

**KABARAK UNIVERSITY**

**SCHOOL OF COMPUTER SCIENCE AND BIOINFORMATICS**

**DEPARTMENT OF COMPUTER SCIENCE AND IT**

**FINAL YEAR PROJECT**

**PROJECT TITLE: ONLINE ATTACHMENT SYSTEM**

**A Project Report Documentation Submitted in The Department of Computer Science and  
IT in partial fulfillment of the degree of Bachelor of Science in Information Technology.**

**SUBMITTED BY:**

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**Submitted On:**

### **STATEMENT OF ORIGINALITY**

This is to certify that to the best of my knowledge, the content of this project is my own work.

This project has not been submitted for any degree or other purposes.

I certify that the intellectual content of this project is the product of my own work and that all the assistance received in preparing this project proposal and sources have been acknowledged.

**CYRUS BUNEI**

**BMIT/M/0607/05/14**

Signature.....

Date.....

**Mr. JOSEPH ORORI**

Signature.....

Date.....

### **ACKNOWLEDGEMENT**

I take this opportunity to thank God, for blessing me with his grace and taking my endeavor to a successful culmination. I also extend my sincere and heartfelt thanks to my esteemed guide, Mr. Orori, for providing me with the right guidance and advice at the crucial junctures and for showing me the right way.

My efforts in this project would not have been possible without the kind support and help of many individuals and members of staff. I would like to extend my sincere thanks to all of them. Finally, I would also like to express my thanks to the School of Computer Science and Bio-informatics for their guidance and constant supervision as well as for providing necessary information regarding the project proposal and also for their support in completing the proposal.

### **ABSTRACT**

The online attachment system is based on an individual acquiring attachment online without actually visiting the companies with potential attachment. The purpose of this project documentation for the Online Attachment System project is to give relevant parties and stakeholders who will be involved in the deployment and implementation of the Online Attachment System project deliverables, namely the Online Attachment System itself an overview of what the Online Attachment System does. The documentation describes an initial prototype for the Online Attachment System and goes down the rabbit hole to describe the features and interface of the said Online Attachment System.

The documentation also aims to show how the deployment and implementation of Online Attachment System can improve the learning experience of students through the use of this online platform. The proposal will illustrate how an educational institution can take full advantage of the huge uptake and use Online Attachment System platform to help there students quickly get attached to there areas of interest and further their academic imperatives.

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## CHAPTER ONE

### 1.0 Introduction

A web application is an application that is accessed via web or over a network such as the Internet or an intranet. Web applications are popular due to the ubiquity of a client. The ability to update and maintain web applications without distributing and installing software on potentially thousands of client computers is a key reason for their popularity.

An online booking system, commonly referred to by such names as online scheduling software, online booking applications and online scheduler, an online scheduling system is a Web-based application that allows individuals to conveniently and securely book their appointments and reservations online through any Web-connected device, such as a computer, laptop, smartphone or tablet.

### 1.1 Existing system

In the world we live in today, it is quite hard to find time to do minor tasks that are as simple as scheduling appointments or making bookings. This is usually brought about due to strict and demanding work schedules that take up most of our time.

The existing system is one where the student sets aside time during business hours to physically go to firms/companies/organizations or write letters to apply for Industrial attachment. This way is time consuming, expensive and might be unsuccessful as the organization may require students from a particular or specific field. The student also has the option of calling the organization to query for an application but a misunderstanding over the phone may lead to wrong answers hence disappointing the student. This therefore creates the need for an automated system which will enable student to accurately apply for Industrial attachment conveniently.

### **1.2 Developed system**

The researcher came up with a system that offers its users an online platform where they are able to view Industrial attachment opportunities available in the various fields and they can submit their applications.

The system also gives the organization the opportunity to state their requirements and pick those applicants they see fit. The developed system also provides the user with the added advantages of saving time and money as they can be able to perform these tasks from wherever they find it convenient.

### **1.3 Objectives of the project**

#### ***1.3.1 Main objective***

The main objective of this project is an online system that enables a students apply for Industrial attachment.

#### ***1.3.2 Specific objectives***

- i. To enable students to register, login and apply for industrial attachment.
- ii. To enable Human Resource official to login, state availability of attachment opportunities as well as approve a student's application.
- iii. To enable the organization posting attachment select students according to their needs.

### **1.4 Justification**

The developed system allows students to register by filling their details in a form, thereby creating an account. They are also able to login and view the available attachment available in all the available fields of practice and therefore apply for the desired attachment.



## Online Attachment System

This makes it easy for the student as he or she is assured that the opportunity is available. The system also has a provision for the organization to create an account. They state their field of practice and post available attachment opportunities for students to apply. Aside from this, they confirm applications from students who wish to join their organization. This is not only convenient for both parties, but also makes the whole interaction very simple and fast.

