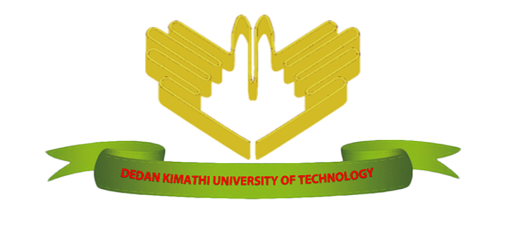
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**DEDAN KIMATHI UNIVERSITY OF TECHNOLGY**

**PROJECT PROPOSAL FOR DEGREE IN BSc. INFORMATION TECHNOLOGY**

**BY**

**KIMANI PATRICK GICHINGA (C025-01-0966/2015)**

**EBURSARY SYSTEM**

**SUPERVISOR**

**MR. MICHEAL KAMAU**

**SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF DEGREE IN BSc. INFORMATION TECHNOLOGY**

## **DECLARATION**

I hereby declare that the project submitted to the Department of Information Technology in the School of Computer Science and Information Technology in partial fulfillment of the requirements for the award of degree of Bachelor of Science in Information Technology in Dedan Kimathi University of Technology is my own original work and has not been submitted to any other college/university or published earlier.

STUDENT’S NAME : KIMANI PATRICK GICHINGA

REGISTRATION NO.: C025-01-0966/2015

SIGNATURE : ……………………..

DATE : ……………………..

This proposal has been submitted for examination with my approval as University Supervisor:

SUPERVISOR’S NAME : MR. MICHAEL KAMAU

SIGNATURE : …………………..

DATE : …………………..

## **ABSTRACT**

An EBS is a system that is aimed to link students/pupils to institutions that offers bursaries as part of community building. Bursary is a monetary award given by an institution to an individual or to a group of persons who cannot afford to cater for their full amount of fees e.g. schools. This system should create a centralized platform where institutions can post bursaries where needy students can access and apply online.

The learner(student/pupil) is expected to give his/her personal information, academic level and financial status of the parents. Also, the institutions willing to use this platform are expected to register. Once the learner has registered in the system, he/she can to subscribe emails from institutions he/she want to receive instant email from upon new bursary is uploaded in the system. The student/pupil is expected to download the form from the system and do as the requirements instruct him/her to do.

Upon completion of all activities required for a bursary i.e. filling, stamping and attaching necessary documents, the learner is expected to upload scanned documents, thus submitting them for approval, as the institution waits for original documents. Hence, the system should indicate whether they were approved, pending or disapproved. Furthermore, the system should show how many beneficiaries a learner benefits from and the amount he/she has/had acquired.

Iterative model of software development will be used to develop the system majorly because it focuses on an initial and simplified implementation, which results to progressively gains, more complexity and a broader feature set until the final system is complete. The requirements needed for the system will be captured using questionnaire and use of past records as the method of fact findings. During development of the system, client-server model will be used to build EBS. HTML and CSS will be used to create client-side user interface while PHP and MySQL will be used to develop database management and server side.

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**Abbreviations**

EBS -Ebursary System

TVET – Tertiary and Vocational education and Training

HELB – Higher Education Loan Board

# CHAPTER ONE: INTRODUCTION

## **1.1 Background of the study**

A bursary is a monetary award given by an institution to an individual or a group of persons who cannot afford to cater for their full amount of fees e.g. school fees. Therefore, bursary is meant to help the needy persons in this case those who are financially unstable. In Kenya, most of the bursaries are provided by the government. The government have even introduced free education to Kenyan children so that a very large group of this children can be enrolled to school. By so doing the number of children joining school have continually grown tremendously,

A bursary is a monetary award given by an institution to an individual or a group of persons who cannot afford to cater for their full amount of fees e.g. school fees. Therefore, bursary is meant to help the needy persons in this case those who are financially unstable. In the year 2003, National Rainbow Coalition (NARC) Administration led by the former Kenyan president, H.E. Mwai Kibaki promised Kenyans free primary education upon their election. On January 6th ,2003, the ministry of education, science and technology launched the free primary education as they had pledge. The administration had opted this so that they not only fulfill the pledge but also to realize the conditions set therein in Children’s Act 2014 that states that every child is entitled to education. By so doing, the government aimed to provide everything that is needed for day to day learning of a school including provision of teachers, books, paying of school fees to every pupil and so on.

