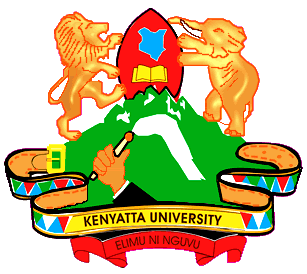
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**INDUSTRIAL ATTACHMENT REPORT**

**KENYATTA UNIVERSITY**

**SCHOOL OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF COMPUTING & INFORMATION TECHNOLOGY**

**BACHELOR OF SCIENCE (COMPUTER SCIENCE)**

**REPORT ON INDUSTRIAL ATTACHMENT**

**ATTACHED AT : MASTERCLASS SOLUTIONS**

**SECTOR OF ATTACHMENT : INFORMATION TECHNOLOGY**

**PERIOD OF ATTACHMENT : 3 MONTHS**

**PRESENTED BY : SHARON CHEPKIRUI**

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**SUBMITTED TO : KENYATTA UNIVERSITY**

**DATE : 25th SEPTEMBER 2019.**

**DECLARATION**

I hereby declare that this report on industrial attachment submitted to Kenyatta University, school of engineering and technology, department of computing and information technology as a partial fulfilment of the requirements for the award of a degree in computer science is a product of activities I carried out at Masterclass Solutions from 13th May 2019 to 13th August 2019 and has not been presented to any other institution or examination body for the award of academic certificate.

NAME …………………………..

REG NO. …………………………

SIGN………………………………

DATE……………………………..

Declaration by Organization’s Supervisor

This report has been submitted with my approval as industry based supervisor.

NAME…………………………….

SIGN………………………………

DATE……………………………..

# **ACKNOWLEDGEMENT**

I would like to express my gratitude to each and every one who contributed to the successful completion of my attachment.

First I would like to thank God for the protection, the strength he gave me and the support both financially and spiritually.

Secondly, I express my sincere gratitude to my masterclass supervisor Ambrose Kimaiyo for always encouraging me, guiding me and leading my supervised training to be a success despite the lots of work he had.

I also thank the masterclass team for the love they showed me, the team work we had together while doing projects, the trainings they gave me and the conducive working environment they provided.

My sincere gratitude also goes to my lecturer Mrs. Lucy Gitau who was my supervisor for the encouragement she gave me, the remarks she gave me that challenged me to work harder in order to gain more and be a better person.

Lastly, I would like to thank my parents and siblings for their financial and moral support throughout the entire period of my attachment.

# **ABSTRACT**

This report is a compilation of the three months industrial attachment I undertook at Masterclass Solutions and is compiled in the partial fulfilment of the requirement for the award in a Degree in Computer Science. The report explains the history of the organization I was attached together with its objectives, core activities, core values and the organization structure. The activities of the department I was attached, the duties I was assigned and the objectives of the training process are explained in the report. The skills acquired and shortcomings I encountered when handling tasks as well as how I overcame the challenges are also explained in details. Finally, my recommendations, the conclusion of the training and the references are included at the end of the report.

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# CHAPTER ONE: INTRODUCTION

## **1.0 History of Masterclass Solutions**

Masterclass Solutions is an accomplished interactive professional service firm specializing in user centric, dynamic application development, design, marketing, mobile application development using the latest technology and hosting. Its solution empower forward thinking companies to redefine their business through innovative use of advanced technology.

The company was started in 2013 and has been continuously growing. Its major services are IT based such as web development, mobile application development and IT support.

## **1.1 Core Activities of Masterclass Solution**

The company being technology based provides the following services:

* API integration: The company team are well-versed with application interfaces, a tool that makes it possible to manage software applications.
* Mobile Application Development: Masterclass team of mobile web developers have extensive experience in building and creating Android and iOS apps.
* Web Development: The Company creates new custom websites as well as integrate existing ones.
* Database development: They design, develop and manage databases for applications and organizations.
* IT Consulting: Strategic IT consulting, on site or cloud based IT management, help and support desk, cloud services, web and mobile solutions, telecommunications services and emerging IT support.
* Ecommerce development: The team work with shopify, woo commerce, magento and other e-commerce platforms.
* USSD/SMS Application development: Masterclass offers development and integration of reliable and user friendly USSD and SMS applications.
* IT support: The Company performs a wide range of software repairs and optimizations using a variety of professional software diagnostic tools.
* IT supplies: The Company also supplies IT products and computer consumables.
* Internet Marketing: It also helps companies achieve success by examining their current online visibility, explaining the strengths and limitations of internet marketing and helping them determine realistic goals.

## **1.2 Mission, Vision and Core Values of Masterclass Solutions**

### Mission

To be an innovative, efficient and customer focused professional IT Consultancy Services Provider in East Africa

### Vision

To be the leading and pace setter Information Technology Consultancy firm in East Africa.