### **1.5 Scope**

The project covers the process of applying for industrial attachment from the moment the student searches for a attachment post in a particular field of practice to the student being approved to the organization moving forward to scheduling for an interview.

### **1.6 System requirements**

#### ***1.6.1 Computer hardware requirements***

- i. At least 2GB RAM
- ii. Hard disk memory at least 250GB
- iii. Processor with a speed of at least 1.5GHz
- iv. Keyboard, mouse and a monitor

#### ***1.6.2 Software requirements***

A web browser, for example Mozilla Firefox, Google Chrome and Safari.

## **1.2 OBJECTIVES OF THE STUDY**

The aims of this study are:

- i. To enhance the database for proper information and record keeping.
- ii. To provide a reliable security access in order to avoid tempering with stored data.
- iii. To provide attachment nationwide.
- iv. To provide good attachment application with no corruption.
- v. To reduce paper work and wastage of time.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

This is a process of reviewing the current state of knowledge about the topic under discussion. The main purpose is to let the developer perform some study and analysis on the similar previous or current existing system, get a better understanding about the features offered in these system and thus let the developer gather valuable information and ideas from the existing system.

There are some research studies and other literature used to collect related information of the project and they include; interviews, internet, document sampling and reference books.

**Reference books** offer good starting point to find more detailed sources such as URL address as a link to the related website. These are some useful knowledge findings about the attendance system such as theories, diagrams

**Electronic journals** are the fastest growing source of information in the internet since they are always up-to-date. There are some sample software and information findings about the time and attendance system that can be found easily from the internet.

**Through interviews**, the user responses about this time and attendance system can referred to and it is a very useful feedback from them that can help develop better time and attendance system.

**Document sampling** can find out the information requirements that people have in the current system. It can also provide statistical data about volumes of transactions and patterns of activity.

## Online Attachment System

### **2.1 Fact and Findings**

Online attachment system is a software to manage and monitor student in application for attachment. This system may help the student to know the requirement needed by company. The system can provide the report for the time for starting and also show if there is some payment provided by the company.

The student can also log in to view the details according to his area of specialization and know the supervisor based on his/her field of study. The system can be refreshed when the attachment period end and new attaches start requesting for attachment.

### **2.2 Conclusion**

Conducting of literature review, there is more understanding on the research topic such as related information, trends of current system, necessary features, requirements based on the user's needs and demands.

Through literature review, a clear view is obtained for the research topic and better understanding is gained for the developed software system.

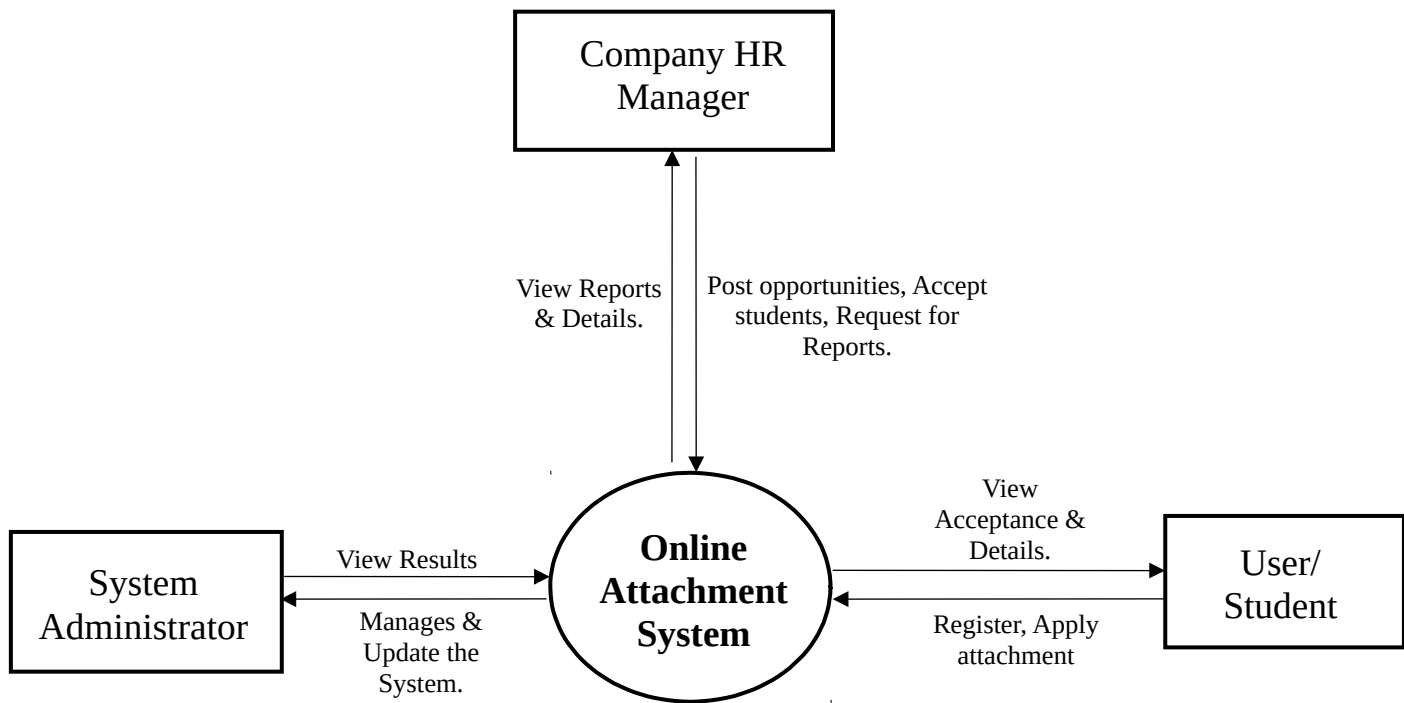
The process of conducting a research helps to determine the methodology that will be used in the project. The methodology that will be used in this project is the Model Driven Development (MDD) that will emphasizes the drawing of models to help visualize and analysis problems, define business requirements and design information system.

