**A REPORT ON A THREE-MONTH FIELD ATTACHMENT**

**AT REVERE TECHNOLOGIES**

**NETWORKING AND CYBER SECURITY SECTION**

**FROM 14TH FEBRUARY 2022 TO 30TH APRIL 2022**

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**JOMO KENYATTA UNIVERSITY**

**SCHOOL OF HUMAN RESOURCE DEVELOPMENT**

**ABSTRACT**

**This report is a compilation of the twelve weeks industrial attachment I had at revere**

**Technologies,Networking and cybersecurity Section. It summarizes the work done during**

**this period, problems encountered and includes suggestions and recommendations on**

**how to counter the problems. It contains highlights of specific tasks performed, strong**

**and weak points of the attachment as compared to the curriculum. My assessor Mrs.**

**NZULWA requested the report on 26th March 2022.**

**DEDICATION**

**This report is dedicated to all students in JKUAT University taking Information and Technology studies.**

**ACKNOWLEDGEMENTS**

**I would like to thank God for the continuous grace He has shown me all through my**

**University Education and having seen me through the successful completion of my**

**attachment.**

**My sincere gratitude goes to my supervisor, Mrs.Nzulwa, for the valuable guidance he**

**has given me in the writing of this report. Also for assessing my progress during my**

**attachment period.**

**Thanks also to my Industry supervisors, Mr.Claude and Mr. sam for the assistance**

**and training offered.**

**My appreciation to my parents and siblings for their support and encouragement.**

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**CHAPTER 1**

**1.0 INTRODUCTION**

**At JKUAT University, School of Human resource development, department of**

**communication studies, an Industrial attachment is a core course in the department’s**

**curriculum. Upon completion of the second semester in third year, a student must go on**

**an attachment, which is a twelve-week examinable course. During this field attachment**

**one gets exposed to what they have learnt during their time in school at the workplace.**

**Asides from the hands-on knowledge one gets, they are also exposed to challenges, learn**

**how to deal with them and also how to mitigate them. Therefore one gets well prepared**

**of their future job market. The assessors also asses the student’s workplace performance**

**during the attachment period with the help of the internal supervisor to get to know what**

**one has learnt so far and what contribution they have made to the organization. The**

**school of Education- Moi University offers curriculum Instruction courses and boasts of**

**its Communication Technology section to foresee the success of their audio-visual**

**programmes.**

**1.2 SCOPE**

**This report highlights a summary of work done, problems encountered, suggestions and**

**recommendations on how to counter the problems.**

**1.3REVERE TECHNOLOGIES COMPANY FOR CYBER SECURITY**

**1.3.1 HISTORICAL BACKGROUND**

**This company was started in 2016 by Ajay and Joy in the year 2016 it was located in westlands but now its in parklands its main objectives is to protect the world from cyber attacks hence a cyber security company**

**1.3.2 VISION**

**The revere technologies company vision is to be recognized as respected cybersecurity firm highly valued by its customers ,employees and partners and to ultimately spread its reputation across africa.**

