

Project Proposal: Nuka POS System

1. Project Title:

Nuka: A Smart POS System with ZRA Smart Invoicing Integration

2. Student Details:

Name: Adam Musakabantu Muyobo

Student ID: 202104060

Department: Computer Science

3. Project Supervisor:

Masizana

4. Project Overview:

Nuka is a **Point of Sale (POS) system** designed for **small businesses and enterprises** in Zambia. It aims to **simplify sales processing, ensure tax compliance, and eliminate double entry errors** by integrating with the **Zambia Revenue Authority (ZRA) Smart Invoicing API**. The system will be built using **Flutter (frontend) and Spring Boot (backend)**, ensuring **cross-platform compatibility** and scalability.

5. Problem Statement:

Many businesses in Zambia **struggle with unreliable POS systems, manual double entry, and compliance with ZRA tax regulations**. This results in **financial losses, incorrect tax returns, and operational inefficiencies**. Current systems are either too expensive or lack essential features such as **barcode scanning and seamless tax reporting**.

6. Proposed Solution:

Nuka will provide an **affordable, reliable, and user-friendly** POS system that integrates with the **ZRA Smart Invoicing API** to automate tax-compliant invoicing. Key features include:

- **Barcode scanning using a phone camera** for easy product identification.
- **Support for mobile money, bank transfers, and e-wallet payments.**
- **Automated sales tracking and reporting** to improve financial transparency.
- **Offline functionality with cloud syncing** for uninterrupted operations.
- **Customizable for small businesses and scalable for larger enterprises.**

7. Objectives:

- Develop a **robust and user-friendly POS system** with tax compliance features.
- **Eliminate manual double entry** by integrating with existing accounting tools.

- Ensure **cross-platform functionality** through Flutter and Spring Boot.
- Provide businesses with **real-time sales analytics** and financial reporting.
- Offer an **affordable solution** for SMEs and an **integrateable** version for large businesses.

8. Project Scope:

- **In-Scope:** POS development, ZRA Smart Invoicing integration, barcode scanning, multi-payment support, offline mode, reporting & analytics.
- **Out-of-Scope:** Advanced ERP features, international expansion, marketing strategies.

9. Expected Outcomes:

- A functional **POS system prototype** with real-time tax compliance.
- A system that **simplifies sales processes and reduces financial errors**.
- A scalable solution that can be **adopted commercially** and partially open-sourced for research.

10. Conclusion:

Nuka aims to **revolutionize sales processing** for businesses in Zambia by **providing a modern, tax-compliant, and scalable POS solution**. With its user-friendly approach and **seamless ZRA integration**, it has the potential to become a **game-changer in financial management for SMEs and large enterprises alike**.

11 Contact Information:

Email: 202104060@ub.ac.bw or muyoboadam@gmail.com

Phone: +26777558138