

DESIGN AND IMPLEMENTATION OF STUDENT BURSARY AWARD PROCESSING SYSTEM

BY:

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CERTIFICATION

This is to certify that this project work is carried out **IBRAHIM ABDULGA NI U OLAITAN** with matriculation number **ND/23/COM/PT/0055**, has been read and approved as part of the requirements for the award of National Diploma in Computer Science.

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DEDICATION

This project is dedicated to the creator of the earth and universe, the Almighty God. It is also dedicated to our parents for their moral and financial support.

ACKNOWLEDGEMENT

Our gratitude goes to Almighty God for sparing our lives and making it possible for us to complete our National Diploma Program, we say Glory be to God Almighty.

Our special gratitude goes to our parents who have been our support. We thank them for their moral and financial support and for their untiring efforts to see us succeed in our career.

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ABSTRACT

Bursary award is a type of financial award provided to certain students to assist with the costs associated with attending a college or university. A bursary award, or simply bursary, is a monetary award provided to students based on financial need and/or academic performance. A bursary award is provided to the student by the educational institution. This research will eliminate the problems facing the bursary Department, by designing a suitable program (software) to handle those issues affecting the bursary, award section. This application is developed with Microsoft Visual C# as Frontend and MYSQL Database as Backend.



CHAPTER ONE

GENERAL INTRODUCTION

1.1 INTRODUCTION

A bursary is a monetary award made by an institution to individuals or groups of people who cannot afford to pay full fees. In return for the bursary, the individual is usually obligated to be employed at the institution for the duration of the bursary. According to The Good Schools Guide, a bursary is "usually for helping out the impoverished but deserving and those fallen on hard times. (Fred, 2021).

The allocation and management of bursary awards for students is a critical process that ensures financial aid reaches deserving candidates efficiently and transparently. However, traditional manual methods of managing this process often lead to delays, errors, and lack of accountability. With the increasing number of applications and the need for fair distribution, a robust and automated system becomes indispensable (Anjola, 2024).

This project focuses on the design and implementation of a Student Bursary Award Processing System, which streamlines the

management of bursary applications, evaluation, and award processes. The proposed system employs advanced digital tools to automate data collection, eligibility verification, and decision-making, thus minimizing manual intervention and ensuring accuracy and equity(Anjola, 2024).

By leveraging a centralized database and user-friendly interface, the system provides an efficient platform for applicants to submit their information and for administrators to review and process applications seamlessly. Additionally, the system includes features for real-time notifications, status tracking, and report generation, contributing to enhanced transparency and accountability in the bursary award process (Eniola, 2022).

The accumulated files and other documents makes collection and disbursement of finance tedious and cumbersome when processed manually, after much observation on the activities of the students bursary award system. With the introduction of computers, an automated form of processing which makes processing easy is enhanced. It promotes prompt information retrieval and entry, accuracy is highly heightened and fraud can easily be detected (Anjola, 2024).

Bursary award is a type of financial award provided to certain students to assist with the costs associated with attending a college or university. A bursary award, or simply bursary, is a monetary award provided to students based on financial need and/or academic performance. A bursary award is provided to the student by the educational institution Wikipedia.com.

This research will eliminate the problems by designing a suitable program (software) to handle those issues affecting the bursary, award section.

1.2 STATEMENT OF THE PROBLEM

The manual process of awarding bursary to student is time consuming and prone to errors. The delay is even more pronounced during the payment period when all the students submit their receipts to the bursar for verification before bursary payment is made. As expected in manual processes, this has led to endless queues during the verification period. The queuing is as a result of the bursar officer personally going through the receipts of the students one after the other to confirm if a particular student is entitled to be awarded the bursary payment. This project work focuses on developing

software that can handle this task efficiently. The bursar officer can now verify the students for bursary without the need for them queuing because the process is now computerized which will be fast, reliable and efficient.

1.3 AIM AND OBJECTIVES OF THE STUDY

The aim of this research is to design and implementation of student bursary award processing system and it has the following objectives:

- i. To reduce stress and gain easy access to students record
- ii. To demonstrate the capabilities of computer by exploring the intricacies associated with software design.
- iii. To aid easy processing of students bursary award and ensure high level of accuracy

1.4 SIGNIFICANCE OF THE STUDY

This research aimed at eradicating the entire setback encountered in the manual bursary award process, which includes time consuming, endless queues, prone to errors and omission of document. This research is designed to eradicate or minimize the problems encountered in the bursary department.

rtment and also enhance easy processing of students bursary award and ensure high level of accuracy.

1.5 SCOPE OF THE STUDY

This study covers the computerized bursary award processing system in Bursary Department. This is an electronic/automated payment of student bursary in tertiary institution which would boost the student's morale and therefore increase productivity; even as computer based system is used for such payment, it will bring about easiest and fastest mode of operation as well as accurate security and good financial management.

1.6 ORGANIZATION OF THE REPORT

This is the overall organizational structure of the work as presented in this project. Chapter one of this project deals with the general introduction to the work in the project. It also entails the aims and objectives of this project, the significance of the study, the methods used for data collection, the scope and limitation of the study.

