



**FACULTY OF INFORMATION TECHNOLOGY**

**BACHELOR OF INFORMATICS**

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**INDUSTRIAL BASED ATTACHMENT REPORT**

***ATTACHMENT DURATION***

19th January 2017 - 31st March 2017

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**ACKNOWLEDGEMENT**

I would like to first thank God for his divine guidance and protection during the attachment period.

I would like to pay particular tribute to the KPMG management team for giving me the opportunity to be part of the company and to use the entire prerequisite work and their facilities.

I would also like to thank all who in various forms assisted me directly and indirectly towards a cherished practical experience of work ethics and the application of learned academic knowledge into reality.

**EXECUTIVE SUMMARY**

KPMGis a professional service company and one of the Big Four auditors, along with Deloitte, Ernst & Young EY) and PricewaterhouseCoopers (PwC).

During my time at KPMG, I was posted in advisory service, under the Risk consulting: IT advisory department. This department is mostly concerned with managing IT risk and compliance. It helps transform risk and compliance efforts into competitive advantage by applying a risk lens to corporate strategy to improve riskintelligence and decision making, protect financial and reputational assets, and enhance business value.

During my time at KPMG, I undertook the following activities:

Induction training

Application Controls

Client consultancy

KEPSS review

Various considerations had to be in place before settling on KPMG as the most appropriate organization to conduct my industrial attachment. This includes the fact that the company has a long history and a good reputation, thus it is a good name to be associated with. KPMG is also known for its outstanding standards, which makes it the best place to train because once you are trained by the best, you also become the best.

To acquire the internship, I had to send my application to KMPG human resource manager. I sent my curriculum vitae, letter of application and cover letter from the faculty of information Technology to ascertain that I am student at the University. Some weeks later I was invited for an interview. The interview was conducted by the human resource manager together with one of the IT advisory managers.

Two weeks later, I was informed that I had passed the interview and I was told that on 19th January 2017, I would begin my induction training.

During the induction training, we were taken through the history of the company, structural and departmental layout. Terms and conditions of the internship were agreed upon and this included my internship period which would run as from 19th January up to 31st March. The working hours were 7.5 hours in a day and 5 days in a week with two days off to rest and conduct personal duties. I would work for a period of 9 weeks, earning 800 KES a day together with a 500 KES lunch claim whenever we were at the clients.. There was a contract signed to stipulate the code of conduct expected during the period. That marked my new journey in acquiring knowledge and skills that will help me for the rest of my life. The journey was tiresome but surely I made it. My time there was priceless and the staff was very welcoming, friendly and accommodating.

**INTRODUCTION OF THE ORGANIZATION**

The name "KPMG" stands for "Klynveld Peat Marwick Goerdeler." It was chosen when KMG (Klynveld Main Goerdeler) merged with Peat Marwick.

KPMG is a global network of independent member firms offering audit, tax and advisory services. The firms work closely with clients, helping them to mitigate risks and grasp opportunities.

Member firms' clients include business corporations, governments and public sector agencies and not-for-profit organizations. They look to KPMG for a consistent standard of service based on high order professional capabilities, industry insight and local knowledge.

KPMG member firms can be found in 152 countries. Collectively they employ more than 189,000 people across a range of disciplines.

Sustaining and enhancing the quality of this professional workforce is KPMG's primary objective. Wherever our firms operate, we want them to be no less than the professional employers of choice.

KPMG East Africa has 21 partners and over 1000 professional staff. The Nairobi office serves as the regional coordinating office providing the required networking and support to facilitate delivery of services on a timely basis to meet and exceed our clients’ expectation.

**VISION AND MISION STATEMENT**

**Mission Statement**

KPMG is the global network of professional services firms whose aim is to turn knowledge into value for the benefit of our clients, our people and the capital markets.

**Vision Statement**

KPMG is committed to creating a working environment where people can flourish and find the freedom to fulfill their potential. As part of KPMG’s People strategy, KPMG examine its approach to a number of areas such as recruitment and retention, personal development, flexible working, overall reward, people management, leadership, diversity and inclusion. KPMG’s progress in these areas is reviewed regularly by the Board.

**STRUCTURE OF THE ORGANIZATION**

KPMG in East Africa is head by a CEO, Josphat Mwaura. Under him are 21 partners, who all head different departments in the company. Reporting to the Partners are the Senior Managers, who are in turn reported to by the different managers in each department.

Under every manager are seniors who have different levels (senior 1- 3) and associates who have different levels as well (associate 1-3).

