Attachment: computer software assignment

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY (JKUAT) INDUSTRIAL ATTACHMENT REPORT TO BE SUBMITED FOR THE FULLFILMENT OF THE AWARD IN BACHELOR OF SCIENCE DEGREE IN INFORMATION TECHNOLOGY (BSCIT). BSCIT-016-0167/2007 MAY-JULY 2010. 1 DECLARATION This attachment report is my original work and it has not been submitted in any other institution of higher learning for examination. Signature .... Date................................. Name: Cheruiyot ken kipkoech

Signature from the supervisor: Signature .... Date................................. Name 2

ABSTRACT The purpose of writing this report is to give detailed information of the activities that I participated in during my attachment period at the Ministry of higher education Science and technology from 4th of May 2010 up to 18th of July 2010. This also gives information about the ministry, its location, and the institutions vision and mission statement. The objective f the attachment was to train, familiarize, and to gain the initial skills and experience with various computer skills and application of what I had learnt for the last four years hence to get enough experience in business and office environment which I have covered as part of my course. The report has a detailed description of the work I did as well as skills and experience I gained while on attachment in the ministry. I was attached in the ICT department and I was expected to work diligently and co-operatively with any other employee in the ministry.

Some of the activities I participated in include: 1. Testing equipment, 2. Installation of peripherals and Software, 3. Updating anti-virus software, 4.

Servicing and Maintenance of Computers, 5. Replacing faulty computer components 6. Helping officers in their daily applications, responding to their problems to the best of my knowledge. 7. Creating Administrative & user accounts and setting of users passwords All these enabled me to learn the practical side of Information Technology. Most of the data was collected through observation and questioning.

The employees were very co-operative and they gave me most of the information I needed to write this report. I also got information about the ministry on the Internet by visiting their website. 3 ACKNOWLEDGEMENT My great regards goes the IT Manager Mr. Abdul Karim K. Mohamed for accepting me to be attached in the company especially in the IT Support and Mentainance department, Also his assistant Mr. Abedi Munguti for ensuring that I get to learn the new technology involved in recording and their respective applications used to meet client needs and Organization needs at all times. Not forgeting IT support and Network Assistant Miss.

Linda Ogoti for ensuring I gain practical experience and skills in Network Troubleshooting and user support, and who always assisted me whenever necessary in my daily tasks hence the smooth running of my attachment. I also acknowledge the support I received from my fellow attachee's for their co-operation and support during my attachment period. Above all I do acknowledge the support I received from my dear parents may God bless them abundantly. And finally my great thanks goes to the entire Synovate Company for helping me to go through this attachment successfully and writing this report. 4

ORGANIZATION HISTORY Synovate Kenya (The Former Steadman Group) was started in the year 1996. It basically handles market research, social research and media monitoring for both clients in Kenya and Abroad. It's a branch which have been accepted as Africa's Headquaters for the wider synovate which is spread over 62 countries in the world. At the Niarobi's office, where I was attached media monitoring involves radio, print and TV monitoring of local and international stations whilst market and social research carry out research on various topics the current referendum standings and research on certain products in the market etc.

To handle this the company has equiped it's IT section to handle this information. The company has invested in enough computers(workstations) for each user in the different departments, this as been enhanced by a stable internet connection(by UUNET company as our ISP) and a global domain for communication with other stations. For media monitoring, TV and Radio recorders are in place to ensure recordings takes place every minute. The hardware is held together by easy to use and practical software applications which ensures that the carrying out of research is managed properly through applications like Adwatch, Cms, protrack, wavlab etc. ORGANIZATION CHART IT GROUP MANAGER IT Technical Support Manager Systems/Software Engineer Technical Syst. Analyst IT Support Assistant IT Studio/Library Assistant Software Developer Systems/Network Administrator INTERNS 6 SYSTEMS/SOFTWARE ENGINEER Key Areas To support the Group IT Manager in delivering a full range of high quality and cost effective information and communications Technology sevices including strategic advice, analysis,

support and development to appropriate stakeholders, both internal and external, in support of steadman and it's business objectives.