### Core Values

* Commitment: We are always working for you.
* Innovation: we are always thinking and coming up with new ideas that change the world to a better place.
* Evolution: We are always learning and keeping up with change in technology.
* Integrity: We are guided by strong moral and ethical principles that ensure honesty and truthfulness.
* Teamwork: Our employees work together to ensure efficiency in our operations
* Efficiency: our team are well experienced in the fields they work on thus provide high quality services.
* Positivity

## **1.3 Objectives of Masterclass Solutions**

The company had the following objectives in their operations:

* To be the best IT service provider in East Africa.
* To maintain a sustainable growth of the organization.
* To be the best innovative organization.
* To improve automation of the organization.

## **1.4 Organization structure of masterclass Solutions**

The management and administration of day to day activities of Masterclass Solutions is undertaken by the managing director. The director has ensured continuous growth of the company since it was started in 2013.

The overall responsibility for policy and guidance is done by the technical manager.

The organization has only one department which is the technical department. The department is comprised of a designers, developers and strategist with expertise in various technologies.

Managing director

Technical Manager

Web developers

IT support team

Designers

Mobile developers

# CHAPTER TWO: THE TECHNICAL DEPARTMENT

## **2.0 Core activities of the technical department**

The technical department is the department I was assigned to and is the major department of the organization. The main duties of the department were as follows**:**

* API integration: The technical team are well-versed with application interfaces, a tool that makes it possible to manage software applications.
* Mobile Application Development: Masterclass team of mobile web developers have extensive experience in building and creating Android and iOS apps.
* Web Development: The department creates new custom websites as well as integrate existing ones.
* Database development: They design, develop and manage databases for applications and organizations.
* IT Consulting: Strategic IT consulting, on site or cloud based IT management, help and support desk, cloud services, web and mobile solutions, telecommunications services and emerging IT support.
* Ecommerce development: The team work with shopify, woo commerce, magento and other e-commerce platforms.
* USSD/SMS Application development: Masterclass technical team offers development and integration of reliable and user friendly USSD and SMS applications.
* IT support: The department performs a wide range of software repairs and optimizations using a variety of professional software diagnostic tools.
* Internet marketing: Masterclass solution can help you achieve success by examining your current online visibility, explaining the strengths and limitations of internet marketing, and by helping you determine realistic goals.

## **2.1 Main objectives of the training**

The main objectives for the attachment exercise were as follows:

* To be acquainted with the expectations of working in a highly competitive environment.
* To get the opportunity to apply theories and techniques learnt in classrooms in solving problems in the society.
* To access interest in student careers.
* To strengthen the relationship between Kenyatta University and various organizations thus creating more job opportunities for students in the university.
* To expose the learner with practical skills that may not be visualized or taught in school like professionalism and problem management.
* To provide access to equipment and devices not provided in school which are necessary for learning.
* To make transition from School to work easy and to enhance student contacts for job placements.
* To improve self-confidence of the student and help in finding own proficiency.
* To cultivate learner’s leadership ability and responsibility to perform or execute the given tasks.

## **2.2 Assigned duties at the technical department**

The following were the duties I was assigned to at the technical department of Masterclass Solutions:

* Web development using;

1. Bootstrap- I created a website called Medcare solutions using pure bootstrap and html, which was assigned to me by my trainer as part of practice.
2. Pure css, html and Javascript- I created a simple log in and signup page for a portal at the beginning of the attachment.
3. Wordpress- I did a number of projects for our clients using Wordpress including the website for real careers where I had to come up with the content for the sight, Ketraco, Aquavet Services and help desk support system for Masterclass Solutions.
4. React Javascript- The supervisor gave me time to learn react Javascript with the help of my trainer in which at the end I was able to create a user interface as well as fetch APIs using react Javascript.

* Graphic design with adobe Photoshop and adobe illustrator- I was able to edit images, icons and logo which were uploaded to the various websites we created with the team. I helped in designing infographics for a SMS based voting system and also created flowcharts for various projects that were done at the department.
* Software application testing- I was able to conduct testing of both front end and backend of Competition Authority of Kenya (CAK) portal, and also the mobile application developed for the same company. I also tested the help desk support system for Masterclass Solutions.
* Created Software Development life Cycle for projects to be presented to clients before the actual development is done.
* Writing documentations/user manuals for websites created at the department for example, the Competition Authority of Kenya portal.
* Software analysis and Design- With the help of the team, we were able to analyze and design a SMS based voting system for a client among other projects.

# CHAPTER THREE: EVALUATION OF THE ATTACHMENT PERIOD

## **3.0 Benefits of the attachment**

Throughout my attachment period, I was able to achieve quite a number of my objectives thus considering the attachment process successful.

Apart from the practical skills in different aspects of technology, I was able to gain non-technical skills including team work, professionalism, punctuality and office etiquette.

