COLLEGE OF BUSINESS EDUCATION

DAR ES SALAAM CAMPUS

FIELD PRACTICAL TRAINING.

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DEPARTMENT NAME: INFORMATION TECHNOLOGY

PROGRAMME: BACHELOR OF INFORMATION TECHNOLOGY

REGISTRATION NUMBER: 03.0775.01.01.2023

COOPERATION: NINAE INVESTMENT.

FIELD SUPERVISOR NAME: DANIEL JONAS.

ACADEMIC YEAR: 2023-2024

FIELD SPAN: 22 JULY 2023 TO 6 SEPTEMBER

ACKNOWLDGEMENT

I would like to extend my sincere gratitude to everyone who contributed to making my internship experience at Ninae Investment a valuable learning journey.

Firstly, I would like to thank Ninae Investment's management for granting me the opportunity to join the team and for providing a supportive learning environment. I am particularly grateful DANIEL JONAS, my supervisor in the IT department, for their patience, guidance, and mentorship throughout my attachment. Your expertise and insights have greatly contributed to my practical understanding of IT in the financial sector.

I would also like to express my appreciation to the entire IT team for their cooperation and willingness to assist me whenever I faced challenges. The knowledge and skills I gained from each of you have been instrumental in shaping my experience and skills in IT.

Finally, I would like to thank for facilitating my placement with Ninae Investment, enabling me to bridge theoretical knowledge with hands-on practice. This field attachment has significantly enhanced my professional and technical skills, and I am deeply grateful for the opportunity.

Thank you all for making this experience memorable and impactful.

ABSTRACT

This field report presents an overview of the internship experience of an IT student at Ninae Investment, a loan and financial services company located in Mbezi Malamba, Dar es Salaam. The report details the practical roles and responsibilities undertaken in the IT department, including system support, network maintenance, database management, and data security practices. The internship provided the student with hands-on exposure to IT operations within a financial institution, emphasizing the importance of data protection, troubleshooting, and customer support. Key challenges encountered included network downtime, compliance with data security protocols, and the technical demands of troubleshooting complex IT issues.

The internship allowed the student to gain practical skills essential to IT support and management in a real-world financial environment. The report concludes with recommendations to enhance future internship experiences, including structured training on advanced IT support and cybersecurity practices. This experience has been crucial in preparing the student for a career in IT by bridging academic knowledge with practical application in the financial sector.

DECLARATION

GODWIN ELIA ALDO. I declare that, this paper is my own work and has not been presented to any other institution of similar or any other professional award. Based on the facts and findings I encountered during the time of learning and observing. Hence, making it the original copy prepared.

Signature……………………………

GODWIN ELIA ALDO:

Contents

LIST OF ABBREVIATION

ICT   -   Information and Communication Technology

IT   -   Information Technology

CEO   -   Chief Executive Officer

HR   -   Human Resources

VPN   -   Virtual Private Network

DBMS   -   Database Management System

LAN   -   Local Area Network

ISP   -   Internet Service Provider

API   -   Application Programming Interface

SQL   -   Structured Query Language

OS   -   Operating System

IP   =   Internet Protocol

CHAPTER ONE:

1:1: Introduction.

This report explores the field attachment experience of an IT student at Ninae Investment, a financial services company specializing in providing loans to the community in Mbezi Malamba, Dar es Salaam. With the growing role of technology in the financial sector, Ninae Investment's IT department plays a critical role in ensuring efficient operations, secure data handling, and reliable customer service. This chapter provides a foundational understanding of Ninae Investment's history, organizational structure, and the specific roles and activities of the IT department, which served as the focus of the student's internship.

1:2: Historical Background.

Ninae Investment was established with the primary objective of providing accessible and reliable loan services to individuals and businesses within Dar es Salaam. The company has grown to become a trusted financial institution in the area, focusing on client satisfaction and ethical practices in the financial services industry. Over the years, Ninae Investment has integrated technology to enhance its operations, which has led to the development of a dedicated IT department responsible for maintaining the company's technological infrastructure.

1:2:1: MISSION AND VISION

- **Vision**

To become a leading provider of accessible and sustainable financial solutions in Tanzania, empowering individuals and businesses to achieve their financial goals.