Tasks 1. Responsible for planning, processing and performing all jobs in an efficient manner with no assistance from supervisor. 2. Work closely with group IT Manager in regard with any issues in relation to systems/software development project. 3. In the absence of the IT Manager, report any major software development project issues to senior management team. 4. Assist the IT Manager in development of procedures/methodology with respect to software development. 5. Assist the IT Manager in the management of software designs, implementation, testing and documentation.

SYSTEMS/SOFTWARE DEVELOPMENT 1. Analyze design, cordinate and supervise the development of software systems to form 2. 3. 4. 5. 6. a basis for the solution of information processing problems. Analyze system specifications and translate system requirements to task specifications for junior programmers. Responsible for analysis of current programs including performance, diagnosis and troubleshooting of problem. Conduct system analysis and development, with limited support from proffessional staff, to keep our systems current with changing technology.

Provide feedback to analysis/usability issues concerning software specifications and implementation. Making presentations to customer or client audiences or professional. 7 GENERAL 1. Perform other duties as required by business needs or as asssigned by group IT Manager in relation to software development. 2. Mainttain positive client interactions. 3. Strong and effective interpersonal and communication skills and ability to interact

professionally with diverse group of clients and staff. 4. Responsible for communicating with engineers and manufacturer's technical support staff regarding programming needs and performance.

IT STUDIO/LIBRARY ASSISTANT Key Areas To support the hardware & support Manager in the provision of acomprehensive and efficient IT recording studio support service. Others includes studio/library support, Quality Assurance, Professional Development. Tasks 1. Communicate and liase with the support Manager regarding any issues in relation to IT recording studio library. 2. In the absence of the support Manager, report any major issues to the group IT Manager. 3. Respond to all requests from users for TV and Radio recording. 4. Monitor and ensure that all recordings are running. 5.

Ensure that all recording euipments have enough storage space for continous and uninterrupted recording. 6. Responding promptly and professionally to TV/Radio anomalies. 7. Ensure that all recordings software are fine tuned to their respective station frequency. 8. Interacts daily with users to answer inquiries, consult on problems and secure cooperation or approval on action to be taken. 9. Respond to diversified inquiries; handle all communication in a professional and friendly manner. 10. Provides support during standard working hours, providing professional , friendly call handling and routing; is available by phone during non working hours. 1. Provides training and and technical assistance to end users for audio/video related software applications. 8 12. Log support calls relating to audio and video recordings and maintain log records. 13. Assure the quality of the TV/Radio recording by listening and verifying that all stations frequency signals are transmitting clearly. 14. Identify training needs and report to support

manager. 15. Understand the applicability of new technologies as they become available. 16. Perform any other duties as assigned by the support Manager. 17. Confinements of assignment of duties. 9 SERVER SETUP AT THE SERVER ROOM FOR TV & RADIO RECORDING CPU 1

CPU 2 KVM SWITCH DISPLAY CPU 3 CPU 4 Workstation 1 Workstation 2 Workstation 3 Workstation 4 Workstation 5 CPU 1 10 COMPUTER CARE, MAINTANANCE, REPAIR AND NETWORK USE I practiced most of computer care, maintenance and repair , where most of the computers that need a lot of care, upgrading and maintenance . This is because these are the computers mostly used by the ministry officers for their daily routine, and research etc and most of the officers come with their own removable storage devices with information from various machines that can enhance the damage of some data in the machines for instance they may spread virus in machines.

Computers are essential for day to day work in the ministry so the computers have to be in good working conditions at all times. I worked with the ICT officers every time and during this time I learnt how to detect and repair common hardware and software problems. TROUBLESHOOTING Various tests were carried out on computers, printers and their components which were suspected to be faulty. Basically, faulty components were removed and tested on a different computer upon which it was determined if the device was faulty or not.