## CHAPTER THREE

### 3.0 Project description and results

#### 3.0.1 Major modules of the system

##### 3.0.1.1 Context diagram



**Figure 1: Online Attachment System context diagram**

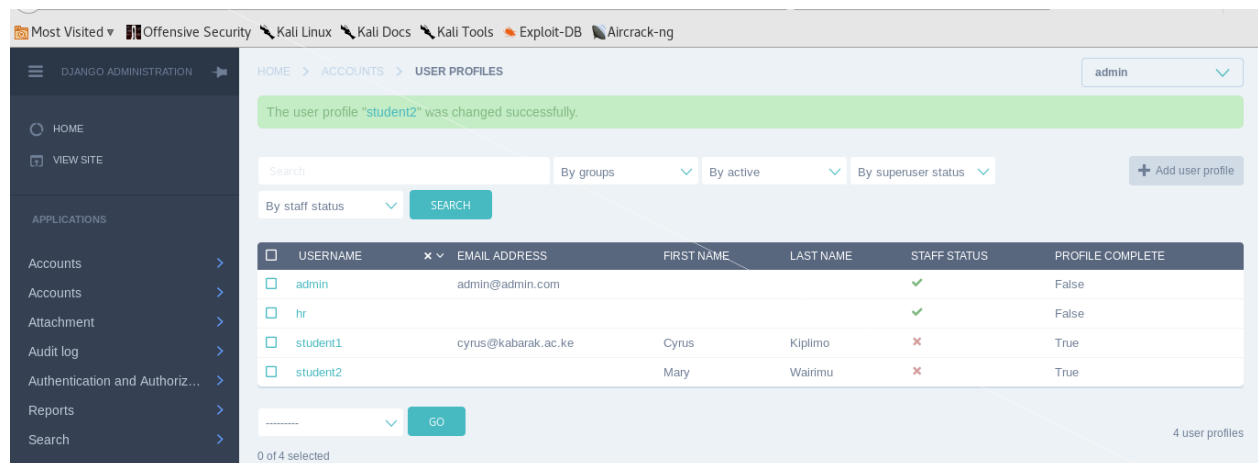




**Figure 2: Online Attachment System Dataflow Diagram**

The system has the following modules:

