), or proximity.
- o Filter/sort results by price, popularity, or recency.

4. Vendor Profiles

    o   Each vendor has a public profile showing their offerings, ratings, and contact info.

5. Order & Contact Mechanism

    o   Students can either place an order directly or contact the vendor via phone/WhatsApp.

    o   Simple cart/checkout for future iterations.

6. Payments (Phase 1: Manual, Phase 2: Digital)

    o   Phase 1: Students pay vendors directly (cash or MOMO transfer).

    o   Phase 2: MOMO API/digital wallet integration for in-app transactions.

7. Reviews & Ratings

    o   Customers can leave feedback on vendors.

    o   Helps establish trust and visibility.

8. Admin Controls

    o   Approve/reject vendor registrations.

    o   Monitor reported listings or fraudulent activities.

    o   Generate simple reports on usage.

NON-FUNCTIONAL REQUIREMENTS

❖ **Usability** – Clean, simple UI optimized for students (mobile-first design).

❖ **Scalability** – Start with Legon campus, but the system should support multiple campuses.

❖ **Security** – Secure login, basic data protection, and safe handling of MOMO transactions.

❖ **Performance** – Fast search and browsing even with hundreds of listings.

❖ **Reliability** – Minimal downtime; fallback options if payment integration fails.

❖ **Maintainability** – Modular design for easy feature updates.

❖ **Accessibility** – Mobile responsiveness, low-data usage, and support for basic devices.

USE-CASE

Use cases describe how different types of users (actors) interact with the system to achieve their goals. They serve as a bridge between user needs and system functionalities, ensuring that the platform delivers value to its intended audience.

ACTORS	USE CASE	DESCRIPTION
Customer	Register/Login	Create an account or log in to access the platform.
Customer	Browse Listings	Search and filter products/services by category, price, or proximity.
Customer	View Vendor Profile	Access vendor details, offerings, and ratings.
Customer	Place Order / Contact Vendor	Initiate purchase request or contact vendor directly via phone/WhatsApp.
Customer	Make Payment (Phase 1)	Pay via cash or MOMO transfer outside the app.
Customer	Review & Rate Vendor	Leave feedback on product/service quality.
Vendor	Register as Vendor	Create a vendor account with business details.
Vendor	Create/Edit/Delete Listing	Manage product/service listings (add photos, descriptions, prices).
Vendor	View Customer Requests	Receive and respond to orders or inquiries.
Vendor	Track Reviews & Ratings	View customer feedback to improve services.
Admin	Approves Vendor Registration	Validate vendor authenticity before listings go live.
Admin	Monitor Listings	Detect/remove fraudulent or inappropriate content.

Admin	Handle Reports/Complaints	Manage reported issues from customers or vendors.
Admin	Generate Reports	Access usage data (number of vendors, listings, transactions).

SYSTEM ARCHITECTURE

CampusVendor is designed as a multi-tier architecture consisting of the frontend (client-facing layer), backend (application logic), database (data management), and external service integrations. This layered design ensures scalability, security, and flexibility for future growth.

FRONTEND (USER INTERFACE LAYER)

• Accessible via web application and mobile application.

• Provides intuitive dashboards for Vendors and administrators.

• Features include product/service search and filter, and Order interfaces.

BACKEND (APPLICATION LAYER)

• Powered by a web framework (e.g., Django, Node.js, or similar).

• Handles the business logic, authentication, role-based access control, and

communication between users and services.

DATABASE (DATA LAYER)

• Centralized relational database (e.g., MySQL/PostgreSQL) to store structured data

such as user accounts, product listings, and orders.

• Ensures data integrity, consistency, and security.

• Backup and recovery mechanisms will be implemented to avoid data loss.

ADMINISTRATION AND REGULATION ACCESS

• Admin panel for dispute resolution, report generation, and user management.

CONCLUSION & WAY FORWARD

CampusVendor is envisioned as a centralized digital marketplace tailored to the needs of students at the University of Ghana, Legon. By connecting student entrepreneurs with their peers in a structured, accessible, and reliable platform, it addresses the inefficiencies of word-of-mouth and fragmented marketing channels. For the MVP, payments will be handled outside the app (primarily via MOMO transfers or cash), keeping the system simple while still ensuring convenience for customers and visibility for vendors.

The immediate way forward involves:

❖ Team Review & Feedback – Sharing this initial concept with the development team for alignment and refinement.

❖ MVP Definition – Identifying the minimum features necessary for a pilot launch at Legon.

❖ System Design – Drafting ER diagrams, architecture, and workflows after consolidating team inputs.

❖ Pilot Rollout – Testing on campus with a small group of vendors and customers to validate usability.

❖ Scale-Up Strategy – Expanding features, refining payment workflows, and exploring in-app MOMO integration for future versions.

CampusVendor represents both a skill-building project for the team and a practical solution to a pressing campus need, laying the foundation for a scalable student-led digital ecosystem.