After troubleshooting, records of all faulty components were kept in preparation for repair or replacement. Some of the components tested

included the mice, keyboards, power supply units and floppy disk drives and hard disk drives. COMPUTER REPAIR AND UPGRADE Solving computer problems included scanning and disabling of viruses, updating the antivirus software, repair or replacement of faulty components and also upgrading of computers to improve their performance. Faulty components such as floppy disk drives, processor funs and Power Supply Unit (PSU) funs were repaired.

I installed Hard Disk Drives with higher memory capacities. I learnt and practiced computer assembling and disassembling procedures. 11 SOFTWARE AND OPERATING SYSTEM INSTALLATION I took part in software and operating system installation. As a legal requirement, the ministry used genuine software and operating systems e. g. WIN XP, WIN 2003 Server, WIN 2000 professional, WIN me, windows 2007 and Windows Vista which are mainly used by officers for their daily operations and for office applications, WIN 2003 server used in the server room etc.

This reduces the risk of infection by viruses and also corruption by pirated software. I was able to take part in the installation of Windows Operating systems and various Anti-virus software including Symantec Antivirus Kaspersky, MacAfee and Norton Antivirus. FORMATING NEW HARD DISKS Before installing Operating systems, the hard disk was scanned for errors and bad sectors, formatted and partitioned using a file system required by the operating system to be installed.

During their replacement of software's I learnt; 1. The procedure of partitioning and formatting a hard disk for instance I formatted using windows XP 2. How to install different operating systems on one hard disk i.

e. dual boot. 3. About operating systems 4. Installation of computer application software. 5. Repairing of operating system when fails to boot properly using emergency repair disk GENERAL COMPUTER MAINTENANCE AND CLEANING PRACTICES General care of computers is important to avoid the risk of breakdown.

Computers in Synovate Company mainly used an antivirus called Trend Micro officeScan which is installed in the server and every user at each work station connects to it via the network, this proved efficient although several other antiviruses were installed on private and company laptops due to mobility of some users going to field duties eg Avira antivirus, Avast antivirus and the Karspersky anti-virus software program that is upgraded frequently. The computers are also scanned for viruses frequently to make sure that no virus attack is experienced that my lead to damage of vast data.

I had to ensure all the computers and their components are cleaned frequently to keep them off dirt and dust that may cause malfunctioning for instance dust causes key sticking in keyboards and malfunctioning of the processor due to over heating. 12 Safety measures had to be observed to make sure no computer or any device is damaged in the maintenance and cleaning process. In all these, I observed the following: 1. All computers had to be switched off when being cleaned or dust being blown out. 2. Extra care had to be taken when blowing dust out of the Central Processing Unit to avoid damage of any component. 3. All liquid ontainers had to be tightly sealed to avoid spilling. 4. Cleaning agents had to be used in moderation. 5. A lot of care had to be taken when replacing the various components of the machines for instance the processor had to be placed with the zero insertion

force (ZIF) to avoid breaking the pins. 6. All the machines should have antivirus software installed and updated constantly to avoid virus, worm and Trojan infection. During computer care and maintenance practices, I learnt and applied various safety measures in assembly and disassembly of the devices in the system unit while testing, repairing or replacing them.

Such safety measures included the fact that: i. ii. iii. iv. v. vi. Handling each device or component with a lot of care because some of the components are delicate. The computer had to be switched off before disassembly. All devices had to be carefully and properly unscrewed. Disassembled devices are placed on a clean table. Power and data cables are unplugged slowly to avoid breaking of any pins. After assembling devices, all connections are counter checked before powering the computer. 13

NETWORK SETUP AND ADMINISTRATION Synovate Kenya has a server-based network of more than 300 computers, which connects almost all the computers in the Organization. Synovate has expanded their network using coaxial cable that enables faster transmission of data. Synovate uses star topology as its network topology. This is because; 1. It's easy to expand enabling the ministry to connect more machines to the network. 2. It enhances easy sharing of data, printer and the scanner. 3. With the help of the Technical assistant, I learnt many networking procedures and devices. 4.