Coordinates all the operations of the different regions in KPMG East Africa

Figure 1: Organizational Hierarchy

They are the people who make the big company deals for KPMG and so have a lot of meetings with clients.

They are required to bring in bigger clients to KPMG and supervise all the managers

Are in charge of the engagements between KPMG and smaller companies and are as such required to meet and deal with the company heads

Supervise the Associates n the field and conduct intricate field work activities as well as reviewing the associates’ work.

Conduct the bulk of the client field work and as such are most of the time client facing

Together with associates conduct most of the field work

**DESCRIPTION OF ATTACHMENT**

**Weekly timetable**

### Week 1

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Thursday  19/01/2017  **7.5** Hours | Knowing the company.  Knowing the various departments of the company and what they do. | Orientation | * KPMG Work ethic   KPMG Policies  KPMG Management  What KPMG do in general  Independence and Confidentiality  What Risk is  How to manage risk |
| Friday  20/01/2017  **7.5** Hours | * Introduction to IT Audit   Basic Systems Audit training  General IT Controls training  Application Controls training | Training completed | * Different Parts of an IT audit   Importance of system audits  General IT Controls breakdown  Application Controls breakdown  KPMG statistics tool (IDEA)  High and Low risk controls |

### Week 2

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Total Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  23/01/2017  **7.5** Hours | * Access Card assignment * Laptop assignment   Account creation | Taken to assigned bank which was Housing Finance Group. | * Introduction to the team doing the audit at Housing Finance Group. |
| Tuesday  24/01/2017  **7.5** Hours | * Introduction to the different processes of the bank. | Reviewed the controls to be tested | * The core processes of a bank   How to prepare for a test |
| Wednesday  25/01/2017  **7.5** Hours | * Further introduction to the processes in the bank | Compared the bank system to the KPMG standards | * The IT systems that run the bank.   The necessary tests to be performed on the bank. |
| Thursday  26/01/2017  **7.5** Hours | * Further introduction to the processes in the bank | Review of the previously done GITC tests for proper preparation. | * How to gather information from the client on the walkthrough |
| Friday  27/01/2017  **7.5** Hours | * KPMG training at the company headquarters. | Scheduling of GITC meetings for the following week  Preparation for GITC testing | * How to use the KPMG intranet. |

### Week 3

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  30/01/2017  **7.5** Hours | * Performing Application controls on the Banks customers | Conducted the walkthrough and collected relevant data for the Bank customers | * Account creation process * All necesssary details pertaining to a customer |
| Tuesday  31/01/2017  **7.5** Hours | * Performing Application controls on the Banks customers | Analysed the data gathered from the walkthrough | * Customers with loans require a KRA PIN |
| Wednesday  01/02/2017  **7.5** Hours | * Performing Application controls on the Banks customers | Analysed the data gathered from the walkthrough | * A customer below 18 years cannot have a loan. |
| Thursday  02/02/2017  **7.5** Hours | * Performing Application controls on the Banks customers | * Conducted the walkthrough for Core Banking | * All co-orporate customers should have a KRA PIN |
| Friday  03/02/2017  **7.5** Hours | * Performing Application controls on the Banks customers | * Commence on analysis of the data acquired from the Core Banking walkthrough | * Documentation on system application access configuration issues |

### Week 4

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  06/02/2017  **7.5** Hours | * Performing Application controls on the Banks transactions | Conducted the relevant tests on the data and discussed the issues discovered | * Segregation of Duties matrix is essential for a proper workflow |
| Tuesday  07/02/2017  **7.5** Hours | * Performing Application controls on the Banks customers | Analysis of bank transactions as of 31st December 2016 | * Data analysis. |
| Wednesday  08/02/2017  **7.5** Hours | Application controls from data acquired. | Analysis of bank transactions as of 31st December 2016 | * Data extraction from database. |
| Thursday  09/02/2017  **7.5** Hours | Application controls from data acquired. | Conducted the relevant tests on the data and discussed the issues discovered | Review on system activities for such systems are rarely done because no transactional operations are performed by the system administrator |
| Friday  10/02/2017  **7.5** Hours | Application controls from data acquired. | * Conducted the relevant tests on the data and discussed the issues discovered | SMS gateway systems interact with customer service related systems |