Chapter two centres on the literature review, computerization of curr

ent state of the art and discussion of related aspect of the project topic relative to computer technology.

Chapter three covers the analysis of the existing system, description of the current procedure, problems of existing system (procedure) itemized, description of the proposed system and the basic advantages of the proposed web based application for library management.

Chapter four entails design, implementation and documentation of the system. The design involves the system design, output design form, input design form, database structure and the procedure of the system. The implementation involves the implementation techniques used in details, choice of programming language used and the hardware and software support. The documentation of the system involves the operation of the system and the maintenance of the system.

Chapter five deal with summary, conclusion, and recommendation.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 LITERATURE REVIEW

Before now, people/students often embraced technological changes with the fear of the unknown and as such decided to carry out activities in their usual way (manually). However, the 21st century came with a lot of challenges that only the use of computer can solve problem effectively. Maslow's theory of management which is of the view that metrication of an organization financially will bring about increase in productivity. Therefore, the payment of student bursary in a particular school enhance the productivity of such school for both the management and students as well, even as a computer – based system is used for such payment for easiest and fastest mode of operation as well as accurate security and good financial management (Peterson, 2013).

Supporting education through bursary award to students of higher learning is an important aspect of government's effort to assist students at all levels of learning to allow them afford the basic needs that accrue during their stu

dies. It's a government plan to develop a critical mass of professionals who would serve as catalysts of change and agents of scientific and technological advancement, as well as sustainable economic development. However, the cost of education has risen drastically over the past few years hindering the families of low income earners to send their children to school as they can barely afford the cost. The money allocated to each student from the government through the school which is referred to as bursary is intended to be supportive to the student's financial problem (Mohammed et al, 2016).

A bursary is a form of financial assistance given to a student for further study or training. Bursaries may differ in terms of amount of money and duration. Students are selected according to various criteria set by donors, which could include academic merit and financial need. Some bursaries require that students sign a contract to enter the employment of the donor after graduation (Wikipedia.com).

In Kenya, the Constituency Development Bursary Fund (CDBF), which was formally referred to as Secondary School Education Bursary Fund (SEBF), was introduced by the government for secondary schools during 1993/1

1994 financial year, with an initial allocation of Ksh. 25 Million. By the 2002 / 03 Financial Year, total allocation had reached KES 548 million. At the inception of the scheme, funds were disbursed directly to secondary schools from the Ministry of Education (MOE) headquarters, based on the school's student enrolment. Schools were expected to distribute the bursary funds in accordance with guidelines issued by MOE. The bursary targeted the vulnerable groups namely; orphans, girls, children from slums and the poor in high potential areas and in arid and semi-arid lands (ASAL) districts (Republic of Kenya, 2005).

A Bursary Award is a type of financial award provided to certain students to assist with the costs associated with attending a college or university. A bursary award, or simply bursary, is a monetary award provided to students based on financial need and/or academic performance. A bursary award is provided to the student by the educational institution. Bursary awards are part of the Canadian and United Kingdom financial aid programs. Bursary awards are not repaid, and are used to provide certain students with money to cover gaps between the amount of financial aid a student needs to

attend the school and any available government assistance that he or she is eligible for (investopedia.com).

2.2 REVIEW OF GENERAL TEXT

The use of the Internet has been extremely fast since it can now be accessed almost anywhere by numerous means. Its advancement has provided a tertiary institution with the ability of paying bursary awards into the students' account directly from the school data base where the students' records will be checked for verification which will sweep out the manual process of awarding bursary to the students. It has also introduced a new era of computing, providing the basis for promising application areas like e-banking, e-exams, e-ticketing etc (Anthony, 2000).

In Singapore, the government through the Ministry of education has a bursary scheme in place known as Edusave Merit Bursary that is meant for students whose household income is less than \$4000 a month. They provide \$300 for secondary 1 to 5. Eligibility is for students who are already in secondary school and whose performance is good that is 25% in a stream (MOE, 2012). This goes a long way to retain students who could have other

wise dropped due to lack of school fees.

In Zambia and Malawi, studies show that close to 70% of secondary school students are entitled to bursary schemes which are supposed to cover 75% tuition fees for most beneficiaries and up to 100% for vulnerable groups such as double orphans. Bursary schemes are also favored to improve retention of girls in the schools (World Bank, 2006).

Though bursary schemes are designed to improve retention of students in public secondary schools some students drop out of school because of extreme poverty levels which the scheme does not address like provision of uniform and other personal effects.

In the late '90s came the introduction of the World Wide Web, and the implementation of the Web browser. This graphically oriented view of data quickly became popular for the Internet. Today we find much of our on-line interaction taking place through the browser. As the number of users on the World Wide Web increases every day, its use in different areas is also growing. One of the most powerful aspects of the web is that anybody who has internet access can browse on the net. This enables sharing the informatio

n worldwide.

According to Ernst (2001), Internet has become the means for conducting growing numbers of transactions because of the speed, flexibility, and efficiency that it offers. This technology is required by every organization if it does want to reach out to its customers in this age of globalization.