Furthermore, in the year 2017, the jubilee administration pledged to Kenyans that they shall provide free secondary education to all students in secondary schools. In addition, they promised 100% transition of class eight (8) pupils to secondary school. This was to ensure that every Kenyan child acquires basic education; hence illiteracy is totally eliminated to the upcoming generations.

However, the common *wananchi* had in mind that free education is that which he/she isn’t entitled to any expense incurred in the whole process of educating their beloved kids. In contrast, they found themselves paying some amount of fees that catered for teachers who were employed by Parents Teachers Association (PTA). This is because the government didn’t manage to provide adequate teaching personnel to cope with the tremendous increase of pupils been enrolled to class one. Most of children joined the school but some didn’t because they felt that the few school fees required to cater of school expense was still a burden to them.

As time went by, the government introduced Constituency Development Fund (CDF) kitty, which main purpose was to fund projects in the society. The main projects were infrastructure, health and education. This was to aid those who didn’t manage to take their young ones to school to do so without difficulty. But the population was large making it hard for CDF kitty to cater for the needs of the needy. Therefore, few or no development could be implemented because much of this kitty was channel to education sector.

However, this is possible if the institutions e.g. companies and both government of Kenya collectively decide to share the cost of providing education to our young ones so that the government, through its development kitty set aside, can develop the country as well.

Any institution operating within a society, must set aside a certain amount of funds that is supposed to cater for the needs of that affected community. For example, kengen company, which its main role is to generate power, emits Sulphur oxide from its drills. When it rains, this gas reacts with water to produce sulphuric acid which results to collision of iron sheets. Furthermore, kengen emits other gases that results miscarriages to woman in the community. For this reason, though the loss and risk around the community cannot be avoided, kengen sets a certain amount of funds aims to funds various projects in the community. Such projects include: building schools, sponsoring students who excels in their academics, provision of bursaries, constructing roads, digging boreholes etc. However, some very productive institutions are set in places where the population around the place is scarce. This means that, the amount to cater for the community may be extemporary huge hence it is prone to misuse e.g. funds earned in Tullow oil’s Lokichar project in Turkana county. If there is a central platform were companies willing to provide educational support in form of bursaries to the pupils and students of Kenya as part of giving back to the community will be more preferable rather than misusing these funds to perform other duties that could otherwise be postponed so as we prioritize education first.

Therefore, EBS is aimed to centralize all bursary applications from various institutions says county governments, companies, various businesses etc. Any institution willing to promote education sector by providing bursaries to the students should upload their bursary application form in the Ebusary platform where pupils/students can view and download, then apply. After, the other processes are done completely i.e. filling the learner details, legal stamping and attaching relevant documents, one should upload the scanned documents to the system as he/she wait to send original copies. Original copies shall be sent only when approval of scanned documents have been made, the institution only needs them to verify the application and for record-keeping. When approval is done, the system should send an instant message through an email to notify the learner that he has been approved for a bursary by a certain institution and he/she should thereafter sends the original documents to allow disbursement of funds to the school’s account to continue after verification of the original documents. However, if the student is disapproved, an email should be sent to him/her showing that he/she has been disapproved.

## **1.2 Problem statement**

Access to bursary is not that easy especially to most students living in remote areas where information is not readily available. Also, some may be having the information but accessing the bursary forms from the respective companies/institutions may be hard. In addition, the process of acquiring a bursary form may be tedious, complicated and costly in terms of transport. For example, when one need to apply for a bursary, one has to acquire that form from the institution offering the bursary because not most of them have a website where you can download the form from, neither do they have a particular mechanism to notify members of the public, i.e. students, that there is a new bursary application that is pending. In this regard, one has to travel for long distances to places where these institutions are located to get the application form.