- **Mission**

To deliver reliable, ethical, and customer-focused financial services that contribute to economic growth by leveraging innovation and technology.
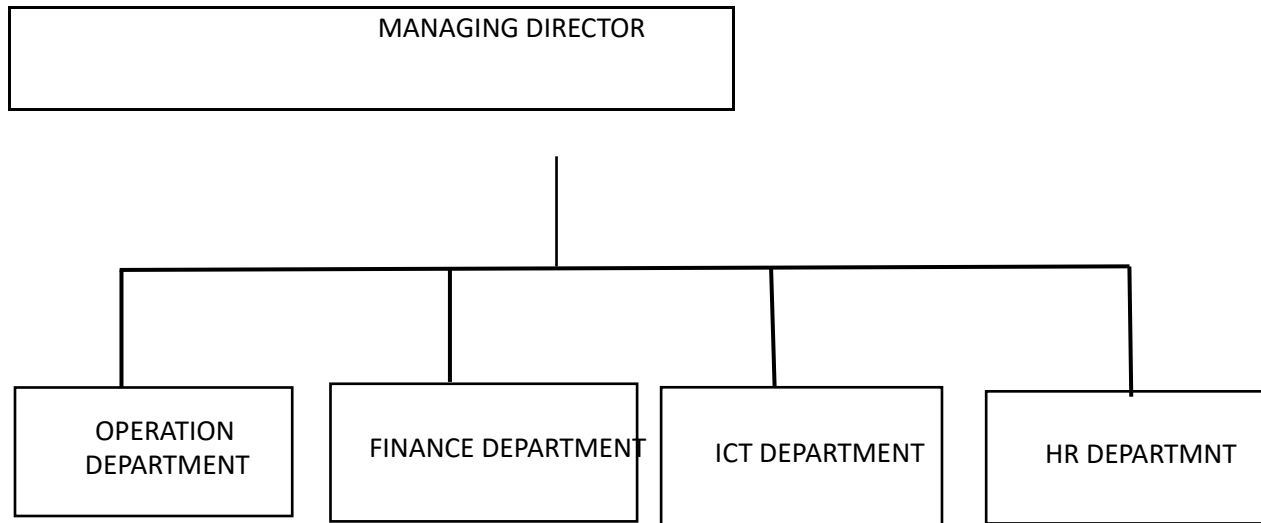
1:3: Organization structure of NINAE INVESTMENT.

