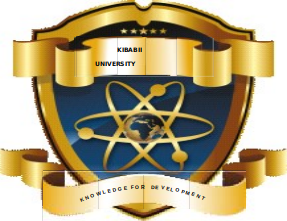
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**Attachment Report**

*Loanspur Company Limited,Nairobi.*

**ATTACHMENT REPORT AT LOANSPUR COMPANY LIMITED.**

**NTHIWA PATRICK WAMBUA .**

**(COM/0005/18)**

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An attachment report is a partial fulfilment of the requirements for the award of the degree of Bachelor of Science in Computer Science of Kibabii University.

October,2022.

## **Declaration**

I hereby declare that this is my original work prepared with no other than the indicated source and has not been presented elsewhere and on any other award.

Name : Nthiwa Patrick Wambua.

RegNo : COM/0005/18.

**Signature : \_\_\_\_\_\_\_\_\_\_\_\_\_** **Date:\_\_\_\_\_\_\_\_\_\_\_\_**

## **Approval and recommendation**

The signature below certifies that, I have read and therefore approve acceptance of this

**Attachment report.**

Name : Mr. Peter Barasa.

Attachment Coordinator,

Department of Computer Science,

Kibabii University.

**Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

## **Acknowledgment**

This attachment and the resultant report, has offered me invaluable lessons and has opened a leeway to ICT practical experience. Such practical experiences could not be garnered in an ordinary class environment; they therefore form a connection between the class-based inputs from my lecturers and the true working environment of a computer scientist.

I would like to thank the Almighty God for his unceasing care, protection and abundant blessings throughout the attachment period. He gave me the opportunity to interact with people from various walks of life, glory and Honour be unto Him. My sincere gratitude also goes to Loanspur Company Limited for granting me the opportunity to be an attaché at the ICT Office and a staff member in all its other branches across the country and diaspora, interns and the ICT Manager for the guidance, support and hands on training during the entire attachment period.

This report cannot be complete without the mention of my mother for his financial and emotional support throughout the attachment period, and my siblings for always encouraging and praying for me. I also want to acknowledge my lecturer Mr. Juma Kilwake for finding time to come and assess my work

## **Abstract**

This report is a compilation of the thirteen weeks’ industrial attachment I participated in at the Loanspur company limited,ICT Department. The report is a summary of the work and assignments done during this period, problems encountered, challenges faced ,how I solved them and suggestions and recommendations on how to counter these challenges in future.

It also contains highlights of specific tasks that I was assigned during the period and details about the strong and weak points for the attachment as compared to the curriculum related to my field of study and other relevant areas of my subject area

# LIST OF ABBREVIATION

**WHMCS-** Web Hosting Billing Management ,Content and Automation Platform Software

**API-** Application Development Interface

**CMS**- Content Management Software

**CRM-** Customer Relationship Management Software

**SERPS** - Search Engine Results Page

**C2B -** Consumer to Business Integrations

**B2C** - Business to Customer integrations

**B2B** - Business to Business Integrations

**CURL** - Client of URLS

**SEO** - Search Engine Optimization

**MRI**- Monthly Rental Income

**MVC- Model,View , Contribution**

**ISO**- International Organisation of Standards

**PC**- Personal Computer

**ICT-**Information Communication technology

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## **CHAPTER ONE**

## **1.0 Introduction**

The Industrial Attachment training is an essential component of the curriculum of the Kibabii University, which is a partial fulfilment of the requirements of the award of Degree in Computer Science. Students are required to undergo an Industrial Attachment programme during which the students are expected to acquire additional practical experience to supplement their programme of study in the University. They are exposed to the real world of work and its challenges, which will prepare them towards their future careers.

According to (Andrew Saina,2013)” Effects on Performance of students on industrial attachment” The industrial attachment links classroom practicals with the induction training which provides the student with the opportunity to have an insight into the practical application of knowledge, skills and safety consciousness in industry. The objective of induction training is to adapt the student on industrial attachment to the specialised equipment, machines and work methods of the industry.

## **1.1 Background Information**

LoanSpur limited a Financial Technology software development and deployment company based in Kenya. Managed by experienced personnel with vast experience in the banking and IT consultancy sector. As a Fintech company, Loanspur specialises in software system development and operations automations for financial institutions.

Loanspur is located in Nairobi, Astrol Petrol station.opposite Garden City Mall.The company was started back in the year 2007 and has since then increased its manpower with vast experience in programming and designing softwares.