When filling

When filling a bursary form, the requirements will be the identity card, academic progress and the legal stamps. Basically, stamps include for the area administration stamp e.g. chief and the school’s principal/deans stamp. During submission of these documents, they might delay in case one send using ordinary postal office. Upon disbursement of bursary fees, one need to travel to the institution or keep calling the institution official to check if he/she was successful and if yes, how much did he/she manage to get.

## **1.3 Objectives**

### **1.3.1 General objective**

The main objective of an Ebursary system is to create a widely accessible system that will facilitate learners to institutions(companies) offering bursaries.

### **1.3.2 Specific objectives**

Some of the specific objectives that the system will do are:

1. To create a system that will provide timely information about bursary application forms posted on the system by sending emails to the bursary beneficiaries.
2. To create a system that will ensure only genuine needy students acquires bursary through e-requesting to respective authorities.
3. To create a system that will diversify bursary issuance over a large geographical area.
4. To create a system that will enhance efficiency on provision of bursary e.g. making access to bursary from various institutions is easy and time-saving using a single platform.
5. To create a database that store records for needy students who apply for bursaries to various institutions and the amount that one acquired.

## **1.4 Problem justification**

Most of the countries worldwide have promised to provide education to every child in primary and secondary schools by the year 2030. Some pledging to provide free education to them. However, since some of this country’s Gross Domestic Product (GDP) is low, they may not be in a position to cater for free education. In this regard, if institutions are allowed to provide bursaries to learners as part of community building, this burden could relatively be reduced. The many dropout cases experienced in various part of the country due to lack of school fees could not be there.

## **1.5 Scope**

EBS will be expected to be used commonly in institutions of learning e.g. universities, secondary schools etc. and those that are willing to offer bursaries to students. The learners shall provide their financial and personal information. For example, their identities, academic level, amount of school fees to be paid, etc.

# CHAPTER TWO: LITERATURE REVIEW

## **2.1 Introduction**

Bursaries are usually given to students who does better in their studies as a form of awarding them. Those who give bursaries to student mostly do not care about the financial background of the student. They care more on the performance of the student. In Kenya, most of the residents believes that only the government is responsible in providing bursaries. This is not the case. According to (“Kenya Law: Kenya Community Development Foundation,” n.d.), any institution that is in the midst of a community should participate in community building. That is, the profit the institution gets, they have to set aside some amount of funds that should be used as part of community development. These funds may be used to construct roads, drilling boreholes, sponsoring students, giving bursaries to the needy students and so on.

Some learning institutions have created systems that allows donors to donate funds to their students. Schools in Canada, United states of America, Germany etc. uses this system to collect funds from donors so as to assist students, who are best performers and financially unstable, pursue their studies without interference. However, in Kenya, this is normally done by a particular institution which is seeking financial assistance from members of public. For example, institutions like Dedan Kimathi University of Technology has got a platform that was started by Christian union that raises funds to cater for the needs of the needy students e.g. pays for school fees. These platforms are only created to cater for the needy students just within the organization.

### **2.1.1 Case one: Wishbone**

Wishbone is a non-profit organization which advocate for well-wishers to support high school students, specifically those living in Los Angeles, New York city and the Bay area, who are low income earners and they are not in a position to raise fees. These students are sponsored to study for summer programs.

According to (“Wishbone,” n.d.), Wishbone organization is a charity platform where any person across the world, who wishes to donate to a certain student, can do so forthwith. All those students, though a few of them, who need help, their photos are uploaded to wishbone website where donors can view them, then select the student they wish to donate to. If one is unable to choose, the system suggests one student whom he/she can donate to. However, despite the organization having a wider source of income from across the world, the number of students who benefits from the organization are few.

Furthermore, any student who wishes to enroll to this program must meet all the condition laid down by the organization. First, one must be a current high school student and who is a low-income earner. Secondly, one must be living within the four cities; namely Los Angeles, New York City, Bay area and Connecticut. And finally, one must be passionate about a particular interest, say leadership.