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                    │       MANAGING DIRECTOR         │
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FIGURE 1 CHAPTER ONE.
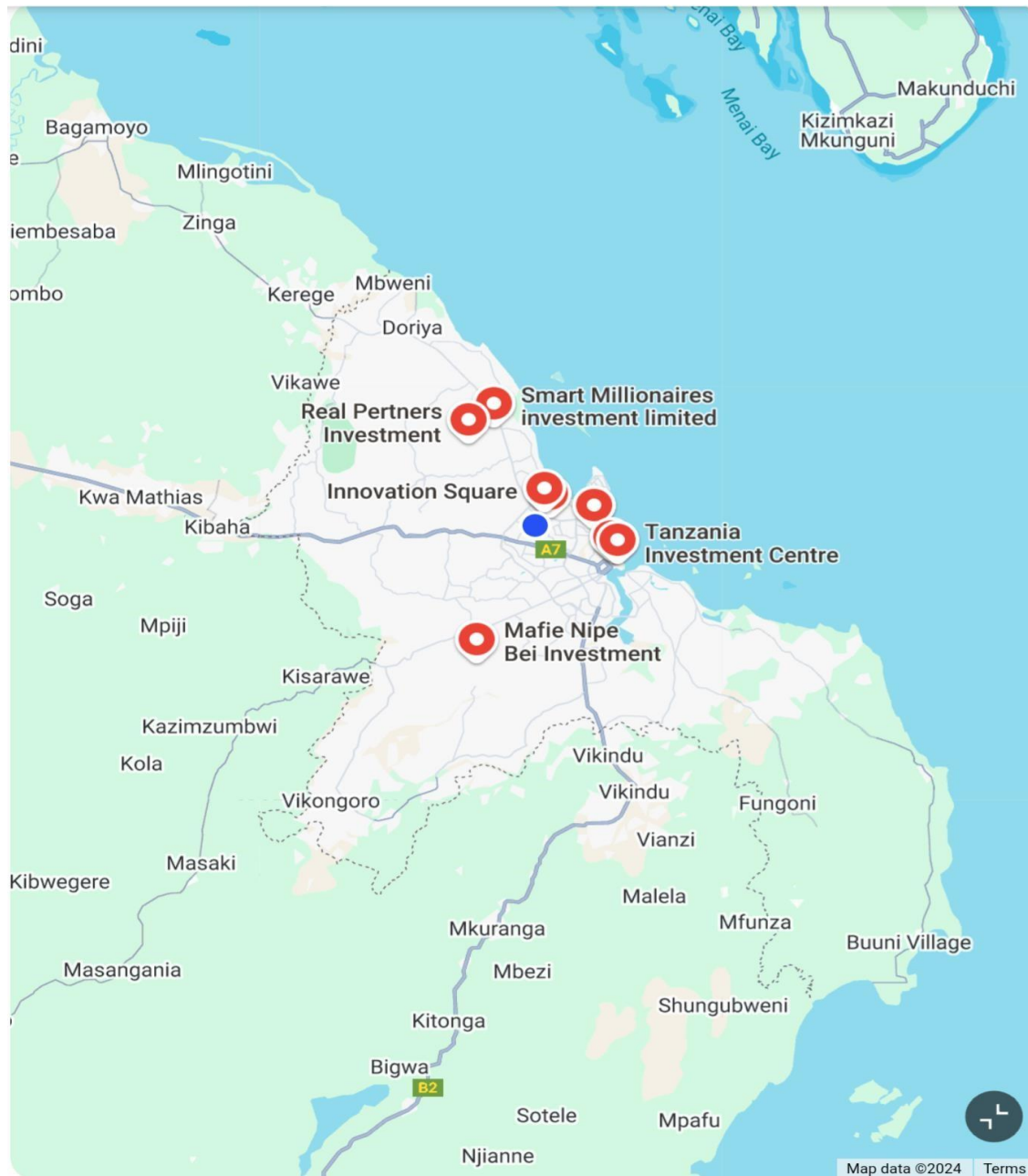
MAP OF NINAE INVESTMENT

FIGURE 2 CHAPTER ONE.

1.4: Roles and Activities of the ICT Department.

The ICT department at Ninae Investment plays an integral role in supporting the technological needs of the company. Its key responsibilities include:

- **Network Maintenance:** Ensuring stable and secure internet connectivity, which is essential for the seamless operation of all departments.

- **System Support and Troubleshooting:** Providing technical assistance to staff to resolve hardware and software issues, thereby minimizing downtime.

- **Database Management:** Overseeing the database for customer information, loan records, and other critical data, ensuring accuracy, security, and proper backups.

- **Cybersecurity and Data Protection:** Implementing security measures to protect sensitive data, including encryption and access control, to maintain confidentiality and prevent unauthorized access.

- **Software Management:** Installing and updating software used in daily operations, including loan management software and data analysis tools, to ensure efficiency and compliance.

- **Technical Training and Support:** Conducting training sessions for employees on new software or IT procedures, helping them understand basic troubleshooting and security practices.

CHAPTER TWO:

2:1: Activities performed and focus of the department.

The ICT Department at Ninae Investment plays a central role in supporting the company's technological operations, ensuring secure and efficient financial services. Its main focus areas include network support, cybersecurity, system troubleshooting, and data management, all of which are essential in a financial institution dealing with sensitive client information. These activities support other departments and enable Ninae Investment to meet its service and operational goals securely and efficiently.

2:2: Activities and duties performed by the student:

2:2:1: The following are activities performed in the organization; These are..