**1.3.3 MISSION**

**To protect clients company database from cyber attacks from hackers across the world**

**1.3.4 CORE VALUES**

**The following are the company’s core values**

**Promote, create and nurture competence, honesty and moral uprightness in**

**Networking and cyber security**

**Foster teamwork, creativity, effective communication tolerance, perseverance and**

**culture of peace through cyber security company.**

**Promote excellence, openness, and broad consultation and consensus building,**

**efficiency and effectiveness.**

**Initiate and promote employment to cyber security**

**Promote integrity to clients hence trust us with their databases.**

**1.4 ORGANISATIONAL STRUCTURE**

**Figure 1.1**

**1.5 DEPARTMENTS OF THE SCHOOL OF BUSINESS**

**i. Fortinet**

**ii. Cyber Security**

**iii. Networking**

**iv. Vmware and kali linux**

**v. Cyber ark**

**1.6 CURRICULUM INSTRUCTION TAKEN**

**The CIEM department is concerned with use of medium such as Television, Radio,**

**PowerPoint presentation on computers and photographs to enhance learning to the**

**students. These audio visual aids activate more than one sensory channel. They help**

**improve the quality of teaching by making study material more interesting and**

**memorable to the learners through increasing the attention span and interest of the**

**learner. To achieve this, the department hosts COMTECH section at the administration**

**block, which is in charge of the audio/visual learning activities.**

**1.6.1 CORE FUNCTIONS OF THE NETWORKING AND CYBERSECURITY SECTION.**

**With businesses looking to secure their systems and information, demand for security specialists and the higher adoption of wireless and cloud-based solutions is increasing. So MIT have added two new specialisations to the Bachelor of Networking - cyber security and cloud networking. Demand for computer networking professionals to design, build, maintain, support and protect computer networks is growing fast, as more and more people and businesses conduct their day-today activities and work over computer networks**

**CHAPTER 2**

**2.O PERIOD OF ATTACHMENT**

**The attachment period lasted three months that begun on 14th February and ended on 30th**

**May 2022.I worked under an internal supervisor in the Cyber security and**

**recorded in the logbook the daily and weekly report on work carried out during the entire**

**period.**

**2.1 OBJECTIVES**

**The objectives of my field attachment were as follows:**

**To gain experience in my career of choice as a Cyber ark, area of specialization;**

**To get exposed to the kind of challenges expected to find in the industry and to**

**new technological tools.**

**To get the chance to put the knowledge gained at the university into practice.**

**To make contacts with prospective future employers.**

**To be well braced with the challenges that come with the career and learn ways of**

**dealing with the challenges or mitigating them.**

**To enhance the good relationship between future employers and the University so**

**that they may contribute positively in bringing up competitive students for the job**

**market.**

**To market the company at large as**

**reliable employees, innovative individuals who are aggressive and ready to**

**deliver at workplaces.**

**2.2 BENEFITS OF THE ATTACHMENT.**

**The attachment is aimed at creating a holistic being both theoretical and practically. I was**

**able to merge a bit of the theory from school with practicals; use of vm wares**

**and kali linux softwares to interact with computer hacks.**

**I got exposed to various networking equipments including the network systems. In addition I learnt part of what was not a major in my course.**

**To top it up I learnt how to interact with supervisors at different**

**levels and made an improvement in my inter-personal relationships at work place.**

**2.3 KEY RESPONSIBILITIES ASSIGNED**

**2.3.1 INTERNETWORK CONNECTIVITY**

**breaking up a massive network into a number of smaller ones—something called network segmentation. This concept is a lot like planning a new community or modernizing an existing one. More streets are added, complete with new intersections and traffic signals, plus post offices with official maps documenting all those street names and directions on how to get to each are built. You’ll need to effect new laws to keep order to it all and provide a police station to protect this nice new neighborhood as well. In a networking neighborhood environment, all of this is carried out using devices like routers, switches, and bridges**

**2.3.2 WINDOWING.**

**Ideally, data throughput happens quickly and efficiently. And as you can imagine, it would be painfully slow if the transmitting machine had to actually wait for an acknowledgment after sending each and every segment! The quantity of data segments, measured in bytes, that the transmitting machine is allowed to send without receiving an acknowledgment is called a window**

**2.3.3 INSTALLATION OF KALI LINUX OPERATING SYSTEM**

**Step 1 – Download Kali Linux ISO image. ...**

**Step 2 – Locate the downloaded file. ...**

**Step 3- Open VMWare Player. ...**

**Step 4 – Launch VMware Player – New Virtual Machine installation wizard. ...**

**Step 5- Welcome to the new Virtual Machine Wizard dialog box appears. ...**

**Step 6- Select installation media or source.**

**.**

**2.3.4 PROVISION OF PUBLIC ADRESS SYSTEM**

**I learnt how to set up a PA system using microphones, receivers, mixing console,**

**amplifiers and loud speakers during public lectures and conferences held in the**

**board rooms. Other equipment I got in contact with were the gooseneck microphones,**

**crossovers, cables, stands for speakers, plugs and adapters.**

**CHAPTER 3**

**3.0 EXPERIENCE**

**In the three-month attachment period i was able to learn new software used in Cyber security and equipments used. I learnt how to connect networking equipments together belonging to different layers both routers and switches.**

