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A Computerized Student Complaint Management System

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ABSTRACT

In most universities, the conventional way of students forwarding complaints is by complaining directly to the staff in charge either through verbal communication or paper documentation. This approach is ineffective and inefficient as it lacks proper documentation process which optimally leads to improper handling as so many complaints can be missed up if formal approach is not used. Each complaint has different range of needs, degrees of attention and actions. Therefore, it is very crucial for the university to develop a computerised system that is able to handle students complaint appropriately in a fast and efficient manner. This paper is therefore aimed at designing and implementing a computerized system to manage students' complaints in the university. The developed system was tested and the results showed ease of use, accountability and proper information documentation and retrieval as it relates to various categories of students complaints.

Keywords: student complaint, system architecture, analysis, systems design, computerised system.

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1. INTRODUCTION

According to Fredrick (2014), complaint is an expression of dissatisfaction or a circumstance regarded as a cause for such expression. Most universities today make use of the conventional method of forwarding compliant to their superiors. This is also known as paper report or through phone call. Usually, where complaints are written in a formal form or through phone call where customers or consumers can forward their complaint directly to the administration is known as Helpdesk or Direct-line.

Considering this conventional means of managing complaints, which involves, evaluation, information storing and report production, it requires a lot of time to be finished and many tedious problems will arise. Thus by implementing a computerised complaint management system, students can easily forward their complaints to necessary university authority and the university management in turn are able to tackle the complaint base on its necessity. Generally, poor communication can result in poor services or products being provided by the organization or government. Whilst concentrating on the topic of complaint handling, universities can achieve an efficient success factor by increasing their student satisfaction and their loyalty. Therefore each university needs to develop its internal and external communication towards its staff, students and alumini to achieve success. Although appropriate communication can reduce user dissatisfaction; it cannot eliminate complaint.

Nowadays many of organizations are facing problem in data or complaint management. The major way of forwarding complaints is by complaining directly to the management. Each complaint has different range of needs, actions and degrees of attention. Therefore, it is very crucial for an organization to develop a system that is able to tackle the complaint base on its necessity. The problems starts when there is no specific or synchronization during the complaints delivering. There are various ranges of attention intensity and elements in complaints expression. The problem arises when every complaint needs special attention from the authority. It is difficult for administrator to manage it, as there are things to be checked and verify. The main problem faced by many people or organizations is the problem in managing their data. This is inherit in most organizations since the organizations do not have a centralize system and database. Computerized system is implemented due to the demand of faster access and paperless work in administration management. Thus by implementing this system, hopefully the system will help the user of universities to handle all their student complaints across various units in the university.

1.1. Research Objectives

The aim of this research is to develop a computerised student complaint management system. The system will seek to provide the following facilities:

i.) Keep records of students' complaints.
ii.) Provide facilities for searching and extracting any existing information about students complaints;
iii.) Provide facilities for fast retrieval of students' complaints information for the purpose of enquires and investigations where applicable and to ease report generation.

2. REVIEW OF RELATED LITERATURE

Razali. (2011) develop a new complaint management system called (e-Admin) as a platform for UiTM Pahang's customers to complain and comment regarding the services and facilities provided by the university. Najar (2010) tried to improve on the relationship between citizens and government by presenting a new model based on Service Oriented Architecture (SOA). With utilizing the presented model in government body on one hand governments will have the ability to minimize citizens' dissatisfaction and on the other hand it can encourage citizens to participate in controlling government body such as governments' staffs and organizations.

According to Oliver (2012), an effective CMS should be able to achieve the following

- Provide a simple and clear process (to staff and public), fair and timely complaint outcomes and information to help improve service delivery.
- Include written policy and procedures, a complaints recording and reporting system and other resources including trained staff and website.
- Meet recognized standard and principles of good complaints management practice.

