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**THE CO-OPERATIVE UNIVERSITY OF KENYA (CUK)**

**DIRECTORATE OF COMPUTING AND e-LEARNING (DCeL)**

**PROJECT PROPOSAL**

**RIARA UNIVERSITY ONLINE CLEARANCE SYSTEM FOR GRADUANDS**

**BY**

**TABITHER MUTHINI MAINGI**

**BITC01/0002/2018**

**SUPERVISOR: MR. PETER MUIGAI.**

**Project proposal submitted in partial fulfillment of the requirements for the award of the Degree in Bsc in Information Technology.**

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# DECLARATION

I hereby declare that this Project Proposal is my own work and has, to the best of my knowledge, not been submitted to any other institution of higher learning for any award.

Student Name: TABITHER MUTHINI MAINGI Registration Number: BITC01/0002/2018

Signature: ……………………….. Date: 5/04/2022

# APPROVAL

This project proposal has been submitted with my approval as the University supervisor.

Supervisor Name: MR. PETER MUIGAI

Signature: ………………………….. Date: 05/04/2022

# ABSTRACT

The project outlines and gives support for the Online Clearance System for Graduating Student

which will be developed as a final year Project at The Co-operative University of Kenya . The system will be developed for Riara University and it will be a web based.The research will be guided by the following objectives; to develop a system that will facilitate information exchange between the clearance information units (the Library, Student Accounts and Departmental) and the graduating student. This will enable both the student and clearance staff to clearly communicate upon the clearance process. Secondly, to develop a system that will allow the graduating student to fill the transcript request form online. This will eliminate the geographical barriers as the student will be able to commence the process of clearance as long as the student is using an internet able access device. To develop a system that will enable the student to check the clearance status online. This will enable the student to actually see how far the clearance process have gone without the even coming physically to the clearance departments. Provided that the student has been successfully cleared, the ticks will be shown on each respective department. The following research instruments will be used; MySql, Php, Apache and Wamp server. In addition to this, some information gathering methodologies such as the interviews, observations as well as questionnaires will be used. Finally the new system will be implemented using parallel conversion method.

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LIST OF ABBREVIATIONS

OCSG………………………………… Online Clearance System for Graduands

RU……………………………………. Riara University

PHP…………………………………... PHP Hyper-text pre-processor

CSS………………………………….. Cascading Style Sheet

HTML………………………………... Hyper Text Mark-up Language

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# CHAPTER 1

# 1.1 INTRODUCTION

In this new era, Information Technology is seen as an instrument which brings about

change across the globe if considered. Thus the capability of academic resource sharing,

instantaneously communication between students and lecturers, accurate and relevant

informational retrieval to complement the learning process.

This chapter will explain the Riara University Online Clearance System for Graduating student that will facilitate communication between the student and the clearance information units. In addition to this, the system will enable the student to fill the transcript request form online thereby overcoming the geographical barriers and the queuing of the students at various clearing points. The clearance process will have three processes that a student will undergo which involves the Student’s Academic Department, the Student Affairs Department and the Library Department. The system will allow the clearance information units to approve on or off the work and finally enables the student to download the approved form in order to completely disengage from the university and to collect the graduation certificate.

# 1.2 BACKGROUND TO THE STUDY

Clearance is termed as a formal authorisation or giving permission to someone to do something.

A clearance can be characterised as the way toward negotiating and determining any

authorisations that are needed to incorporate the use of someone’s property. In almost many

institutes, clearance systems for graduating students are very important since they derive a

number of benefits. To ensure that the student is eligible to for work without owing the

institute anything, the clearance process must be carried out. Moreover it is a mandate of the

university after the student’s completion of the final examinations to do these processes

provided that the student did not carry some modules on the previous levels. The system will

be developed after comprehensively analysing some problems that were experienced during

clearance process. The system will be developed because it proved to have the ability of

alleviating the pressure on the clearance in the event that vast number of students wants to be

cleared within a short period of time. Currently, there is alott of complains from students concerning their transcripts, it’s a process which takes long to be done and leads to disgraduation of many graduands. The system will be an equalizing agent as both the student

and the university management can have access to it. More so, with the enhanced new system,

there will be ubiquity that is the student or even the staff don’t have to worry about moving from

one point to another to conduct the clearance process. Finally, the system will offer some sophisticated search functionalities to search for one student’s information from more than a

thousand registered students in a system.

# 1.3 STATEMENT OF THE PROBLEM

A problem statement is a clear description of issues that need to be addressed .

At Riara University, clearance process for graduating students has

dependably been manual. It requires that the graduating students must be cleared in their

various departments and information units among which are:

1. Admissions to collect the Transcript Request Form

2. University Librarian Clearance

3. Students Affairs Clearance

4. Departmental Clearance

Apparently we are presently in an innovation era where technology and science is connected

to practically every part of life to enhance work in an efficiency and effective manner.