I was also involved in creation of users' accounts on the mail server and lifting the settings to the 5. user's terminal to enable them access their email addresses over the ministry domain. 6. I learnt how the network operates and I observed how network resources are shared and accessed. All

resources and shared files were managed from the administrator's account as the officers used unique log on accounts to access the data in the machines. 7. The changes made in the network were recorded and the network performance was monitored to make sure the expansion had been successful. 8.

I learned how to setup, configure a small network and to configure other computers in the network whereby different roles were assigned. For example, there was a print server, which controlled access and use of the printer, and a file server, which controlled access and use of shared programs and files. 9. Apart from a few log on errors and loose cable connections, we never experienced a serious network failure. 14 OTHER TASKS CARRIED OUT 1. 2. 3. 4. Servicing keyboards, mouse& making sure all power supply are working. Network and hardware maintenance specifically in various Departments.

Creating of user accounts and administering their usage. Troubleshooting of networking problems e. g. non-functional network points, faulty cables. 5. Blowing of machines 6. Applying cooling paste to the heating processors . 7. Setting of machines hardware in various Departments. 8. Making sure that all the computers are well shut down and the offices are closed before leaving at 5: 00PM for security purposes. 9. Helping officers in some of the fields e. g. the Microsoft office packages and also helping them in the Internet usage for their researches. 10.

Setting up a video conferencing equipment to enable officer share a meeting from different conference rooms and locations CHALLENGES 1. Poor user

understanding as a result of new machine models and software's. 2. Most users were inpatient as they would have a lot of work hence they requested for any problem to be solved quickly. 3. Some users also wanted to know what was being done to their machines hence they wanted to learn as the problem was being solved. 4. Some users would relocate duties to the ICT which was not part of ICT support such as typing for them a document, printing a document for them etc. . Few working software were available. 6. Availability of few tools for use such as screw drivers. 7. Being unable to solve some issues such as internet interruption from the internet service providers, it took time before some of the users understood the problem. 8. Each task encountered posed different challenges even though you trouble shoot it the same way you did the last time you encountered it. For instance formatting a hard disk using the usual process succeeds yet if you format another machine some files might be skipped, the hard disk could ot be formatted hence you had to change some settings, the keyboard and mouse could be disabled and hence you had to format it from another machine. 15 STRENGTHS 1. Having video conferencing equipment within the ministry that enhances the discussion and seminars from different site since they can be easily presented on screen for everyone to see it. 2. Using of AP (public address) services that makes it possible and easy to communicate with the large population in the ministry. 3. The computers in the ministry are adequate in number for every officer in the ministry. 4.

Spacious offices for all departments in the ministry and conference room SUGGESTIONS The following are my suggestions to the ministry in order to make the program worthwhile and to make the best out of the internship

program. 1. Though the ministry has been welcoming enough I believe they should offer at least allowances to intern's students to motivate, feel appreciated more and also feel they belong or make part of the ministry community. 2. Interns in the IT department should be exposed to more of the vital work in the department to enable them sharpen their skills. 3.

The computers should be replaced after some time to improve the quality of production. 4. Make available enough software for user support. 5. Provide collective user training on various applications through meetings and seminars. 6. Provide more maintenance services of the software and hardware like machine blowing, disk cleanup. 7. Incorporate use of updated software. 8. The only solution provided for terminating viruses on a computer that was already disabled by a virus was formatting hence the department should provide more solutions like an up-to-date antivirus version or provide more protection from the server. 6 CONCLUSION My attachment in this organization was both a challenge and a great learning experience for me. It was a wonderful period. Sometimes I found myself faced with new tasks that I had to perform, sometimes with the least supervision, out of which I had to show my worth and that of my training. The report has captured my major involvements during the attachment, which included: assisting officer on, computer care, maintenance, repair, and network use.

It was a great learning experience for me because the ICT officers who work here tried their best to teach me new things and they took their time to explain things that were out of my understanding. This drove me to explore more areas, seek a lot of information and participate in the ministry activities, all with a lot of interest. It is my confession that after the

attachment, I have gained skills, experience and Knowledge of computer skills and technical applications in business office environment and networking. I will be able to use the skills learnt to perform similar tasks in a similar or different environment. 17