### Week 5

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  06/02/2017  **7.5** Hours | * Performing Application controls on the Banks transactions | Conducted the relevant tests on the data and discussed the issues discovered | * Segregation of Duties matrix is essential for a proper workflow |
| Tuesday  07/02/2017  **7.5** Hours | * Performing Application controls on the Banks customers | Analysis of bank transactions as of 31st December 2016 | * Data analysis. |
| Wednesday  08/02/2017  **7.5** Hours | Application controls from data acquired. | Analysis of bank transactions as of 31st December 2016 | * Data extraction from database. |
| Thursday  09/02/2017  **7.5** Hours | Application controls from data acquired. | Conducted the relevant tests on the data and discussed the issues discovered | Review on system activities for such systems are rarely done because no transactional operations are performed by the system administrator |
| Friday  10/02/2017  **7.5** Hours | Application controls from data acquired. | * Conducted the relevant tests on the data and discussed the issues discovered | SMS gateway systems interact with customer service related systems |

### Week 6

|  |  |  |  |
| --- | --- | --- | --- |
| Day and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  20/02/2017  **7.5** Hours | Application control on Deposit accounts | Conducted a walk though on deposit accunt products | How to open a deposit account with the bank |
| Tuesday  21/02/2017  **7.5** Hours | Application control on Deposit accounts | Conducted a walk though on deposit accunt products | Charges levied on deposit accounts |
| Wednesday  22/02/2017  **7.5** Hours | Application control on Deposit accounts | * Conducted a walk though on deposit accunt products | Savings accounts should not incur any charges |
| Thursday  23/02/2017  **7.5** Hours | Application control on Deposit accounts | Data analysis | Some deposit accounts earn loyalty points depending on the accounts activiy in the past 3 months |
| Friday  24/02/2017  **7.5** Hours | Application control on Deposit accounts | Discussion of issues found | What min opening and min operating balanc is |

### Week 7

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  27/02/2017  **7.5** Hours | * Application control on the Banks assets | Conducted a walkthough on the banks assets | Got to know how the Bank categorises its assets. Under different asset classes. |
| Tuesday  28/02/2017  **7.5** Hours | * Application control on the Banks assets | * Conducted a walkthough on the banks assets | How the bank calcuates the depreciation of assets. Using the straight line method |
| Wednesday  01/03/2017  **7.5** Hours | * Application control on the Banks assets | Data analysis | Assets under diiferent asset classes have a different rate of depreciation. While those in the same class depreciate in the same rate |
| Thursday  02/03/2017  **7.5** Hours | * Application control on the Banks assets | Data analysis | How the bank acquired some of the assets |
| Friday  03/03/2017  **7.5** Hours | * Application control on the Banks assets | Discussion of issues found when running tests.. | Assets under diiferent asset classes have a different rate of depreciation. While those in the same class depreciate in the same rate |

### Week 8

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  06/03/2017  **7.5** Hours | * Reconcilition of the Banks Trial balance with corresponding General Ledgers | Conducted a walkthough of how to reconcile the TB with GL’s | What a Trail balance is  What a General ledger is |
| Tuesday  07/03/2017  **7.5** Hours | * Reconcilition of the Banks Trial balance with corresponding General Ledgers | Conducted a walkthough of how to reconcile the TB with GL’s | How to reconcile the Trail balance with the GL |
| Wednesday  08/03/2017  **7.5** Hours | * Reconcilition of the Banks Trial balance with corresponding General Ledgers | Conducted a walkthough of how to reconcile the TB with GL’s | How the Bank comes up with the Trail balance |
| Thursday  09/03/2017  **7.5** Hours | * Reconcilition of the Banks Trial balance with corresponding General Ledgers | Data analysis | How differences between the TB and GL’s come about |
| Friday  10/03/2017  **7.5** Hours | * Reconcilition of the Banks Trial balance with corresponding General Ledgers | Discusion of issues | How differences between the TB and GL’s come about |

### Week 9

|  |  |  |  |
| --- | --- | --- | --- |
| Date and  Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  13/03/2017  **7.5** Hours | * Application controls on Loan accounts | Conducted walk through of bank loans | Loan application process |
| Tuesday  14/03/2017  **7.5** Hours | * Application controls on Loan accounts | Conducted walk through of bank loans | Criteria to apply for a loan |
| Wednesday  15/03/2017  **7.5** Hours | * Application controls on Loan accounts | Data analysis | All the charges levied on loans |
| Thursday  16/03/2017  **7.5** Hours | * Application controls on Loan accounts | Data analysis | Loan interest rates should be below 14 pc for local currency loans. |
| Friday  17/03/2017  **7.5** Hours | * Application controls on Loan accounts | Discussed issues involving loan accounts | Foregin currency loans do not have an interest rate cap |