A scholarship is a form of financial aid that is specifically geared towards students who are attending college. It is used as a way of financing their education, and it may pay a part of their education, or it may pay the entire cost of a student's tuition.

As Exforsy (2014) pointed out, Scholarships will require students to meet certain requirements, both before and after they've obtained it. Most of these scholarships will require students to have a minimum GPA, and they may also require them to take a certain number of credit hours within the first 12 months of their schooling. While some scholarships are based on gender, others are based on the field the student is majoring in.

Scholarship, especially in developing countries, has been considered as a means to improve the access, participation, enrolment and achievement of students from poor and disadvantaged background (Sanothimi, 2010).

2.3 FINANCIAL ASSISTANCE THAT CAN BE AWARDED TO STUDENTS

BURSARIES: A bursary is a form of financial assistance given to a student for further study or training. Bursaries may differ in terms of amount of money and duration. Students are selected according to various criteria set by donors, which could include academic merit and financial need. Some bursaries require that students sign a contract to enter the employment of the donor after graduation.

SCHOLARSHIPS: The scholarship amount is normally based on outstanding academic achievement. Scholarships do not normally require the recipient to repay the scholarship and usually, have no employment conditions attached.

STUDY LOANS: A loan is money borrowed, which must be repaid upon completion of studies. Loans are available from banks and institutions like Edu-loan. The NSFAS (National Student Financial Aid Scheme) is a South Africa

n Government-funded structure offering assistance to academically deserving and financially needy students. Students may apply for this type of loan at the Financial Aid offices and up to 40% of this type of loan can be converted into a bursary, depending on the end-of-year results.

2.4 **BREAKING DOWN BURSARY AWARD**

Bursary awards are part of the Nigerian financial aid programs. Bursary awards are not repaid, and are used to provide certain students with money to cover gaps between the amount of financial aid a student needs to attend the school and any available government assistance that he or she is eligible for. Unlike merit scholarships, these awards are given on the basis of financial need, making them much different than scholarships that are tied to academic achievement.

These types of awards are most often funds that have been donated generously by companies, private donors, foundations, and government funding. Many bursaries have additional criteria connected to them alongside the financial need. Eligible students in Canada and the United Kingdom can apply to various bursaries based on fit and need. There are also bursary awards s

pecifically geared towards students with disabilities, as well, and some schools offer emergency bursaries for international undergraduates. Academic advisors in the financial aid departments of colleges and universities can assist with a student's search for appropriate bursaries.

1.5 PROCESS MODELING

System models have effective place in any system development project. System analyst often constantly deals with unstructured problems during system analysis. Among methods to structure such problems is to use pictorial representation commonly known as models. A model is a representation of reality (Whitten, 2004). For good understanding of a system, system analyst use models to document system requirements. Process model is a formal way of representing how a business system operates (Alan and Barbara, 2008).

1.6 PROCEDURES FOR DEVELOPING PROCESS MODEL

In process modeling, the highest-level of data flow diagram is known as the context diagram. A context diagram is a data flow diagram of an organization.

onal system that shows the system boundaries, external entities that interact with the system and the major information flows between the entities and the system (Dennis, Wixom, and Roth, 2006).

BURSARY DEPARTMENT

Every tertiary institutions in Nigeria has a Bursary department with the responsibility of carrying out its Finance and Accounting functions. The Bursary Departments of the Universities are responsible for the effective coordination of all financial functions and the Bursary Department has many units including Budget and expenditure unit, Cash Office and Revenue unit, Final Accounts unit, Salaries, Loans and advances unit (Gary and Harry).

1.7 CASH OFFICE PROCESS MODELLING

In the bursary department, cash office unit is the unit that is charged with the responsibility of monitoring cash operational functions while maintaining a high level of internal controls and professional accuracy and is dedicated to providing courteous and outstanding university service, and accurate

the posting of accounts. The unit is responsible for the entire university's various balances of cash. This cash could be currency, personal cheques, certified cheques, money orders, traveler's cheques, or bank drafts. Cash unit functions may vary and depend on the university agreed cash management policy. However, the unit function incorporates two key responsibilities: depositing cash and recording cash received in the University's accounting records. The accurate recording of receipts involves verification and classification of the amounts. These procedures are carried out by various sections in the cash office unit and these sections are referred to as the processing sections. Figure 1 shows the Cash Office context diagram (as a process). Mail, Payment Vouchers and Cash are input of the Cash Office System while e-payment schedule, Standard Journal Vouchers Schedule (SJV) and Cash are the output of the same system (Rosziati and Siow, 2010).

CHAPTER THREE

RESEARCH METHODOLOGY AND ANALYSIS

This system was developed using the following technologies:

- i. C# for building the structure
- ii. MYSQL for database management

In the design of this project work, a high level programming was used in order to achieve a good end. Before the design, the front and backend of a design must be known, therefore C# is the programming language used for the scripting of the design and MYSQL database was used for the database in the implementation.

3.1 RESEARCH METHODOLOGY

Data collection method employed in gathering information for this project involves Internet survey and literature review. Browsing the internet helps in gathering related online journals and texts. Relevant information are extracted from these materials and used in aiding the effective analysis and design of this project.