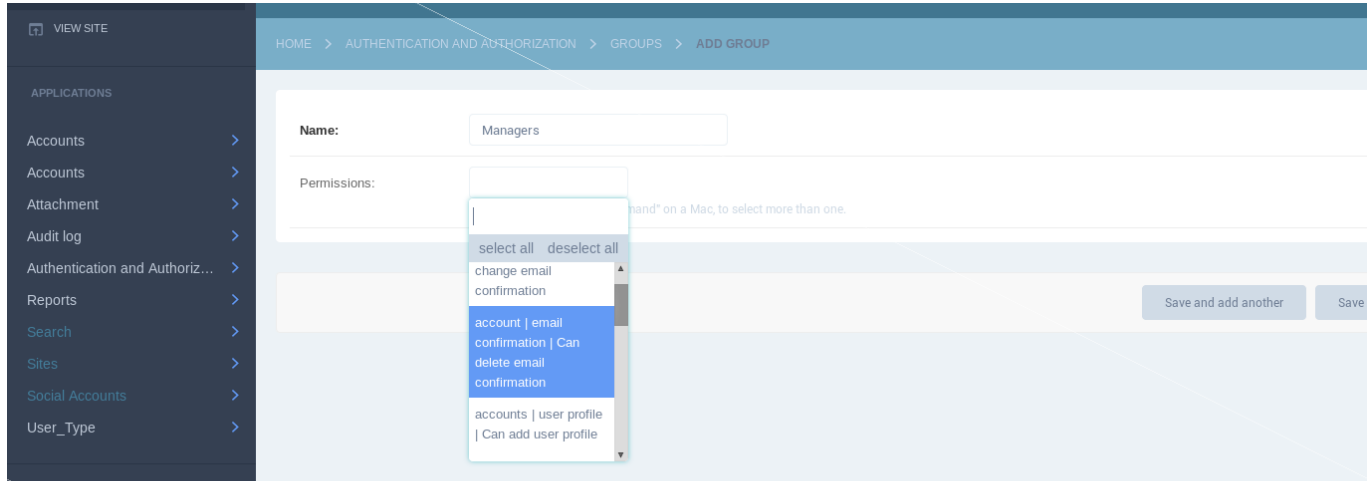
### 3.1 Admin module functionality



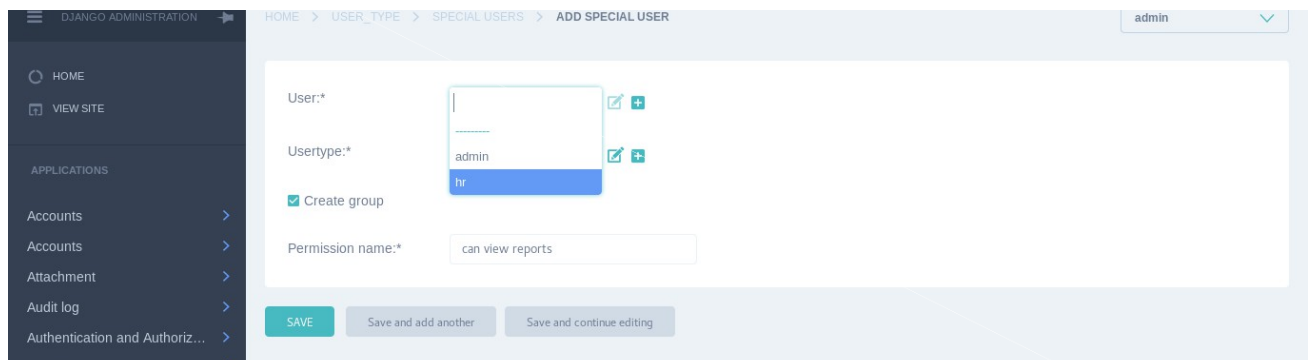
**Figure 3: Online Attachment System Admin user registration**



## Online Attachment System



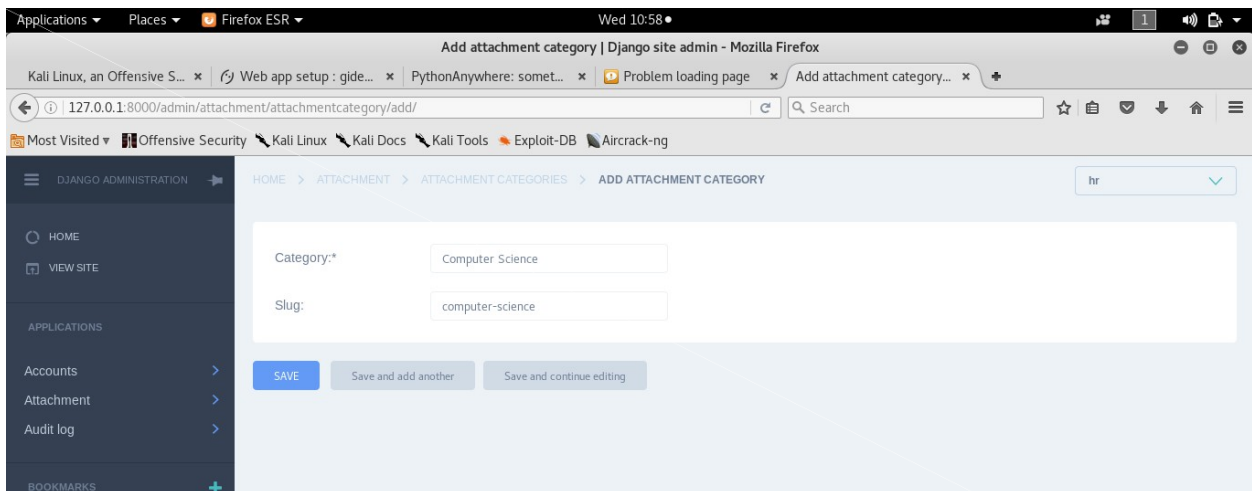
***figure 4: Online Attachment System admin create authorization groups and permissions***



***figure 5: Online Attachment System admin create special users with special permissions***

## Online Attachment System

### 3.2 hr module functionality



***Figure 6: Online Attachment System HR create attachment post category***

## Online Attachment System

Most Visited Offensive Security Kali Linux Kali Docs Kali Tools Exploit-DB Aircrack-ng

DJANGO ADMINISTRATION

HOME > ATTACHMENT > PREFERABLE ATTACHMENT COURSES > ADD PREFERABLE ATTACHMENT COURSES

hr

Name:\* IT DEPARTMENT  
A unique name that will help when you need to reuse this object