The company’s flagship is to become a core banking solution for banks ,micro-lending institutions,saccos and non-bank lenders.

The company is headed by the CEO together with a board of directors for various departments and branches across Bungoma,Kakamega ,Uganda and diaspora.

In addition to conducive working environments,loanspur has reliable network conditions,a wide library of research materials ,a community and support team.

### **1.1.0 Core Functions**

The Company’s core functions are:

* Point of Sale System.-This is a web and cloud-based Retail POS and Stock Software that supports all types of Retail Business.
* Core Banking system.-LoanSpur is our Flagship Fintech software. It is a web based Core Banking System for: Banks, Micro Finance, Institutions and SACCOs.
* Mpesa-Integrations.-Mobile money integration with Telco Pay bill(C2B), Bulk payment(B2C)
* Web design and development.-Responsive and professional Website design and development.
* Bulk sms services .-Smart and powerful Bulk SMS messaging application that allows you to create and send effective Bulk SMS messages worldwide easily online
* Android Apps development.-Responsive and professional Android Applications development.

### **1.1.1 Work schedule**

All workers report on duty at exactly 8:00 am and leave the office at 5:00pm

However,being on attachment,I was given the opportunity to report at 8:00am and leave any time after 5:00 pm which gave me the opportunity to study more,explore and make further research.

### **1.1.2 Core Values**

#### Integrity

We are trustworthy, diligent and honest. We accept responsibility for our actions and follow through on promises and commitment

#### Professionalism

We are qualified, skilled and committed who take pride in producing high quality work and delivering exceptional services to our customers.

#### Simplicity

We strive for clarity and consistency, make decisions quickly and pragmatically and focus on what's essential.

#### Transparency

The company values Open and honest communication about everything.

### **1.1.3 Mission**

To be one stop shop to business enterprise that creates value for clients while maintaining concrete business relationships.

### **1.1.4 Vision**

To be the most preferred company in provision of business technology service solutions.

### **1.1.5 Motto**

‘Your Partner in Growth’.

# 1.2 Organisational structure

LoanSpur Limited is organised into a hierarchy with top, middle and operational management. The company has various departments which assist in the delivery of quality services to the clients.

### 1.2.0 Human Resource Department

This department carries out the recruitment, rewards management, learning and development, employee communications and administration.Department in charge of health insurance that is insurance that covers the whole or a part of the risk of a person incurring medical expenses.

### 1.2.1 Marketing department

This department is responsible for the image maintenance of the institution where they ensure the company has a good representation.

### 1.2.2 Finance department

This department involves financial policy and management including cash management, financial accounting, system and budgetary control. It also deals with controlling cash around the organisation.

### 1.2.3 Legal department

Legal department is in charge of all legal activities of the company and responsible for representing the organisation in court issues.

### 1.2.4 Underwriting department

Department in charge of issuing policy, printing renewal notices, raising endorsement and debiting.

### 1.2.5 Claims department

Insurance claims handlers make sure that claims are handled efficiently and that payment for valid claims is made to policyholders

### 1.2.6 ICT department

This department is responsible for all technological issues within the organisation and as well as ensuring the smooth running of services needed by the workers and staff respectively.

## CHAPTER TWO

## 2.0 THE ATTACHMENT

### 2.1 Period of attachment

Kibabii University curriculum dictates that the period of attachment runs for a minimum of 8 weeks. The Students are supposed to be supervised by a specific lecturer and also have a field attachment supervisor from the organisation he /she is in.

I was attached at lOANSPUR COMPANY LIMITED ( a FinTech institution) where Mr. Juma Kilwake was my field attachment lecturer and Mr Justus Murenga my industrial supervisor.

#### 2.1.0 My work-schedule

I was given tasks to do on a daily -personal basis,weekly-personal basis ,daily-team basis and weekly-team basis.

This gave me the chance to understand how to work with deadlines and to work with a team.

I was able to accomplish both personal and team projects and tasks on time.

#### 2.1.1 My Objectives

1. Gain practical experience in the performance of core routine duties in a professional environment.
2. Gain experience of work discipline, to develop abilities in practical skills specific to the area of specification .
3. Integrate theory and practice in handling management issues at the individual, group and community levels.
4. Apply theory knowledge gained at class level on an industry level in a professional way.
5. Get a work offer at the company after my attachment.

### 2.2 Detailed activities, duties and responsibilities

#### 2.2.0 Designing and Development.

I was part and parcel of the IT team in charge of designing and developing software applications.