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### Week 10

|  |  |  |  |
| --- | --- | --- | --- |
| Date and  Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  20/03/2017  **7.5** Hours | * Application controls on loan collaterals | Conducted walk through of collaterals | How loans are given with collaterals |
| Tuesday  21/03/2017  **7.5** Hours | * Application controls on loan collaterals | Conducted walk through of of collaterals | Collaterals should be re-valuatedevery 3 years |
| Wednesday  22/03/2017  **7.5** Hours | * Application controls on loan collaterals | Data analysis | One loan can havve multiple collaterals  Also, one collateral can be tied to multiplr loans |
| Thursday  23/03/2017  **7.5** Hours | * Application controls on loan collaterals | Data analysis | Collaterals offered for a loan should not be in the Ndugu Land report |
| Friday  24/03/2017  **7.5** Hours | * Application controls on loan collaterals | Discussed issues collaterals | All loans should have a collaterals just incase of defaulting the loan. |

### Week 11

|  |  |  |  |
| --- | --- | --- | --- |
| Date and Hours | Objectives | Tasks Achieved | Lessons Learnt |
| Monday  27/03/2017  **7.5** Hours | KEPSS review | Conducted the walkthrough for the KEPSS system | How the banks operates inter-bank transactions |
| Tuesday  28/03/2017  **7.5** Hours | KEPSS review | Conducted the relevant tests on the data and discussed the issues discovered | How the KEPPS system is networkly segragated from the banks network. It has a direct line to the CBK network. |
| Wednesday  29/03/2017  **7.5** Hours | KEPSS review | Learnt how the bank handles inward and outward transactions | * How to send money from one bank to antoher.   How RTGS systems operate. |
| Thursday  30/03/17  **7.5** Hours | KEPSS review | Conducted the relevant tests on the data and discussed the issues discovered | * Transactions without complete details should be reversed withiin 2 hours. |
| Friday  31/03/2017  **7.5** Hours | KEPSS review | Conducted the relevant tests on the data and discussed the issues discovered | * Transactions without complete details should be reversed withiin 2 hours. |

**DESCRIPTION OF WORK STATION**

**Induction training**

The first 3 days at KPMG were allocated to the induction training. This training tends to familiarize new employees to the KPMG company headquarters. You get to know who is who and what is where. We were also taken through the company’s history and their journey so far.

A classroom training was also conducted to introduce us to auditing. This training was done on the second day and exposed us to the IT auditing world. We were also granted access cards to facilitate entry into the building and using peripherals such as printers.

**Client Facing**

After the necessary training was done to completion, we were taken to the clients to start working. I was taken to Housing Finance Group located in the Central Business District. We were assigned desks in the IT department and introduced to both KPMG and HFG staff.

The Risk Consulting department at KPMG is headed by Nancy Mosa, the senior partner. During my time at KPMG, i was managed by Leah Kimata and supervised by Fredrick Iraki. We worked hand in hand with associate Emily Njeru and fellow intern Fiona Muthoni.

There was a worksheet supplied by CBK that acts as a guideline and directs you on which tests to conduct. My supervisor allocated me a page from the worksheet for me to do and if i had any follow up questions, I would consult him for clarification.

The database administrator had managed to create a dummy environment that had all the data necessary to carry out the audit thus, i together with my supervisor would pull this data from the environment using Oracle Toad and proceed with doing the tests.

The tests were done using a computer aided auditing tool called IDEA. This piece of software is capable of handling insane amounts of data and facilitates analysis of this data to convert it to useful information that is useful during the audit process.

Once the tests were run and exceptions were found, these exceptions were reported to my supervisor, who would request for a meeting with HFG’s IT manager and Chief Information Officer to discuss these issues. These issues were then documented down in the final report that is sent to CBK.

**IMPACT OF THE INTERNSHIP**

This industry Based attachment at KPMG was a key moment in my life as I was able to learn a great deal of new things that will better my career in the field of IT. Undoubtedly, the impact of this attachment cannot be quantified. The attachment has made me gain some practical knowledge and experiences in my field of study (Information Technology) as well as enriching me with the interaction with the current Technology world.

It has also exposed me to new fields that i had no knowledge of prior to this attachment. IT audit is a field that I knew little about before my engagement at KPMG. I have been able to master this field and even consider it among the future lines of work i would like to peruse after i finish

## **Skills and Qualifications Gained**

From the internship I acquired a lot of skills which I believe will help me in my line of study. This include;

**Auditing Skills:** I was able to gain an in depth understanding on how auditing works. I have learnt about the environment that the Central Bank of Kenya requires banks to operate within and the various guidelines CBK has set to curb fraud, money laundering, and Cyber Security. This is very important to ensure that people’s money is kept safe and secure. It also provides an enabling environment for one to borrow cash from financial institutions and this has a trickledown effect on our economy.