I was also able to interact with new people and share career aspirations in the field of technology which helped me gain deeper understanding of the field I want to major in my career.

## **3.1 Technical skills acquired during the attachment exercise**

From the assignments and daily duties, I was able to learn the following:

* Front end web development using bootstrap
* Front end web development using pure css and html and Javascript
* Front end web development using Wordpress
* Creating website user interfaces using React Javascript
* Fetching APIs using React Javascript
* Image editing using Photoshop
* Designing flowcharts and infographics for projects using adobe illustrator.
* Creating SDLC (software development life cycle) for projects.
* Test the working of software before delivery to clients
* Hosting websites both locally and online.
* Running commands from the terminal
* Ability to understand users’ needs by creating a support system for the clients.
* Creation of databases using a localhost(both xampp and wampp)

## **3.2 Non-technical skills acquired during the attachment exercise**

Apart from the practical skills and experience I gained during the attachment period, I was also able to acquire non-technical skills that enabled me to work well with Masterclass team. The following are the skills acquired:

* Ability to work with a team during handling of big projects.
* Punctuality, this was a necessary key to completion of duties in time and thus became part of me during the attachment period. I therefore learnt time management skills.
* Professionalism, I was able to acquire self-confidence, self-motivation and time management skills.
* Interpersonal skills through interaction with the supervisor and the rest of the staff.
* Communication skills during interactions with the manager and with other staff.
* Critical thinking when doing projects and also learning various languages such as React Javascript.

## **3.3 Discussion on gained experience and skills**

Technically, my knowledge about the career I want to pursue in has expanded as I learnt a lot through the projects I was involved in. I was able to apply what I learnt in class as well as what I was taught by my trainer enabling me to handle projects very well.

Professionally, I was able to adapt well with the environment and gain skills in good time management as it was a key to ensure completion of projects on time, good interpersonal relationships and team work.

Socially, I was able to interact with new people, share ideas and experience thus opening up my mind on various career aspirations. I also made connections that will help in future with job seeking.

## **3.4 Challenges encountered during the training period**

Here are some of the challenges that I encountered during my training period:

1. During the early period of my attachment, I was using my personal laptop which has a slow processor and so it was inconveniencing. The laptop used to hang a lot which was disturbing and thus slowed down my work rate.
2. Time was also another challenge during my attachment. There were many projects to be completed within a limited time.
3. The internet sometimes was not stable.

## **3.5 How I overcame the challenges encountered**

1. I was provided with a company machine which was fast and reliable making it easy for me to finish the work given on time.
2. Due to many projects and limited time, I had to work tirelessly by working overtime and even while at home in order to meet the deadlines of projects. I also adopted time management skills which enabled me catch up with the lost time.
3. We reported the internet issue to management who then sorted it out enabling us to complete our work on time.

# CHAPTER FOUR: CONCLUSION AND RECOMMENDATION

## **4.0 Conclusion**

The industrial attachment of the university gives students the opportunity to apply what is learnt in class into practice and therefore exposing them to more work methods that are not taught in class.

It provides an opportunity for students to gain better understanding of their interest in career they want to undertake and also prepare and acquaint them with skills to work in a highly competitive environment.

The attachment also strengthens the relationship between the university and various organizations thus creating a large opportunity for other students to pursue their attachment in the organizations and also job market for graduate students.

The training was a success as I was able to gain practical skills, theoretical skills, interact and make connections with various people. I was able to gain skills in time management, good interpersonal relationships, good communication skills, professionalism, self-confidence, self-motivation and team work thus enabling me achieve all my objectives.

It also helped me gain better understanding of the field I want to major in my career as I spent most of the time working on projects in that field.

The attachment process should therefore be maintained for students to enable them understand the job done in the real world environment apart from what is taught in class. It was a really great and educative experience for me and I hope that all other students get the same experience or even better than what I got.

## **4.1 Recommendations**

The attachment exercise is a very educative and beneficial process to each and every students and therefore should be taken seriously by all students. The following should be put in place by the university to future benefits of students and the university.

* The university should give enough time for students to search for attachment places by providing the recommendation letters as early as at the end of the first semester of third year.
* The university should build good relationship with various organizations and request them for opportunities for attachment thus helping out some students as most of them look for the attachments tirelessly with no success.
* The institution should also liaise with HELB to provide grants for students during attachment period because some organizations do not pay students thus making finance a major challenge.

The following is what Masters Solutions should put in place for better working conditions for the organization:

* It should ensure that the internet is always stable.

# CHAPTER FIVE: REFERENCES

## **5.0 References**

<http://agriculture.ku.ac.ke/images/stories/docs/ASTFieldAttachmentReportWritingGuidelines2019.pdf>

<http://masterclass.co.ke>

Log book