As a result implementing an automated systems that will complement and replace all manual

process within the institution is a way to go. The research problems identified are as follows:

• Information integrity if not completely ensured as there is high danger of

information to unapproved individuals that can unlawfully manipulate data

thereby causing information inconsistencies in the database.

• Provided that the personnel in charge is absent of the clearance processes, the

entire process is deferred until such a staff is available.

• It is time consuming in that too much time is squandered before a student

successfully finishes the clearance process.

• Unlawful clearance process by fraudulent personnel causing insecurity.

• Only predetermined number of students are attended a day, subsequently

unattended student should return the following day until they are attended.

Considering the case that the graduating students are over one thousand, the

manual system will work but it takes ages.

# 1.4 OBJECTIVES

An objective is a particular outcome that a system or an organisation is intended to

accomplish in the future .

## 1.4.1 SPECIFIC OBJECTIVE

1. To develop a system that will allow the graduating student to fill the transcript request

form online.

2. To develop a system that will enable the student to check the clearance status online.

## 1.4.2 GENERAL OBJECTIVES

1. To develop a platform that will facilitate information exchange between the clearance

information units (the Library, Student Accounts and Departmental) and the

graduating student.

2. To develop a system that will enable the student to track the progress of the clearance

process.

# 1.5 SIGNIFICANCE OF THE STUDY

This online clearance system will be designed to save user information, to provide concurrent access to authorized users and also to ensure integrity and accuracy of information system store by authorize users.

The online clearance system for graduating students will help ease the students from queuing to be cleared by the university.

# 1.6 SCOPE OF THE STUDY

The Online Clearance System for Graduands (OCSG) will been designed to manage clearance process for graduating students for only Riara University.

# 1.7 ASSUMPTIONS

All the graduands will be able to access a smartphone or a laptop.

Every student has the knowledge to interact with the computer system.

# 1.8 LIMITATIONS

For you to use the system you will have to be online, that’s been able to have a smartphone with network accessibility.

# 1.9 DEFINITION OF TERMS

OCSG – Means Online Clearance Sytem for Graduands.

Online – been able to be connected to a network of computers.

Clearance – authorized permission given to have an access to something.

System – an assembly of interrelated elements which we find interesting to study.

Graduand – is a graduating student who has accomplished her/his 4/5 years of study in the University.

# CHAPTER TWO

# 2.0 LITERATURE REVIEW

# 2.1 INTRODUCTION

In a new era where technology is advancing each day, computing has become a lifestyle. Technology has made acquiring of resources much easier and efficient. It has become a significant tool for more productive operations and accurate results.

# 2.2 RELATED SYSTEMS

In accordance to the case study by Ralph Buskirk and Schmidt (2007) regarding the use of online projects, students in favour of online projects indicate that accessibility to the professor for feedback is great. The study reveals that when implementing technology students are concerned with the expense of technology, the necessity for internet access and reliability of the technology. Research on students perception and satisfaction with online resource access provide the insights to students reaction and satisfaction with implementing of an Online Information System.

The “wide spread availability of computers and the internet provide considerable enrichment in terms of variety of material and formats for presentation over what was possible with the old correspondence course” (Walker and Kelly, 2007). The Chronicle for Higher Education reported that a university started the use of electronic education to add on to their curriculum, not as the main basis but as a supplement. This led to the implementation of online service such as a library management system, take lessons via distant learning and undertake an exam.

# 2.3 LIMITATIONS

For the case study of Ralph in 2007, the system was only able to solve a part of the many problems since it covered only the online book management whereas there are many fields it should have covered.

Walkers study also for students studying at a far distance will have to report to school and access the information physically while it can be accessed in a easier way online.

# 2.4 HOW THE PROPOSED SOLUTION WILL HANDLE THESE WEAKNESSES

Many systems have only solved an online clearance system but omitting some areas like transcript request module, hence not been able to fully serve the purpose. This system will be able to allow students to request for a transcript form online and check the clearance status.

# CHAPTER THREE

# 3.0 METHODOLOGY

# 3.1 INTRODUCTION

This stage will take into consideration the methodologies for the information gathering as well as the analysis of the proposed system. It will also describe the methodology for this dissertation and methods used for system development.

# 3.2 PROJECT DESIGN

## 3.2.1 DEVELOPMENT METHODOLOGY

According to Hamdy (2004), information gathering methodologies are used to collect the

information of the presently prevailing system with a particular organisation in order to

evaluating its shortcomings and weaknesses. The main objective will be to gather as much

information as possible from all the entities (all the clearance information unit entities and the

students) in order to thoroughly evaluate the advantages and disadvantages for each. During

the process of the information gathering, several methods will be considered such as

observations, questioners as well as the records review. However for this project

research the following data gathering methodologies will be used:

 Observations

 Questioners

## 3.2.2 DESCRPTION OF THE METHODOLOGY

The following methods will be used to gather information;

### 3.2.2.1 OBSERVATIONS

An observational study will be done which will be used by system analyst to closely monitor the performance of the workers within the working environment without the disturbances so as to come up with the evaluated information. During the process of direct observations, the system analysist will sit next to the users as the user will be doing the work and this will give the room for the analyst to ask questions instantly.