1. **Preparation of Ethernet cables, (Network cables):**

   In making the Ethernet cable their different materials can be used which are, UTP solid cable, RJ45 which is crimp cable connector for cat.6, RJ45 crimping tool which is used as wire cutter, and also tester for testing that it works. Also, ethernet cable is used to connect devices such as PCs, routers, and switches within a local area network

2. **System Troubleshooting and Support.**

The student assisted in troubleshooting and resolving hardware and software issues encountered by staff members. This involved diagnosing common problems such as connectivity issues, software malfunctions, and printer failures. The student also handled ticketing for reported issues, ensuring each case was logged, addressed, and closed properly.

3.Network Maintenance and Configuration.

Ensuring a reliable and secure network is vital in a financial setting. The student participated in network monitoring tasks, learning to identify and resolve connectivity issues. They were involved in configuring routers and access points and gained experience in basic network security protocols, including firewall settings and access control management.

4. **Printer connection.**

   During my practical training I was learned how to connect printers with computers to make sure that the users can print their different documents. There is different type of printer

which is local printer or shared printer, this is type of printer in which all the the computers of the users within the office can use only one printer to print their document, and this can be connected by using one computer and then other users can use the name of this computer to print their document in the same printer. And also there is network or wireless printer, this's is the type of printer which print automatically by using its IP address, this IP address can be assigned in all the computers within the office which want to use this printer, so after assign or putting the IP address of this printer into your computer you can print any of your document.

4. Network troubleshooting and maintenance:

It was done to ensure users can access internet. This is also one of the duties I was performed at organization, this was also very important task I performed because without the access of internet to the users in the organization anything cannot be done, here I was done this by helping the user to get access to Internet.

5. Installation of window:

This it was done by using window setup, window setup is the program that installs windows or upgrades existing window installation

There is difference ways can be used to install window in your computer. Example you can install windows by using bootable USB driver which was created by using refuse application

NB: In the past, most Microsoft windows was installed by using Disk, CD or DVD.ROM, or Floppy disk while now many people we use bootable USB driver to install window in our computers. Thus, for my side I was appreciated this way (bootable USB driver) because it was a simplest way to me

6. Creation of bootable USB driver:

During my practical training I was learned how to create bootable USB driver. This is one among of usefully way of window installation in the computers, and during this process refuse application were used, although there is others application which can be used to create bootable USB driver. Example powerISO

There are lots of uses for a bootable USB driver and the most important is, booting the computer if it will no longer start itself, because of either virus, partition problems, defective hard drive or serious system failure.

7. Router troubleshooting:

According to me, I was defined router as, is device that connect two or more subnetwork. The most important uses of router within the network are,. To receive and send data on computer networks. Sometimes routers are confused with network hubs, modems, or network switches. Hence IN (organization) the problem of network failure was occurred department were requested to solve this problem including me.the problem was solved through checking wires

and cables (tightening and cables replacement), why this? tis because loose or damaged cables can cause wide range of internet issues **8: Data Backup and Recovery**

One of the critical functions of the ICT Department was ensuring that data was regularly backed up to prevent data loss. The student assisted with the data backup procedures, learning how to schedule backups, verify their integrity, and perform data recovery processes. They also participated in testing recovery scenarios to ensure readiness in case of data loss.

9: Database Management and Data Entry Accuracy

The student gained hands-on experience in database management, especially in updating and verifying customer loan records. This involved data entry accuracy checks, where the student learned the importance of meticulous attention to detail. They also assisted in organizing and categorizing records within the database, which was crucial for compliance with data protection protocols.

10: Software Installation and Updates.

During the attachment, the student assisted in installing essential software, ensuring all systems were equipped with necessary tools for efficient operation. Additionally, they learned how to manage software updates, including scheduling updates at non-peak hours to avoid disruptions and confirming system compatibility before installations.

11: Cybersecurity Protocols and Data Protection

Given the sensitivity of financial data, cybersecurity was a significant focus in the student's duties. The student gained an understanding of security protocols, including data encryption, password management, and access restrictions. They were involved in conducting basic security checks on workstations to ensure compliance with the company's data protection policies.

12: User Training and Technical Support.

The student also provided user support to employees, helping them with basic IT issues such as setting up new accounts, password resets, and software navigation. They conducted short sessions for staff members on security best practices, such as recognizing phishing emails, securing personal data, and understanding the importance of regular system updates.

13: Assistance with IT Documentation.