**3.1 SOCIAL EDUCATION**

**The Company’s environment includes both the clients and members of staff. Interacting**

**with both parties socially taught me how to relate well in a situation in cases of**

**the business.**

**3.2 METHODOLOGY**

**In order to achieve the objectives of my field attachment, I embarked on the following**

**methods of learning.**

**3.2.1 GUIDANCE**

**The supervisor could demonstrate how to use the equipment or connect cables and also**

**listening to previous radio programmes that had been recorded gave the feel of what was**

**expected at the end of every recording session. This method was also used to acquire**

**knowledge of the technical hitches to expect when setting up audio/visual equipment and**

**preparation on what to do whenever that happens.**

**3.2.2 OBSERVATION**

**This method was implored during the first week on attachment in order to see how**

**activities were run in the office and also during field operations like public lectures and**

**repetition of the same process later perfected the learnt skill.**

**3.2.3 EXPERIMENTAL LEARNING**

**The method involved planning and trying out various soft wares that were available in the**

**computers just to be well versed with the different soft wares performing similar tasks.**

**3.2.4 QUESTIONS**

**The method was used to obtain assistance when in difficulties in handling new equipment**

**such as the public address system and sound mixer. It led to reviewing of the work done**

**to ascertain accuracy.**

**3.2.5 RECOGNITION OF FLAWS**

**This method was used to express willingness to learn and it encouraged my supervisor to**

**impart more knowledge.**

**3.2.6 INTERVIEWING**

**The method helped in studying workers attitude towards work and factors influencing**

**organizational behavior.**

**3.2.7 INTERACTION**

**The method was put in practice to create interpersonal relationships at workplace and to**

**learn the channels of organizational communication and chains of command.**

**3.3 CHALLENGES.**

**SERVICING OF MACHINES.**

**Some of the machines are not frequently serviced as a maintenance requirement**

**procedure, posing a risk of breakdown or in-efficiency in time of need.**

**3.4 ACHIEVEMENTS**

**Implemented and maintained small business LAN, NAS, and workstations.**

**Responsibilities.**

**Installation, maintenance, and troubleshooting applications and hardware.**

**Data recovery and data backup**

**.**

**3.5 KNOWLEDGE AND SKILLS ACQUIRED.**

* **Communication**
* **Active listening**
* **Social skills**
* **Public speaking skills**
* **Nonverbal communication**
* **Interpersonal skills**
* **Empathy**
* **Positivity**
* **Humor**
* **Focus**

**CHAPTER 4**

**4.0 CONCLUSION**

**The three-month attachment exposes students to a hands-on approach to the skills learnt**

**in the University and prepares them to the work environment. It is good way of practicing**

**and it nurtures one into a prepared individual when it comes to tackling challenges,**

**performing tasks and interacting with fellow employees. It is a good opportunity to test**

**one’s preparedness to undertake the demands of the chosen career and to shape them up.**

**Therefore every student should practice the attachment.**

**4.1 RECOMMENDATIONS**

**The Routers and Switches in Networking and cyber security department should frequently be serviced as**

**a preventive measure. This would ensure they don’t break down and they are in good**

**working condition whenever there is need to use them.**

**4.2 APPENDICES**

**DEFINATION OF TERMS**

**PHYSICAL LAYER**

**A hub is really a multiple port repeater. A repeater rcieves a digital signal, reamplifies or regenerate that signal and then forward out that signal to other ports without looking at any data.A hub acts the same thing across all the active ports:any digital signal received froma a segment on a hub port is regenerated.**

**DATA LINK LAYER**

**Data link layer provides the physical transmission of data and handles error notification, network topology , and flow control.This means data link layer ensures messages are delivered to the proper device on a LAN using hardware addresses and will translate messages from the network layer into bits.**

**NETWORK LAYER**

**The network layer or the layer 3 manages the addressing,tracks the location of devices on the network and determines the best way to move data, this means its upto the network layer to transport data that are not locally attached.Routers which are layer 3 are specified at this layer and provide the routing services within the internet work**

**ROUTERS**

**A device that belong to the network layer which enables addressing, and tracks location of devices on a network**

**MAINTANANCE**

**Routine check up given to the networking equipments as a preventive measure.**