### 3.2.2.2 QUESTIONERS

Kendall and Kendal (2003) defined the questionnaires as the set of questions printed on a

document which are directed to the users of the system and later returned to the system

analyst. These questionnaires will be given to all the target users at the University. They will be presented so as to identify the drawbacks of the current system at the same time stating the recommendations for the proposed system.

## 3.2.3 JUSTIFICATION OF THE METHODOLOGY

### 3.2.3.1 FINDINGS FROM OBSERVATIONS

The observations will prove to be very vital since the researcher will manage to closely monitor the performance of each and every staff within the working environment. The probability of acquiring some fake answers will be alleviated. This will enable the researcher to have the

knowhow of what will be needed on the actual ground.

### 3.2.3.2 FINDINGS FROM QUESTIONNAIRES

The researcher will manage to collect responses from many student thus abundant amount of

data will be acquired in no time and with the little effort. It will be very easy to make some

evaluations since the responses will be fixed. Also, the staff will be able to ask free

questions. Questionnaires will give the researcher more knowledge of what will be needed to

increase the efficiency of the system.

# 3.3 SYSTEM REQUIREMENTS

It will analyse the feasibility study by evaluating operational, economic as well as technical factors that are concerned with the development cycle of the system.

## 3.3.1 FEASIBILITY

Feasibility study seeks to objectively and rationally bring out the weakness and the strength

of an existing proposed venture as well as threats which are found in the present environment

Castro (2002). The feasibility is used to determine as well as to document the project’s

viability hence the decision whether to do the project or not will be made. Regarding that,

economic, social, technical as well as operational benefits will be assessed. This analyses will

be used to determine the two options that is outsourcing or developing the system.

### 3.3.1.1 TECHNICAL FEASIBILITY

Technical feasibility focuses on comprehension of the current technical resources of the

institute or organization that the new system will provide, Castro (2002). Under this, there

will be a determination on whether the institute had enough technology such as hardware,

software as well as the technical expertise for the development of the system. However the

smooth operation of the new project is assured since the resources will be available .

SOFTWARE REQUIREMENTS OF THE PROPOSED SYSTEM

|  |  |  |
| --- | --- | --- |
| RESOURCE | SOTWARE VERSION | AVAILABLE |
|  |  |  |
| DREAMWEAVER | 8 | YES |
| MYSQL |  | YES |
| WAMP SERVER |  | YES |
| APACHE | 25.0 | YES |

## Table 3.1 : Software Requirements

HARDWARE REQUIREMENTS OF THE PROPOSED SYSTEM

|  |  |  |
| --- | --- | --- |
| ITEM | QUANTITY | DESCRIPTION |
| LAPTOP | 1 |  |
| ROUTER | 2 | 2gb ram 500gbdd |
| SWITCH | 2 | Cisco |
| SERVER | 1 | 5 pots |
| HP LaserJet Printer | 1 | 8gb ram, core I processor |
| Client server | 1 | 8gb ram, core I processor |
| Network modem | 1 | GSM Dongle |

## Table 3.2 : Hardware Requirements

### 3.3.1.2 ECONOMIC FEASIBILITY

Gibson and Hughes (1994) says that economic feasibility is comparing as well as

identifying the estimated cost against estimated value.

If the value of the new system is overwhelmed by the operating costs, the project will not be

economically feasible.

COSTS

The costs will be as follows:

 Developmental costs

 Operational costs

DEVELOPMENTAL COSTS

According to Porter (1980), the total costs incurred by an organization from the

commencement to the implementation of the project is known as the developmental costs.

|  |  |
| --- | --- |
| **ITEM** | **COST(ksh)** |
| LAPTOP | 2000 |
| BACKUP SERVER | 2700 |
| SYSTEM SOFTWARE | 2700 |
| SWITCH | 700 |
| NETWORK MODEM | 200 |
| HP LASERJET PRINTER  P1305 | 2700 |
| TOTAL | 11,100 |

## Table 3.3: Developmental cost

OPERATIONAL COSTS

Porter (1980) defined operational expenses as the expenses that the organization inquire

during its operations. They constitute the system maintenance, user training as well as all

other operational related costs.

|  |  |
| --- | --- |
| ITEM | COST(ksh) |
| User training | 1200 |
| System Maintenance | 1300 |
| Software Licensing | 700 |
| Stationary | 100 |
| TOTAL | 3,300 |

## Table 3.4: Operational cost

### 3.3.1.3 OPERATIONAL FEASIBILITY

Castrol (2002) defined operational feasibility as a measure of how good the system in finding

the solution of the problems effectively as well as to take advantage of the opportunities and

satisfying the requirements of the system under development. As a result, the analyses will

assist with the knowledge of whether the proposed system would rectify problems as well as

taking advantage of the opportunities. It is vital to comprehend how the proposed system will

fit into the daily operations of the institute. It is not always important to evaluate whether the

system can work instead the evaluations should be on how the system will work. It

investigations will review that the manual system was not working as expected as seen by some

forms that get lost.