Courses:\*  
B.sc. ( Food Science & Technology)  
B.sc. ( Agriculture)  
B.sc. (agribusiness Management)  
B.sc. (food Science)  
Climate Change & Development  
Bachelor Of Science In Agribusiness Management  
Bsc.agricultural Economics  
Bsc.agricultural Education And Extension  
Bachelor Of Science In Agriculture(animal Science Major)  
Bachelor Of Science Fisheries And Aquaculture Management  
Bachelor Of Science In Wildlife Management And Conservation  
Bsc Food Science And Technology  
Bsc Food Nutrition And Dietetics  
B.sc. (agriculture)  
B.sc. ( Range Management)  
Bsc. Management Of Agroecosystems & Environment

**Figure 6: Online Attachment System HR add preferable Attachment Courses**

Applications Places Firefox ESR Wed 11:44

Add attachment | Django site admin - Mozilla Firefox

Kali Linux, an Offensive S... Web app setup : gide... PythonAnywhere: somet... Select special user to ch... Add attachment | Django ... geex-arts/django-jet: ...

127.0.0.1:8000/admin/attachment/attachment/add/

Most Visited Offensive Security Kali Linux Kali Docs Kali Tools Exploit-DB Aircrack-ng

DJANGO ADMINISTRATION

HOME > ATTACHMENT > ATTACHMENT POSTS > ADD ATTACHMENT

hr

Name:\* Web Development Industrial Attachment

Slug: web-development-industrial-attachment

Category:\* Information Technology  
Hold down "Control", or "Command" on a Mac, to select more than one.

Organization:\* ihub Nairobi

Requirements:\*  
1. Student must be in third year final semester.  
2. Must be taking a course that is in the field of computer science.  
3. Have basic knowledge of web programming.  
Upload Your Resume and Cover letter and we will vet it.  
Ihub Nairobi  
Email: info@ihub.com  
Tel: 07123456789

Preferable courses:\* IT RELATED COURSES

**figure 7:Online Attachment System HR create attachment post.**

## Online Attachment System

HOME > ATTACHMENT > ATTACHMENT APPLICATIONS > ATTACHMENT APPLICATION FROM STUDENT2

hr

History

STUDENT INFO STUDENT PROFILE INFO HUMAN RESOURCE FEEDBACK INFO IMPORTANT DATES ASSOCIATED ATTACHMENT POST

Resume:\* Currently: [cvs/CV.pdf](#)  
Change:  No file selected.

Cover letter:\* Currently: [students/applications/cover\\_letters/Cover\\_Letter.pdf](#)  
Change:  No file selected.