The student was involved in preparing and updating IT documentation, including equipment logs, inventory lists, and troubleshooting guidelines. This was essential for maintaining a record of technical assets and creating an organized resource that staff members could refer to for basic troubleshooting.

2:3: Work environment:

Environment is mostly of team work and friendly environment, during the period of practical training. I was assigned the work with my fellow students together with other workers who always used to train us what we were supposed to do at given department. In each department and section, I was placed, I was trained enough to make me understand clearly without problems. Since the environment was friendly, it made me to understand clearly without problem. Since the environment was friendly, it made me to be free to ask anything which was not well understood. When there are some things which I thought that were simple and suitable to be used in performing the tasks, I was requested to explain and the workers were very attentive and always cooperate with me.

The working environment during my field work was good. The environment helps me to gain experience and knowledge from people I worked with in the I.C.T department. They were highly cooperative and honestly.

Apart from that the environment was conducive because there was no noise, air pollution and transport were available for transporting workers. Therefore, I generally said that I enjoyed doing my Field Practical Training work at Ninae Investment.

2:4: THINGS I LEARNT FROM **at Ninae Investment**

1.   Technical Troubleshooting: I developed practical skills in diagnosing and resolving common hardware and software issues, enhancing my problem-solving abilities and understanding of technical workflows in a real-world environment.

2.   Network Management: I gained experience in network setup and maintenance, including configuring routers, monitoring network traffic, and implementing security protocols like firewalls and VPNs.

3.   Data Backup and Recovery: I learned the importance of regular data backups to prevent loss and was trained in data recovery techniques, ensuring business continuity in case of system failure.

4.   Cybersecurity Practices: Working in a financial setting, I learned essential cybersecurity practices, including data encryption, password management, and recognizing potential security threats, which are critical in protecting sensitive information.

5.   Database Management: I became familiar with database management tasks, such as data entry verification and updating client records, which taught me the importance of accuracy and attention to detail in handling financial data.

6.   User Support and Communication: I provided technical support to staff, which helped improve my communication skills by learning how to explain IT concepts and solutions to non-technical team members.

7.   Importance of IT Documentation: I learned how to create and update IT documentation, such as troubleshooting guides and equipment logs, which aids in keeping organized records and supporting team efficiency.

8.   Project Management Skills: Balancing multiple tasks, like troubleshooting, data management, and documentation, taught me time management and prioritization skills, essential for effectively handling responsibilities in a professional setting.

2:5: Problem faced, within the organization:

Despite all these achievements and support I got at at Ninae Investment also I have faced some challenges during my fieldwork but I have managed to archive my mission, I understand that every duty in this world has some challenges. The followings are some of challenges which I faced during my practical training at at Ninae Investment.

Network Downtime: Frequent network issues disrupted operations, especially during peak hours. This affected employee productivity and delayed customer service processes.

Limited IT Resources: The ICT department had limited resources, such as outdated hardware and software. This restricted the efficiency of IT operations, making certain tasks, like data processing, slower and more challenging.

Data Security Concerns: Managing data security in a financial institution is critical, but there were challenges in consistently maintaining data protection protocols, especially with the increasing amount of sensitive client data.

System Compatibility Issues: Some software applications used in various departments were incompatible with updated systems, causing issues like software crashes, slower processing, and the need for frequent troubleshooting.

Communication Gaps Between Departments: Miscommunication between the IT and other departments led to misunderstandings regarding the nature and urgency of technical issues. This sometimes resulted in delays in problem resolution.

High Dependence on Manual Processes: A few processes, such as data entry and report generation, were still done manually, which increased the risk of human error and consumed a significant amount of time.

Limited Training for Staff on IT Systems: Many staff members had minimal IT training, making them reliant on the IT department for basic troubleshooting. This increased the workload of the IT team and delayed the resolution of minor issues.

Lack of Regular Maintenance Schedules: The absence of structured maintenance schedules for IT equipment led to unexpected breakdowns, affecting workflow continuity and increasing repair costs.

