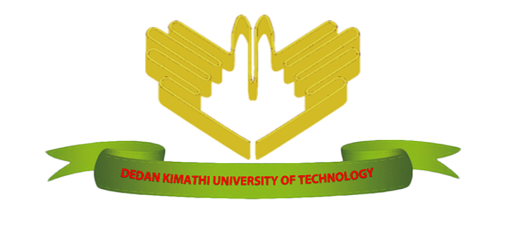
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**DEDAN KIMATHI UNIVERSITY OF TECHNOLGY**

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

**BY**

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

**E-BURSARY 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 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 student 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 system should indicate whether they were approved, pending or disapproved.

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 - E-bursary 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. Besides bursaries, the government have even introduced free education to students so that to increase the number of children that are enrolled in various school. By so doing the number of children joining school have continually grown tremendously. Though still the government is increasing the amount it allocates to free education, the amount of funds that each student is getting has decline proportionally meaning a student gets small amount than that he/she used to get initially so that each student gets equal portion. Therefore, there is need for institutions(companies) to provide part of the amount they allocate for community building to cater for bursary. This will ensure that those needy students who’s their portion provided by government is little in terms of catering their needs, can apply for bursary, thus they can be maintained in school instead of them missing examinations due to lack of school fees.

When one applies for a bursary, he/she is required to provide his/her personal information and his/her academic progress. He/she is required get approval from school administration to confirm if he/she is really a student in the said school. Also get approval from area administration e.g. chief who confirms that the student comes from their region and he/she is needy.

## **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. 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 obtain that form from the institution offering the bursary because not most of them have a website where you can download the form from. In addition, some organizations do not have an efficient mechanism to notify members of the public, i.e. students, that there is a new bursary application that is pending. For this reason, one has to travel for long distances to places where these institutions are located to get the application form. Further, when filling a bursary application, an applicant is required to get his/her bursary form stamped by the dean of students and one’s area administration officer i.e. chief for approval. This process may be long and time wasting. Furthermore, there is no mechanism that notifies students that they were awarded bursary funds upon disbursement of funds by the company. If cheque is not presented to school within the specified time, they become stale, hence these funds returns back to the company’s accounts.

## **1.3 Objectives**

### **1.3.1 General objective**

The main objective of this study is to come up with an Ebursary system, a widely accessible online platform, that will facilitate the processes of offering and applying for bursaries.

### **1.3.2 Specific objectives**

Upon completion of Ebursary system, the following objectives will be realized;

1. To provide timely information about bursaries on offer as posted by companies
2. To automate the manual bursary application processes
3. To provide a validation mechanism for applications by ensuring that only those who are genuine/needy benefit with bursary funds.
4. To provide a database that stores records for applications.
5. To provide a mechanism for reports generation, as transaction summaries and/or notifications

## **1.4 Problem justification**

As seen in the problem statement, at present, manual bursary application processes are both inefficient and ineffective. The proposed E-bursary system aims at automating the whole process of bursary application so that to increase transparency in bursary issuance. Also improve on efficiency as one no longer needs to travel to these institutions in order to get bursary forms. Furthermore, since institutions all over country will be the key provider of bursaries, the number of beneficiaries, including those in remote areas, will increase due to diversification and information centralization- in a single platform where one can apply online to any institution of his/her interest. Also, validation of the students by the school administration and area administration which will be done through eRequesting will ensure only genuine students acquires bursaries.

## **1.5 Scope**

The proposed Ebursary system is expected to be usable in an internet enabled environment, by local universities in Kenya, to cater for search of financial resources by needy students. This will ensure that needy students do not miss examinations because they never paid their fees in time. The student 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.

HELB offers bursaries but to very few students which must be repaid upon completion of one’s studies. However, this loan is repayable with an interest rate which means if one stay for long without clearing the loan, the amount will continually rise to a large amount. So, some students, though needy, may fear acquiring this loan in fear of how it will be repaid back considering that securing a well-paying job in Kenya is hectic.

### **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. 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.(“Bursaries - Latymer Foundation,” n.d.).

### **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.

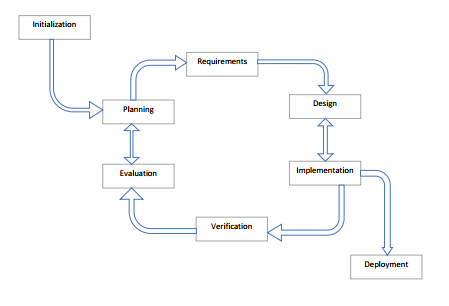


Figure 3:1 - Iterative Model

## 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 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** |

## References

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