**Figure 8: Online Attachment System HR view attachment application**

HOME > ATTACHMENT > ATTACHMENT APPLICATIONS > ATTACHMENT APPLICATION FROM STUDENT2

hr

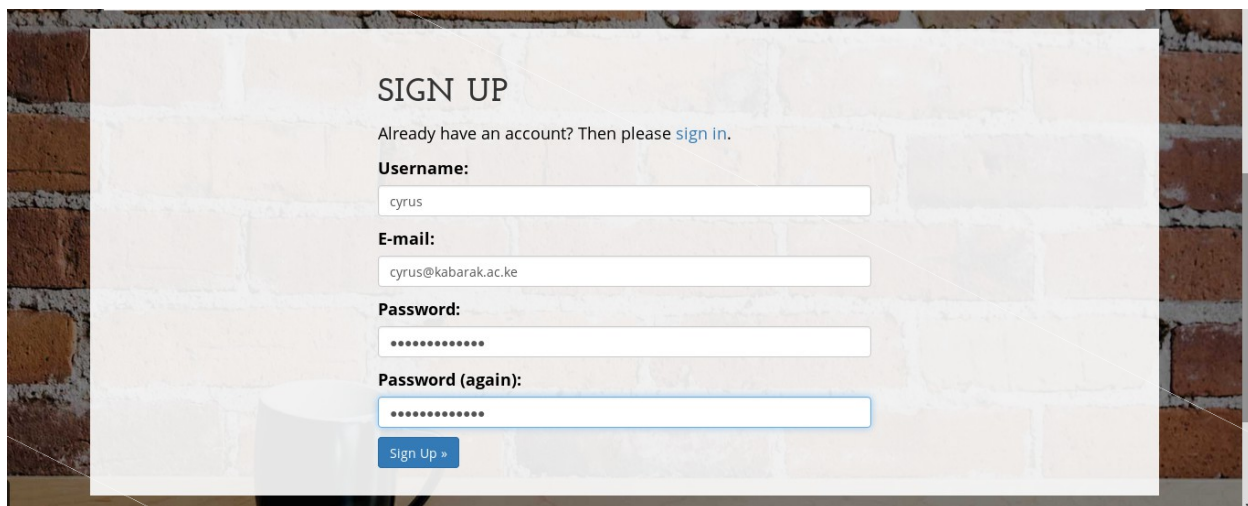
History

STUDENT INFO STUDENT PROFILE INFO HUMAN RESOURCE FEEDBACK INFO IMPORTANT DATES ASSOCIATED ATTACHMENT POST

Action:\*

**figure 9: Online Attachment System HR providing a feedback to attachment application**

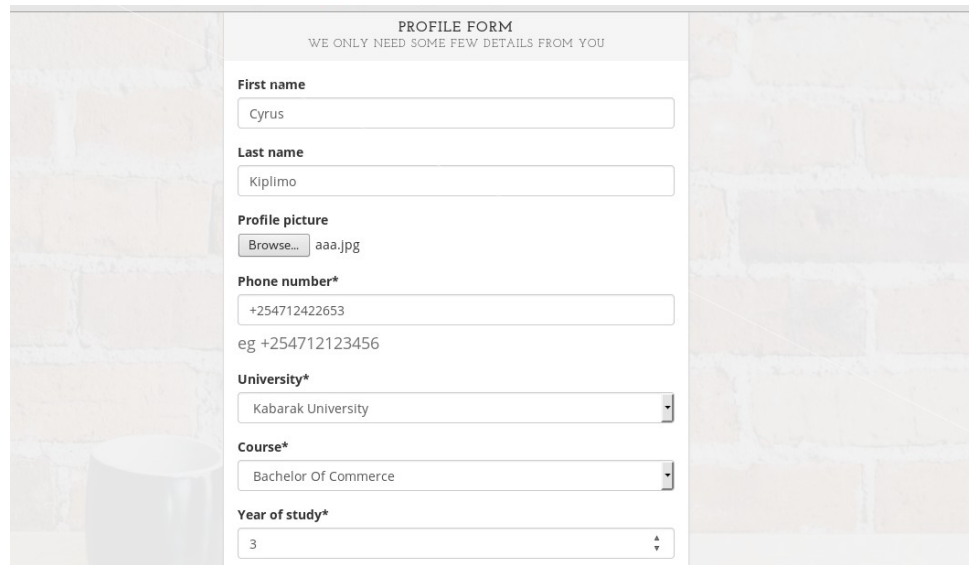
### 3.3 STUDENT MODULE FUNCTIONALITY



The screenshot displays a 'SIGN UP' form overlaid on a background image of a brick wall. The form is titled 'SIGN UP' in a large, bold, sans-serif font. Below the title, a line of text reads 'Already have an account? Then please [sign in](#).' in a smaller font. The form contains four input fields, each preceded by a label in bold: 'Username:', 'E-mail:', 'Password:', and 'Password (again):'. The 'Username' field contains the text 'cyrus'. The 'E-mail' field contains 'cyrus@kabarak.ac.ke'. The 'Password' and 'Password (again)' fields are filled with a series of dots, indicating masked text. At the bottom of the form, there is a blue button with the text 'Sign Up »' in white.

*figure 10: Online Attachment System Student Signup*

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The screenshot shows a web form titled "PROFILE FORM" with the subtitle "WE ONLY NEED SOME FEW DETAILS FROM YOU". The form is set against a background of a light-colored brick wall. It contains several input fields and dropdown menus for updating a student's profile.