2:5 possible solutions to the faced problems:

Despite the challenges I faced at Ninae Investment but I have managed to complete my field work at the right time, either the knowledge I got from field is very important in my studies and my life, due to that reasons I would to take this time to mention some of the solution which may be taken by leaders in Ninae Investment,

1.   Reduce Network Downtime: Implement network redundancy by adding backup internet connections or setting up a secondary network. This would minimize downtime by allowing seamless switching if the primary connection fails. Additionally, regular monitoring tools should be used to detect and address network issues proactively.

2.   Upgrade IT Resources: Allocate a budget for upgrading outdated hardware and software. Investing in updated systems would increase operational efficiency, reduce the need for frequent troubleshooting, and support modern applications that the organization may need.

3.Strengthen Data Security Protocols: Establish robust data security protocols by implementing multi-factor authentication, regular security audits, and encrypted data storage. Providing training on data protection practices for all staff would also help maintain data security and compliance.

4. Ensure System Compatibility: Conduct a compatibility assessment of existing systems and applications, and implement software solutions that are compatible across departments. Where upgrades are necessary, roll them out in phases to reduce disruptions and ensure each department can use systems effectively.

5. Improve Communication Between Departments: Set up regular IT meetings with department representatives to better understand each department's needs and to clarify any technical challenges. A shared issue-tracking system could help staff report IT problems efficiently, with IT able to prioritize based on urgency.

6. Automate Manual Processes: Introduce automation tools for repetitive tasks like data entry and report generation to reduce human error and save time. Training staff on using these tools would streamline operations and free up their time for more critical tasks.

7. Provide IT Training for Staff: Offer basic IT training sessions to empower staff to handle minor troubleshooting. This would reduce dependence on the IT team for simple issues, allowing IT staff to focus on complex technical problems.

8. Establish Regular Maintenance Schedules: Develop a maintenance schedule for IT equipment to ensure regular updates, cleaning, and repairs. Preventative maintenance reduces unexpected breakdowns and extends the lifespan of IT assets, saving costs over time.

2:6, Expectations and the result of the attachment.

Expectations Before the Attachment

1. Skill Development: Gain hands-on experience in IT support, including troubleshooting, network maintenance, and data management.

2. Understanding of IT in Financial Services: Learn how IT supports financial operations, especially in areas like data security, system support, and regulatory compliance.

3. Professional Growth: Develop communication and teamwork skills by working with different departments and assisting in resolving their IT issues.

4. Exposure to Real-World IT Challenges: Experience the challenges faced by IT departments in a financial organization, such as network security, data privacy, and system integration.

5. Mentorship and Guidance: Receive guidance from experienced IT professionals to enhance my understanding of the industry and expand my technical knowledge.

6. Learn Practical Cybersecurity Measures: Understand practical measures for data protection and cybersecurity protocols used in the finance sector.

Results Achieved from the Attachment

1.   Enhanced Technical Skills: The attachment provided hands-on experience in troubleshooting, network configuration, software updates, and data backups. These tasks helped me develop problem-solving skills and improve my technical knowledge.

2.   Understanding of IT's Role in Finance: I gained insight into how IT supports core financial operations, particularly in terms of data protection, transaction processing, and customer service. This experience reinforced the importance of reliable and secure IT infrastructure in finance.

3.   Improved Communication Skills: Interacting with non-technical staff improved my ability to explain IT concepts in simple terms, which helped build effective working relationships and enhanced my communication skills.

4.   Experience with Real IT Challenges: Working within the ICT Department exposed me to realworld challenges such as system downtimes, security compliance, and resource limitations. Overcoming these challenges has prepared me for similar situations in future roles.

5.   Valuable Mentorship: I received valuable mentorship from experienced team members, who provided guidance on best practices, troubleshooting techniques, and professional growth, which greatly enhanced my learning experience.

6.   Practical Knowledge in Cybersecurity: I gained practical knowledge in cybersecurity measures, such as data encryption, access control, and secure password management, which are essential for IT roles in financial services.

CHAPTER THREE:

3.1 Conclusion:

The practical training should remain to be essential course to all levels of education starting with certificate, diploma and bachelors at COLLAGE OF BUSNESS EDUCATION(CBE). It is worthy to say so because the practical training adds experience and stream the knowledge to the students. Therefore, COLLAGE OF BUSNESS EDUCATION(CBE). should ensure that this program is progressive.