My duties were:

* Developing Websites. For instance <https://theprimehouse.co.ke/>
* Designing and developing Point of sale system.i.e billing systems WHMCS
* Development and Integration of Api’s in company softwares.
* Development of Customer Relationship management system -The p
* Review and maintainance of the Company website.For instance <https://umojamagharibi.com/>
* Web Applications design and Development

#### 2.2.1 Hardware maintenance

Hardware maintenance is an important activity of ICT management in the loanspur Company limited :

1. Installation of security measures in Computers
2. Installation of operating system and printer configuration
3. Upgrading computers for example replacing processors with VDIs and adding RAM.
4. Upgrading printers and troubleshooting Network equipment.

#### 2.2.2 Help Desk

* Providing support to users who have problems in network connections.
* Helping users with printer connection problems.
* Helping users to troubleshoot slow PCs

### 

### 2.3 Challenges encountered

* Inadequate facilities; we didn’t have enough desktops and workstations, we therefore had to carry our own laptops to work and squeeze ourselves in the office.
* Inadequate number of support staff to compliment development by Junior software developers or interns.
* Network instability within the premise under which work is done.
* Problem of securing an attachment position; It took me time to get an attachment position since most companies never gave me feedback after application.

### 2.4 Weekly Summary

#### Week One (19th - 24th)September

I reported my attachment on the 19th october 2022 after an interview that i had done two weeks earlier.

This week activities were:

* Reporting
* Orientation to organisation staff, Departments and company branches
* Formulation of the attachment Expectations ,goals and deliverables.

I was given the first task,which was to learn preprocessor Hypertext language from basic level to advanced.

I demonstrated skills gained by developing a login register system using php.

#### Week two(26th - 1st)October

The task for this week was to further the understanding of advanced php using a simple MVC application.

This opened my mind to how php is really powerful,because I went ahead and began studying a php framework.

The study of the framework began after implementation of a login register system using MVC.

#### Week three(2nd-8th)October

Week three had several milestones that were to be completed within 7 days.

The milestones were:

* Study on Database Eloquent Relationships.
* Database seeding
* Git and Github
* Forms and DDL
* Emailing in Laravel
* Creating a simple System to implement the study.

#### Week four(10th -16th)October

The major Tasks for thai week were:

* Website Review <https://umojamagharibi.com/>
* Cpanel
* Web hosting
* FileZilla

The week had a lot to cover,we were able to accomplish these tasks in groups of three.

I gained practical knowledge on how we host websites and interact with the cpanel.

#### 5.Week Five(18th-22nd)October

The weeks Milestones were:

* Website review
* Laravel CRUD with VueJs
* Youtube Channels

In a team of three we reviewed umoja magharibi website <https://umojamagharibi.com/>.

I also learned how to monetize a youtube channel.

#### 6. Week six(24th- 29th)October

In week six i covered the following items:

* Wordpress CMS
* CI $ CD  
  Version control using Git and GitHub

This Study was led by Mr. Edwin Diaz ,a CMS and Version control Expert from codingfaculty.com.

We also embarked on a long term project to create a wordpress website for Jugoma Prim House Poultry farm.Link <https://theprimehouse.co.ke/>

#### 

#### 7.Week Seven(31th - 5th)November

The week was dedicated to designing and developing the Jugoma Prime House Website (<https://theprimehouse.co.ke/>).

This was an MPA(Multi Page Application)

We included core functionalities and features that included chatroom and sms Integrations.

The week was very engaging with the need to learn new concepts and apply them in the MPA.

#### 8.Week Eight(7th-12th)November

The Week tasks were:

* Perform Corrections based on recommendations of the site from users and support team.
* Hosting the website.
* Learn Integrations

The major integration I was to do was to write an mpesa C2B integration and have it working in Jugoma Prime House Website.

The task was completed successfully.

#### 9.Week nine(14th-19th)November

The weeks activities include:

* Finishing the c2B mpesa integration and going live.
* Assessment by Mr.Juma Kilwake.
* Create a Lipa na Mpesa Script

I was assessed this week and I also did all the tasks to completion.

### 10.Week ten(21st-26th)November

Week ten task included:

* Research on Curl(client of Url)
* Search engine optimization of Jugoma Prime House website.
* Application of web security on Jugoma prime house website.i.e OWASP and CWE

I did research ,completed all tasks and uploaded CURL application on my Github account <https://github.com/PatrickNthiwa/cURL>

### 11. Week eleven(28th-3rd)December

This was the second last week of mya attachment and the task i was given were:

* Restructuring Jugoma Prime house website on recommendations from the CEO.
* Complete SEO optimization.