**PROFILE FORM**  
WE ONLY NEED SOME FEW DETAILS FROM YOU

**First name**

**Last name**

**Profile picture**

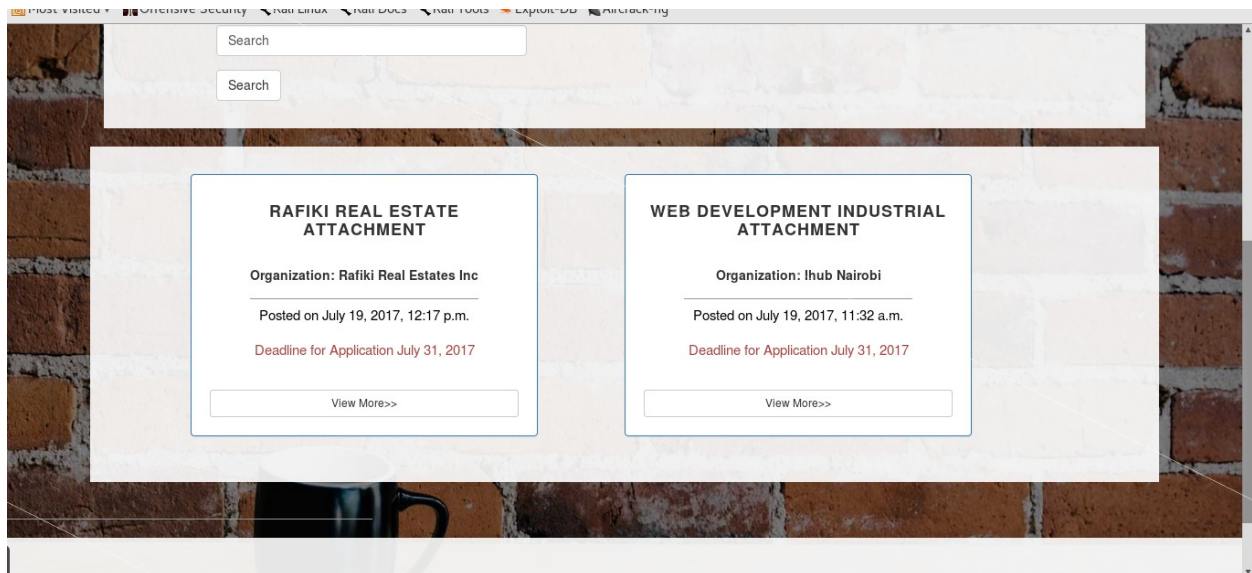
**Phone number\***  
  
eg +254712123456

**University\***

**Course\***

**Year of study\***

**Figure 11: Online Attachment System Student Update Profile**



The screenshot shows a web interface with a search bar at the top. Below the search bar, there are two side-by-side cards displaying attachment information. The background features a brick wall and a dark mug.

**Search**

**RAFIKI REAL ESTATE ATTACHMENT**

Organization: Rafiki Real Estates Inc

Posted on July 19, 2017, 12:17 p.m.

Deadline for Application July 31, 2017

**WEB DEVELOPMENT INDUSTRIAL ATTACHMENT**


Organization: Ihub Nairobi

Posted on July 19, 2017, 11:32 a.m.

Deadline for Application July 31, 2017

## Online Attachment System

***figure 12: Online Attachment System Student viewing available attachment posts.***



**RAFIKI REAL ESTATE ATTACHMENT**

<b>COMPANY/ORGANIZATION</b>
Rafiki Real Estates Inc

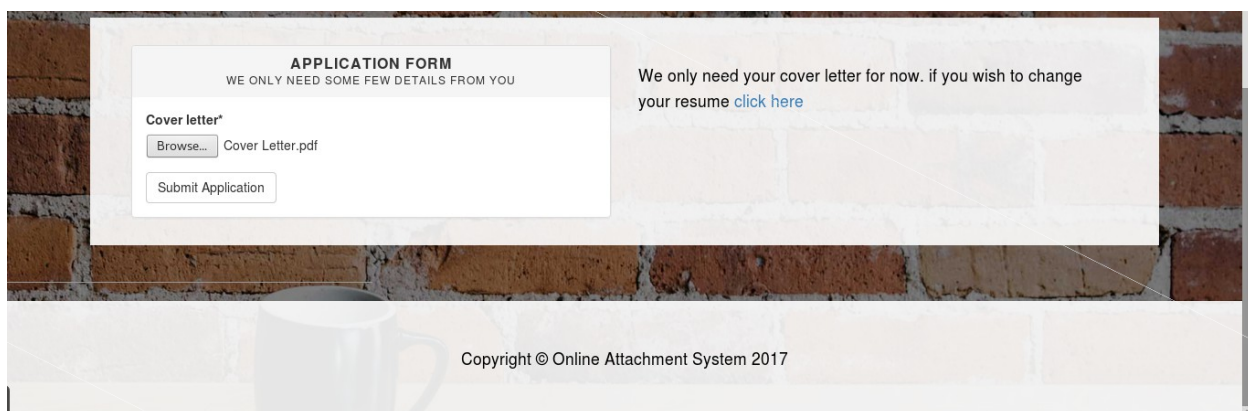
<b>CATEGORY</b>
Business

<b>REQUIREMENTS</b>
<ol style="list-style-type: none"><li>1. Must be undertaking any Business Course.</li><li>2. Must be in Fourth year or Third year.</li></ol> <p>Others</p> <ol style="list-style-type: none"><li>1. Any Business Certification Course would be an added advantage.</li></ol>