In contrast, EBS shall cater not only for high school students but also pupils in primary school and students in universities and colleges all over the country. Unlike wishbone organization where donors are members of public, this system shall involve all companies/institutions in Kenya that wishes to offer bursary to needy students across the country as part of community building.

### **2.1.2 Case two: Higher Education Loan Board**

Higher Education Loan Board (HELB) is a state corporation which was started back in 1995. Its main aim was to source funds and lend affordable loans to students undertaking various courses in a recognized higher education institution. According to (“Higher Education Loans Board - Empowering Dreams,” n.d.), HELB which majorly depend on national government to fund students, though nowadays is partnering with some other institutions such as corporates, county government etc., only an approximate of 20000 students have benefited in the last four (4) years. Compared to the number of youths per year that joins universities and colleges, this number is incomparable.

HELB invites individuals, corporates, constituencies, county governments etc. to partner with them so that they can create a revolving funds, bursary schemes and scholarships to the needy students. By so doing, HELB manages these funds on their behalf. However, HELB offers loan which one has to repay upon completion of his/her studies. This loan is classified into undergraduate loan which is offered to undergraduate, postgraduate loan which is offered to post graduate and TVET loans which is offered to college students. Therefore, it deals solely with higher education only. Furthermore, HELB also offers bursaries but to very few students. Unlike, other bursaries, HELB concentrates on higher education only. Primary and secondary school are not part of it. Therefore, any needy student (primary/secondary) who may wish to apply for bursary, cannot get help.

This system, therefore, discriminate needy persons as far as academic level is concerned.

### **2.1.3 Case three: Latymer Foundation**

Latymer foundation is a school that was developed through generous act of charity in London. It was founded by Latymer upper. According to (“Latymer Foundation Hammersmith,” n.d.), Latymer Foundation is a foundation that is aimed at raising funds that are used to support the expansion of bursary programme. This system is used to mobilize people to take part in inspiring dreams of the present and next generations of Latymerians. The system actually links the students and the alumni who usually take part in giving back to the community.

This foundation majorly focuses on awarding bursaries to students that do well in their study regardless of their financial background. Therefore, awarding bursaries acts as reward for better performance. (“Bursaries - Latymer Foundation,” n.d.). However, the population benefiting from this system is very small. Only those who studies at London Borough of Hammersmith. Hence, other learners how may wish help and are not willing join them cannot apply for bursary.

### 2.1.4 Case four: kin Canada system

This is a system is used by Kin Canada Foundation in Canada that allows individuals or organizations to donate towards projects that are aimed at improving the livelihood of the community. Kin Canada foundation is a charitable organization whose mandate is to achieve its main objectives of serving the community’s greatest need and to help resource and develop many of the programs provided for the benefit of its members. It also channels donations to support initiatives financially such as by use of bursaries and a number of donation campaigns.

Due to the national contributions by the key donors, the volunteers, who initially are supposed to pay lumpsum of money, they pay less (“Donate - Kin Canada,” n.d.). However, bursaries that kin Canada foundation provides through Hal Rogers Endowment funds, are only used to fund post-secondary schools/institutions. Bursaries are only awarded based on financial need, community and volunteer involvement etc. (“HAL ROGERS ENDOWMENT FUND / KIN CANADA BURSARIES | Ways To Give,” n.d.).

In contrast to kin Canada system, EBS will not only fund higher learning institution, but also primary and secondary schools. It will also be able to handle a large population.

### **Summary**

According to the above research, most of the system allows donors across the country or even from worldwide to donate funds to them despite them having a very small population to donate to. Most of the donations made are made by members of public and others the alumni of the school, hence the beneficiaries are less. In addition, most of them are much specific with the academic level they fund i.e. university/college, secondary etc. EBS will involve all companies which wishes to offer bursaries to students at any part of the country as part of community building.

# CHAPTER THREE: METHODOLOGY

## **3.1 Introduction**

### 3.1.1 Iterative model

Iterative model is will be most preferable model to develop web-based systems. This is because, it focusses on initial, simplified implementation which then progressively gains more complexity and a broader feature set until the final system is complete. And because it’s a cyclic process, after the initial planning stage, a small handful of stages will be repeated over and over, with each completion of the cycle incremented, hence improving the software.