**Data analytics:** Using the computer aided auditing tool IDEA together with Microsoft Excel, i have been able to learn on how to analyse data and acquire useful information from this data.

**Data Extraction:** Since we were given a dummy environment that has all the data that we needed, i was able to learn how to write SQL scripts that pull data from the environment and into an excel file. This usually entails writing SQL statements with multiple JOINS, SELECT statements and UNIONS so as to get all the information needed.

**Banking Skills:** I have learnt a lot about banking because of being posted to a bank. I am now able to know what happens behind the scenes and various bank procedures. I am no longer as naive as i was prior to my attachment. I am now aware of various bank processes such as how Real-time gross settlement systems works and electronic fund transfer.

**Communication Skills: -** I was able to learn how to communicate effectively when discussing issues i had gotten during my tests with the clients. The walkthroughs also helped improve my communications skills and confidence in asking questions wherever i did not understand.

**Responsibilities Undertaken During Internship**

I was posted to the core of KPMG’s business and this came with nuerous responsibilities.

Some of the responsibilities expected of me during the internship include;

- General IT controls

- Application controls

- KEPSS system review.

**Challenges Faced**

The orientation session before the commencement of the training came in handy as it portrayed what was to be expected of the intern and what the intern was to expect of the company. This communication made transition into the work life much smoother. However, few challenges were observed during the internship as it was not a smooth ride all the way. Firstly,, the very late evenings at work. These always left me exhausted and I had to master the art of managing my time otherwise I would not be able to remain afloat It was very hard to maintain social ties because of the nature of the timings I would find myself free. There is not much I can do about this because it is the nature of the industry I chose, so I quickly had to accept and adjust.

**Influence on Future Career Plans**

The internship affirmed that my passion for the IT industry persists. From my observations I was able to determine which department I would prefer to base my career on thus narrowing my job choice. I have realized that I can perform at a higher level than I ever imagined. Having this experience under my belt has allowed me to look at the broader picture and see how several drivers and factors affect the IT industry.

I am now confident I want to pursue this career path after graduation. The experience has also helped me establish a good network of connections that will hopefully be useful in the near future as I look for a job after graduation.

The experience also helped open my eyes to some of the areas I feel I need to improve on, such as increasing my knowledge of scripting SQL statements, as well as understanding the areas that I was already successful in. It also helped me realize the type of industry and corporate culture that I’m willing to work in. Having the experience of my internship present on my resume will help me in the future after graduation when I’m applying for full-time positions. Many large companies are looking to hire individuals with work and internship experience because these individuals know what is expected of them on a professional level and have already been exposed to the working culture.

Since I was given the opportunity to observe the work of others and learn from their own job responsibilities I was able to cultivate managerial skills from observation.

**Correlation between Attachment Activities and Classroom Knowledge**

The attachment to the work environment through temporary position was extremely important in building an extension between what is learnt in the classroom and what is in the working environment. The temporary position as a type of experiential learning gave me significant opportunity to experience the IT industry firsthand and to apply classroom information to hone.

Quite a bit of what I learnt in the classroom setting could be connected at the work environment circumstances, assignments, and exercises. The trick was to have the capacity to connect the theory from class into practice. For instance, writing the SQL scripts. We had learnt about this is Database Administration but on a theoretical basis. I was able to apply this knowledge effectively.

**CONCLUSION**

After completion of my industrial training, I had been exposed to auditors working life. Throughout my internship, I could understand more about the definition of an auditor and prepare myself to become a responsible and innovative professional in future. Along my training period, I realize that observation is a main element to find out the root cause of a problem. Not only for my work but daily activities too. During my project, I cooperate with my colleagues and operators to determine the problems. Moreover, the internship indirectly helped me to learn independence, discipline myself, be considerate/patient, self-trust, take initiative and the ability to solve problems. Besides, my communication skills is strengthen as well when communicating with others. During my training period, I have received criticism and advice from my colleagues when mistakes were made. However, those advices are useful guidance for me to change myself and avoid myself making the same mistakes again.

So far I have learned that this career field is difficult because after time it can wear on you, but overall I have loved the experience. I certainly think that this could be a possible career field for me. With just the right attitude and skills, nothing can hinder me from achieving my goals.

**REFERENCES**

kpmg.com

Information from KPMG staff.