**Deadline**

🕒 July 31, 2017

***Figure 13: Online Attachment System Student viewing a specific attachment post***



**APPLICATION FORM**  
WE ONLY NEED SOME FEW DETAILS FROM YOU

Cover letter\*

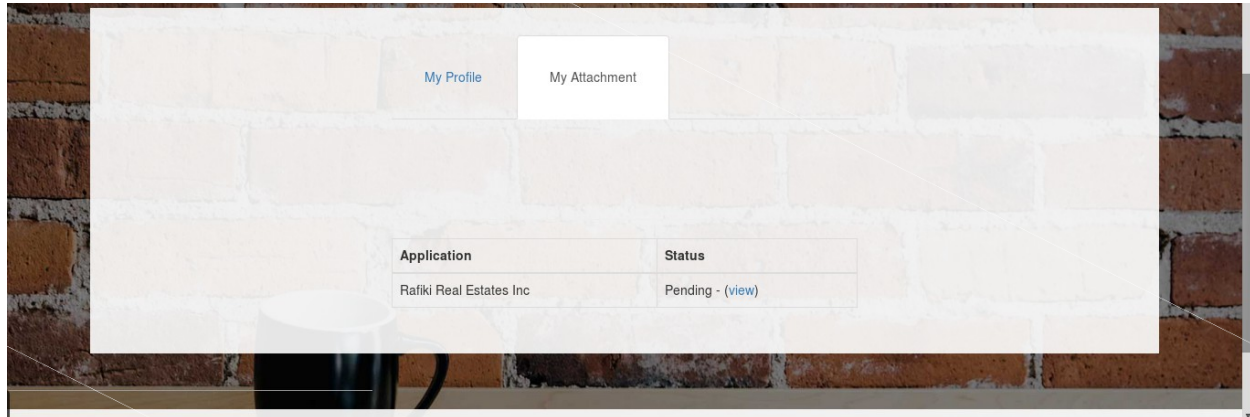
Cover Letter.pdf

We only need your cover letter for now. if you wish to change your resume [click here](#)

Copyright © Online Attachment System 2017

***figure 14: Online Attachment System Student Applying for attachment post***

## Online Attachment System



***figure 15: Online Attachment System Student Viewing application status.***



## CHAPTER FOUR

### 4.0 Recommendations

In this section of the documentation I'm going to offer recommendations on how the Online Attachment System should be deployed and implemented. The probable beneficiary, that is, Kabarak University main campus may however choose another method or way to implement the system that they see fit. The recommendations I offer herein are what I saw as the best approach to the implementation and the deployment of the Online Attachment System.

### 4.1 Implementation

This section is going to go into the implementation strategy that will be used once the Online Attachment System has been fully developed and refined. The methodology for the chosen change over strategy or deployment of the Online Attachment System will be stated and justification for the methodology of the chosen strategy of deployment or implementation will be offered.

#### 4.1.1 *Deployment and Implementation Methodology*

This section of the proposal document for the Online Attachment System shall specify the methodology that was identified as the best strategy for implementing the Online Attachment System once its development and refinement is fully completely done. The changeover and deployment strategy that was identified as best was the Pilot Operation strategy.

#### 4.1.2 *Pilot Run*

Here, implementation of the Online Attachment System is going to be done in a phased fashion. The entire completely developed system will be provided and made accessible to some of the probable beneficiaries of the Online Attachment System, that is, Kabarak University main campus students after it has been deployed on the underlying software, hardware and network infrastructure of Kabarak University main campus students and made the students of Kabarak University main campus made aware of the existence of such a system through email based announcements and how they can access the Online Attachment System. Within the first 3 of its deployment in the Kabarak University main campus network servers after the management approves the deployment, 500 students from all schools and faculties will be allowed to register

## Online Attachment System

and be the pioneer users of the Online Attachment System without discrimination on who is eligible and who is not eligible to take up the first 500 slots. The students will be required to register with their Kabarak University based email accounts for the Online Attachment System. Since the Admin Module of the Online Attachment System will have the capability to check on how many students have registered, once the first 500 slots have been exhausted, all other requests for registration will be put on hold until the pilot run of the Online Attachment System is complete. The students who registration request have been declined will be notified why through mass mails. The first 500 students to register for the Online Attachment System on a first come first serve basis will then use the proposed system to see if it functions as intended and whether it has the features that they requested for. This pilot run will also be used to determine whether the proposed Online Attachment System will run efficiently on the underlying software, hardware and network resources infrastructure that the organisation of the probable beneficiary has implemented, that is, Kabarak University main campus under varying conditions such as too many user requests and traffic, basically, scalability aspects of the Online Attachment System and if changes need to be made to the underlying code base of the Online Attachment System.

## **CHAPTER FIVE**

### **5.0 Conclusion**

I hope this proposal documentation for the Online Attachment System will be of great help to the relevant stakeholder who will be part and parcel of the development of the Online Attachment System and its deployment and implementation. This proposal document for the Online Attachment System should be treated as a fundamental apparatus that forms part of the core documentation for the undertaking of the proposed software project. By, now it should be relatively clear to the relevant stakeholders through the reading of this project documentation on what the proposed project seeks to achieve and what will the deliverables and end products will bring to the metaphorical table. I do hope however, the relevant stakeholders will see things from my perspective and therefore understand the need to take advantage of the opportunity that has been identified for the implementation of the Online Attachment System for the sole benefit of the organisation of the probable beneficiary, that is, Kabarak University main campus, an institution of higher learning of which I happen to be a student. Also of great importance, is that the option for adding or incrementing to the functionality and features of the Online Attachment System or getting rid of some of the functionality that they are proposed to as going to be included and integrated into the Online Attachment System is open. Should the need ever arise.

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