**CHINHOYI UNIVERSITY OF TECHNOLOGY**



**SCHOOL OF ENGINEERING SCIENCES AND TECHNOLOGY ICT AND ELECTRONICS DEPARTMENT**

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**LEVEL: 3.1**

**YEAR: 2023**

**PROGRAM: INFORMATION TECHNOLOGY PERIOD: AUGUST 2023 – AUGUST 2024**

**Introduction/Overview:**

This month August 2023 marked the initiation of my attachment at Zimbabwe Women Microfinance Bank, where I'm actively immersing myself in the vibrant realm of information technology. Being a student of Information Technology at Chinhoyi University of Technology, this attachment serves as a pivotal opportunity to translate theoretical knowledge into practical applications. The central focuses for the month were to familiarize with the Banking system used with the bank, Leaning the support techniques and the initiation of a Loan Management System project.

**Pertinent Responsibilities and Activities:**

**Familiarization Week:**

Upon joining Zimbabwe Women Microfinance Bank, the initial week was dedicated to an all-encompassing orientation program. This encompassed acquainting me with the bank's structure, key personnel, and grasping the overall intricacies of its operations. The orientation also entailed a comprehensive overview of the existing systems and technologies employed by the bank.

**System Familiarity Sessions:**

Subsequently, a substantial portion of the month was devoted to in-depth training sessions on the existing systems within the bank. This was imperative to comprehend the prevailing workflow and pinpoint areas where seamless integration of the Loan Management System could be achieved. The training sessions also offered a valuable opportunity to engage with the IT team, gaining insights into their methodologies and best practices.

**Proposal Crafting and Technology Stack Selection:**

Following the orientation and system training, there was a proposal for the development of the Loan Management System using C# but the idea was then shifted when one of the interns proposed using a Python-centric stack. The choice of Python was propelled by its adaptability, readability, and robust library support. Additionally, opting for a web-based application ensures accessibility and ease of use for diverse stakeholders within the bank.

**Commencement of Development and System familiarization:**

Upon the green light for the proposed stack, the development phase kicked off by establishing the development environment, outlining the project scope, and crafting a meticulous project plan. The initial weeks were devoted to devising the system architecture and database schema, ensuring a resilient foundation for subsequent development. We where taught to create other users in the system and the active directory .

**User Interface Design:**

Simultaneously with system architecture design, I actively collaborated in the initiation of frontend development. Utilizing modern web development frameworks, I played a pivotal role in conceptualizing and implementing ideas for the user interface of the Loan Management System. My focus was on instilling a sense of intuitiveness and user-friendliness, contributing ideas and skills to enhance the design.

**Backend Logic Implementation:**

In parallel, the backend development process unfolded to lay the foundation for the logic and functionality of the Loan Management System. Python's Django framework was utilized for its efficiency in managing data models, routing, and database interactions. Although I wasn't directly involved in the backend development phase, I seized this opportunity as a valuable lesson to enhance my understanding and learning in this domain.

**Integration Harmony Testing:**

As the development progressed, regular integration testing sessions were conducted to ensure seamless communication between frontend and backend components. This iterative testing process aimed to detect and rectify any inconsistencies or issues in the early stages of development.

**Encountered Challenges:**

While the development process unfolded smoothly, a few challenges emerged during the month. One noteworthy hurdle was the integration of the Loan Management System with the existing infrastructure. Ensuring compatibility and a smooth transition between the new system and the bank's legacy systems demanded meticulous consideration and additional testing efforts.

**Reflective Analysis:**

The challenges encountered during the month contributed to valuable learning experiences. Addressing the integration issues prompted a deeper understanding of the importance of system compatibility and the intricacies of working with existing frameworks. The analysis also underscored the significance of effective communication and collaboration with the bank's IT team to streamline the integration process.

**Conclusive Remarks:**

In conclusion, the past month has been a productive and enlightening period of attachment at Zimbabwe Women Microfinance Bank. The journey commenced with orientation and system training, culminating in the proposal and selection of a Python-based stack for the development of the Loan Management System. The ensuing weeks were dedicated to actual development, encompassing both frontend and backend components. Challenges were encountered, particularly in the integration phase, but each hurdle served as a learning opportunity.

Looking forward, the upcoming months will center around refining the system, conducting thorough testing, and collaborating closely with the bank's IT team for a successful implementation. The attachment at Zimbabwe Women Microfinance Bank continues to be a gratifying experience, offering insights into the practical aspects of IT project development and reinforcing the importance of adaptability and problem-solving skills in a professional setting.

# Summary

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| **Week** | **Activity** | **Detailed** |
| **Week 1:** | *Orientation at Zimbabwe Women Microfinance Bank:* | Familiarization with the bank's mission, values, and organizational framework. Providing overviews of crucial departments, teams, and their functions within the organization. Insightful exploration of the current technological environment employed by the bank. |
|  | *Familiarization with the Bank's Structure and Systems:* | Thorough examination of the hierarchical arrangement and lines of reporting.  Familiarization with the diverse systems and technologies presently employed.  Building connections with essential personnel and gaining a comprehension of their roles within the organization |
| **Week 2:** | *Intensive Training on Existing Bank Systems:* | Detailed training sessions encompassing the functionalities of the existing systems within the bank.  Practical engagement with a variety of software tools employed in daily operational tasks.  Conversations with members of the IT team to acquire a deeper understanding of their work processes and methodologies. |
|  | *Proposal for Loan Management System Development:* | Recognition of the necessity for a Loan Management System prompted by identified gaps.  Exploration of potential technologies and frameworks suitable for the project through research.  Creation of a comprehensive proposal delineating the scope and advantages of the system. |
| **Week 3:** | *Kick-off of Loan Management System Development:* | Establishment of the development environment for the new system.  In-depth consultations with stakeholders to solidify project requirements.  Formulation of a project plan delineating timelines and key milestones. |
|  | *System Architecture and Database Schema Design:* | Architectural planning to ensure a scalable and maintainable system.  Designing the database schema to efficiently store and retrieve relevant loan data.  Iterative discussions with the development team to refine the initial design. |
|  | *Frontend Development Initiation:* | Selection of modern web development frameworks for the frontend.  Initial design wireframes to visualize the user interface.  Coding of the frontend components, emphasizing a user-friendly design. |
|  | *Backend Development Initiation:* | Utilization of the Django framework for backend development.  Implementation of core functionalities such as loan application processing.  Ongoing collaboration with the frontend team to ensure seamless integration. |
| **Week 4:** | *Continued Frontend and Backend Development:* | Iterative refinement of both frontend and backend components through the development process.  Frequent code reviews and joint problem-solving sessions.  Ongoing testing to promptly identify and address issues throughout the development cycle. |
|  | *Integration Testing for Seamless System Communication:* | Comprehensive testing to verify seamless communication between the frontend and backend.  Recognition of any inconsistencies or glitches in the integration process.  Collaborative endeavors to promptly address and resolve integration issues. |
|  | *Identification and Resolution of Integration Issues:* | Thorough examination of challenges faced in the integration phase. Cooperative troubleshooting with the IT team to resolve compatibility issues. Implementation of solutions to guarantee a smooth transition between the new and existing systems. |