Iteration model consists of the following stages: initialization, planning and requirement gathering, design and coding, implementation, testing and evaluation.

**Planning and requirement gathering** – in this stage, mapping of the specifications will be done. Both software and hardware requirements are gathered so that to prepare on the upcoming cycles.

**Analysis and design** – after planning, analysis of the requirements is done so that an appropriate business logic of the system can be created. Then design follows thereafter.

**Implementation** – coding and implementation into initial iteration of the system will follow.

**Testing** – perform a series of tests so that to ensure the system works as expected.

**Evaluation** – after completion of the previous stages, users of the system are invited to examine the system. If satisfied with it, deployment of the system is done.

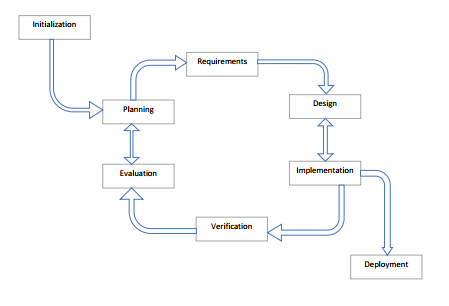


Figure 3:1 - Iterative Model

## 3.2 Facts finding methods

Data I collected created useful information. Processes needed to carry out the objectives are also  
collected. How the system interacts with the users is an area worth studying. The facts on the storage for that data and processes and how interfaces happen is also important to collect.

### 3.2.1 Questionnaires

Open-ended questionnaire was used to capture the respondents’ own opinion about the proposed system while closed questionnaire was used to capture specific area of interest for the developer of the system.

### 3.2.2 Past records

Used the existing materials e.g. online materials and journals to get information on the approximate number students who are in need of the bursary and how EBS will benefit them.

## 3.3 Data presentation

Data collected from various sources was presented using pie charts.

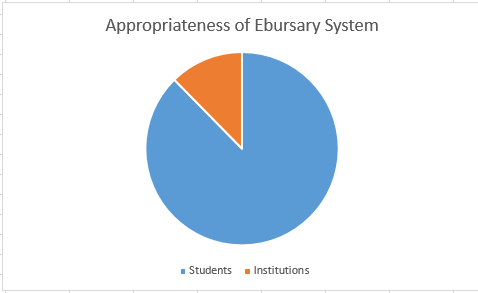


Figure 3:2 Appropriateness of the system

## 

## 3.4 Resources

To develop an EBS, one will need the following hardware and software resources:

* Hardware

1. Computer (4GB RAM, core i5 CPU 2.53GHz, 500GB HDD).
2. Modem
3. External Hard disk

* Software

1. Xampp server
2. Laravel 5.4
3. Operating system i.e. windows 10(64-bit OS)
4. Browser e.g. chrome
5. Editor e.g. atom

# APPENDICES

### Appendix A:

Table 1 : Schedule

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Duration | 1st month | 2nd month | 3rd month | 4th month | 5th month | 6th month | 7th month | 8th month |
| Proposal writing and presentation |  |  |  |  |  |  |  |  |
| Requirement Analysis and design |  |  |  |  |  |  |  |  |
| Coding and testing |  |  |  |  |  |  |  |  |
| Implementation |  |  |  |  |  |  |  |  |
| Documentation |  |  |  |  |  |  |  |  |
| Presentation |  |  |  |  |  |  |  |  |

### Appendix B:

Table 2: Budget

|  |  |  |
| --- | --- | --- |
| **NO.** | **TASK DESCRIPTION** | **TOTAL AMOUNT** |
| 1 | Computer(laptop/desktop) | 40000 |
| 2 | Hard disk and flash disk | 5600 |
| 3 | Modem | 1000 |
| 4 | Printing | 2000 |
| 5 | Miscellaneous | 4000 |
|  | **Total** | **52,600** |

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