### 3.3.1.4 SOCIAL FEASIBILITY

Castro (2002) defined social feasibility as the interactions of various entities within the

system environment. Under this study, some evaluations of the project alternatives will be

conducted on the aspects of the general culture and societal ethics. For example the factors

that affect the environment needed to be carefully known and weighed. At Riara

University they depend excessively on the system so the proposed system must provide at

least no wrong as well as obsolete information.

Considering the staff or personnel in charge, the proposed system will provide more

information about the student profile and more information about the clearance process.

# 3.4 DATA COLLECTION AND ANALYSIS

## 3.4.1 METHODS

A qualitative research will be done so as to meet the objectives of this dissertation(research). Qualitative research is more appropriate for small samples even though outcomes are quantifiable as well as measurable. The basic advantage of conducting this research over quantitative research will be that of offering a comprehensively complete analysis as well as description of a particular research subject without reducing the participant’s response. On the other hand, the effective of qualitative research will be based on the abilities of the researcher since they come from the personal interpretations as well as the judgments of the researcher. Regarding the purpose of this research some comprehensive questionnaires will be conducted. This will aim to uniquely identify the opinions, emotions as well as the feelings of the questionnee.Personal questionaring involves direct as well as personal contact between the questionee as well as the questioners. The sample selections will be conducted to those who had special relationship with the process under investigation.

## 3.4.2 TOOLS

Are the instruments which will be used to rectifying a particular problem. These instruments involves;

 DREAMWEAVER

A Dreamweaver is a computer software program which is used for the development of

the web-based systems Welling (2001). It assists in designing intuitive and responsive

web systems despite the resolutions.

 PHP

PHP is a powerful computer programming language which is designed in distinction

from other programming languages to assists in the development of highly featured web based

systems Welling (2001).

MYSQL 5.0

According to Welling (2001), MYSQL is a relational database which is used in

conjunction with PHP in the development of the web-based systems.

 APACHE

Apache is a tool which is found under XAMPP and it is used as a go between the server

and the application system Welling (2001).

# 3.5 APPENDICES

WORK PLAN

According to Porter (1980), work plan is defined as a document that is used by the consulting

organisations to schedule a project and its activities. It is normally used to define the

timeframes between the start of the project and its ending. In addition to this, it is used to

show or determine the resources that might be needed until the project is done. In order to

come up with the dates of each and every process or phase, the work plan, the

the gantt chart will be used.

## 3.5.1 SCHEDULE GANTT CHART

According to Castrol (2002) gantt chart is defined as the list of the events logically

organized in accordance to the time will they take place.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Items of Work/ Activities** | **Months** | | | | | | | | | | | |
|  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
| **Conceptualization and scoping of Project title** | ……… |  |  |  |  |  |  |  |  |  |  |  |
| **Proposal writing and submission to DCeL** |  | ……… |  |  |  |  |  |  |  |  |  |  |
| **System Development** |  |  | ……… |  |  |  |  |  |  |  |  |  |
| **Project Report Writing** |  |  |  | ……… | ……… | ……… | ……… | ……… | ……… |  |  |  |
| **Project Presentation and submission** |  |  |  |  |  |  |  |  |  | ……… |  |  |
| **Corrections and final submission** |  |  |  |  |  |  |  |  |  |  | ……… | ……… |

# Fig 3.1 : Schedule Gantt chart

## 3.5.2 PROPOSED BUDGET

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Items** | **Specifications** | **Quantity** | **@ksh** | **Amount, ksh** |
| **1** | **Printing paper** | **A4, high quality** | **5 reams** | **500** | **2,500** |
| **2** | **Printing tonners** |  | **2** | **6,000** | **12,000** |
| **3** | **Writing pad** | **A4, high quality** | **5** | **100** | **500** |
| **4** | **Transport** |  |  |  | **10,000** |
| **5** | **Equipment** |  |  |  | **15,000** |
| **6** | **Subsistence** |  | **15 days** | **1,500** | **22,500** |
|  | **Total** |  |  |  | **62,500** |

## Table3.5: Proposed Budget

# 3.6 REFERENCES

Welling (2001).

Castrol (2002.

Hamdy (2004).