The field attachment experience at Ninae Investment provided invaluable practical exposure in the field of Information Technology within a financial services environment. Through hands-on involvement in the ICT Department, the student gained extensive skills in system troubleshooting, network maintenance, data management, and cybersecurity. Each duty, from supporting network configurations to conducting user training sessions, reinforced the importance of IT in supporting business continuity and data security, especially in a financial institution handling sensitive client information.

The attachment period was also an opportunity for the student to understand the demands and challenges faced by IT departments, such as network downtime, data security compliance, and the technical complexity of certain tasks. Overcoming these challenges not only enhanced the student's technical capabilities but also improved problem-solving and communication skills essential in future IT roles. Overall, this experience successfully bridged the gap between academic knowledge and real-world application, providing the student with a strong foundation for a career in IT.

The tasks performed during the practical training revealed for the COLLAGE OF BUSNESS EDUCATION(CBE). students to diversity their skills in order to meet the challenges of the highly labor market, so the students need to use their skills to do better on what they have been assigned.

Also, there is a need for students to know that practical training depends on their efforts and ability to use theories to solve practical problems.

The institute should play a role of making sure that the student are attached to the organization which enable them to compare theories and practical in the organization together with supervisor to visit the student at the organization.

As practical training is a part of learning and gaining more skills, it is important and compulsory to be conducting.

Lastly, practical training builds confidence and good understanding to students in various fields. For instance, for the time I spent. I was able to learn many things such as information technology, human resource management, and recording financial statements. Also gained Experience of working with people from different department.

3:1: RECOMMENDATION:

The following are the recommendations concerning the report: -

1. **Recommendation to the COLLAGE OF BUSNESS EDUCATION(CBE).**
   Practical training is very important to be conducted by the student of CBE because it helps to increase knowledge and gain experience on how the work should be done practically and not theoretically.

   - The institute should make sure that the supervisors visit to the organizations where students do their practical training this will add the credibility of the institute.

   - The institute should make sure that the things which are not taught in theory are involved in the curriculum.

   - Also, the institute should ensure that they establish good relationship with different organization which operate in business sector and other sector, so as to enable students get practical training opportunities in those organizations.

2. **Recommendation to the student:**

   - The student of CBE should be serious when they are in the practical training because it helps them to increase knowledge and gain experience on how the work is being performing.

   - The student should have discipline and good behavior when they are at field because the two are the main tools when you're at practical training at any organization.

   - Also, the student should be obedient to the institute and follow all instructions which are given before going to start the field for example: Give the correct contact information of the organization they are going to do practical training, region and telephone number. This will help the supervisor to reach them for assessment.

3. **Recommendation to the organization**:
   To further enhance the effectiveness of internships in the ICT Department, the following recommendations are proposed:

   1. Structured Training Program: A more structured training program for interns that covers essential IT concepts relevant to financial services would be beneficial.

Including modules on cybersecurity, data protection laws, and advanced troubleshooting techniques would allow interns to be better prepared for department-specific tasks.

2.   Regular Feedback and Mentorship: Instituting regular feedback sessions with assigned mentors would help interns understand their progress and identify areas for improvement. This approach would also foster a learning environment where interns feel supported and can openly discuss challenges.

3.   Exposure to Advanced IT Systems: Providing interns with access to more advanced IT systems and allowing them to shadow senior staff during complex tasks would help them gain deeper insights into the field and enhance their technical knowledge.

4.   Data Security and Compliance Training: Given the importance of data security in financial services, offering specialized training on data protection laws and best practices would be highly beneficial. This could include practical exercises in handling sensitive information and recognizing cybersecurity threats.

5.   Project-Based Learning Opportunities: Assigning specific IT projects to interns would encourage them to apply their knowledge in a structured way, from planning through execution. Project-based learning could involve tasks like creating a troubleshooting guide, setting up a secure network, or developing basic IT support documentation.

6.   Enhanced IT Documentation: Improving the department's IT documentation, including guidelines for common troubleshooting scenarios and network management protocols, would provide interns with a valuable resource to reference during their tasks.

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