The website was successfully indexed and ranked position 1 in google's SERPS-(search engine results page).

This week witnessed great achievements with its milestones well conquered.

### 

### 12.Week twelve(5th-10th)December

The main Weeks activity was:

* Design and develop a billing system for Loanspur,Umoja Magharibi and Jugoma prime House .(WHMCS)

We researched in depth and created the prime billing system and hosted it.

I also created a personal portfolio website using Wordpress CMS.

### 2.5 Skills acquired

1. **Time management**; by adhering to loanspur work hours (8am to 5pm), I improved on my time management skills.
2. **Leadership ;**I was chosen as the team leader for all interns,this gave me the chance to acquire leadership skills especially in a work environment.
3. P**rofessionalism;**I learnt that being a professional entailed a lot, from not disclosing personal information about a client,trust of the company’s mission and alot development of professional sites and softwares using industry based standards.
4. **Simplicity**;I learnt how to create clean code and develop simple yet very powerful systems.
5. **Team work**; I worked with a team of three interns, officers and the company CEO.
6. **Adaptability**; I was able to become familiar with the company's operations and way of conducting business especially that revolves around money.
7. **Critical thinking;** Demonstrated by willingness to ask questions in order to understand issues from all possible angles and to pose creative solutions to challenges.
8. **Record keeping:** Record keeping entails proper storage of all information of an organisation. It includes records on payments, purchases and other expenses that incurred by the organisation done through billing systems and from intergrations. This information is crucial in computing organisational costs.
9. **Planning**: Planning function ensures that activities and programs of an organisation moves smoothly. Being an attached I was able to plan activities of the day or week and effectively allocate adequate time,Come up with best designs and prototypes for projects on time.
10. **Decision Making:** At different times, individuals, groups or the organisation is expected to make decisions. Therefore, I was able to make decisions at different times when need arose.
11. **Punctuality :** During my attachment, I learned the time or period in which activities of the organisation were carried out. I was able to allocate time and schedule activities in order to ensure all programs are equally timed and carried out for effective coordination. 1 reported to work as per the stipulated time and I also left for home from the attachment when the time for departure arrived.

# CHAPTER THREE

## 3.0 CONCLUSIONS AND RECOMMENDATIONS

## 3.1 SUMMARY

The entire attachment ended successfully . The three months that I was in attachment was exciting whereby I learnt organisational activities and functions. As an Attachee, I achieved my objectives that included gaining practical experience in the performance of routine duties in a professional environment, gain experience of work discipline, to develop abilities in practical skills specific to the area of specification and to integrate theory and practice in handling management issues at the individual, group and community levels.

## 3.2 CONCLUSION

The Industrial attachment at LOANSUR COMPANY LIMITED was appreciable. I must honour and appreciate the entire company for giving me the chance to undertake my attachment to the institution.

I benefited a lot in the field attachment in a way that I managed to apply the theoretical knowledge from the university into practice through the many activities/tasks/assignments that I was instructed to do.

In addition to skills acqured, I gained interpersonal, listening, presentation, coding and organisational skills, to mention but a few. These skills improved my thinking and analytical skills and strengthened my professional ability to work in a multicultural environment.

I will forever be grateful to the loanspur company and its stakeholders for providing an enabling environment and support to undertake my attachment. The attachment was fun and fulfilling and I would therefore encourage the company to continue giving students this opportunity.

## 3.3 Recommendations

### 3.2.1 To the organisation

More support staff should be employed so as to balance the ratio between support staff and company officers.

Loanspur stakeholders should find a stable internet service provider like Faiba.

The management should consider expanding the offices and increasing facilities inoder to create a more conducive work environment for its stakeholders.

### 3.2.2 To the university

The university should help secure attachment positions in various organisations for students to ease on hectic encounters searching for the institution to do the attachment.

Students should be given industry best subjects and taught exactly what they will find in institutions.

The university should employ more practical oriented approaches of teaching in order to impose learners with practical skills.

The university should also offer fully practical oriented skills on printers to reduce the challenges faced working with printers in the field.

# REFERENCES

Industrial attachment activities,duties and responsibilities given and done in accordance to loanspur terms and conditions.

<https://www.loanspur.com/>

<https://theprimehouse.co.ke/>

<https://umojamagharibi.com/>