Every organization is expected to adopt, a complaints management process for resolving administrative action complaints. This statutory complaints management process is a Compliant Management System (CMS). According toTaylor, (2013), the benefits of an effective CMS includes; providing a structured and consistent approach to complaints management across organization, promoting customer satisfaction enabling poor decisions to be rectified quickly and efficiently, saving money by resolving complaints internally, close to the source, preventing complaints from unnecessarily escalating, a situation which can be resource intensive and lead to adverse publicity, identifying areas, practices, procedures and services for improvement and satisfying organization's statutory obligation to implement a complaints management process.

3. METHODOLOGY

The CMS design flow diagram is shown in Figure1.0. it depicts the various stages when determining the need of a CMS based on organisation's objectives, consideration of the substance, form and complexity of the CMS, preparing the CMS procedures, implementing the CMS procedures, CMS maintenance and evaluation. After the evaluation process, if there is need to improve on or modify the CMS, the procedure is flowed again as indicated by the arrow connecting line to determine the CMS objectives.

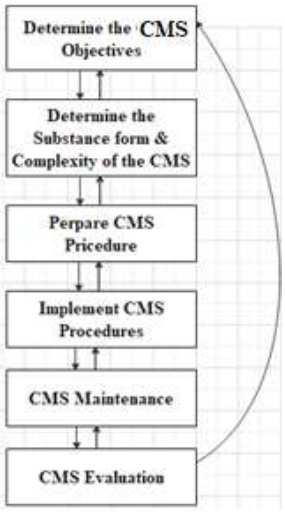

Fig 1: CMS Design Flow diagram

The first step of an effective CMS should have clearly stated and defined objectives. The objectives should be determined by considering recognised principles of good complaints management and relevant statutory requirements. The objectives of an effective CMS should generally address: complaints visibility and accessibility, complaints resolution process, complaints resolution timeliness, complaints resolution outcomes, and complaints monitoring (e.g. complaints data is used to identify improvements to decision-making, practices and service delivery). Each organization has flexibility to determine the substance, form and complexity of their CMS. An organization does nor need to adopt a complex or detailed CMS. It requires only that an organization's CMS comply with certain requirements such as the nature of functions and services provided, geographic distribution of organization offices, the source of complaints, the volume and types of complaints. A good CMS is one that provides a simple and fair process that is clear to the public and staff and meets good complaints management principles and statutory requirements. An effective CMS should be supported by approved procedures. Derrick (2014), requires the administrative action complaints process be supported by written procedures. Organizations are required to adopt CMS procedures. CMS procedures should be consistent with and incorporate the statutory requirements and policy.

3.1 Systems Analysis

System analysis is the stage in software development life cycle where the existing system is investigated in order to identify its problem and weaknesses. For this research work, an investigation of the existing system of complaint used by a tertiary university was performed. Data about the existing system was gathered through the use of interviews conducted with the public relations officers, some staff in student affairs unit and some students of the university.

The nature of the activities as regard filing issues of complaint about the institutions and other related cases were extensively discussed. Relevant information needed for this research work was also related to us by the officials contacted. The use of personal interview turned out to be essential in gathering data about the existing system. During these personal interviews, the officers interviewed were able to give first-hand information about the facts needed. The interviewing process also provided the freedom of pursuing different lines of investigations as deemed necessary while the interviews lasted.

From the analysis of the existing system of complaint management processes, we arrived at the following findings:

a. There is the problem of improper recording keeping;
b. The officers of the student affairs unit usually have problem in retrieving peoples complaints files for enquiring or investigation purposes due to the improper arrangement of the files in the shelves.
c. This further slows down the investigation process. Furthermore, when an investigation process is being slowed down, such a complainer does not get timely feedback and this may to some extent distort the entire system.
d. Some of these officials in most cases tend to keep aside some complaints, ensuring that they do not get to management's table, for fear of be prosecuted, especially when it is an issue relating to them or their office.

3.2 The Need for an Alternative System

In view of the numerous problems faced by the existing system, the need to adopt an alternative system for the university is germane. This proposed system will be designed to provide the following

a.) Keep store of personal information of complainers and their respective complains;
b.) Provide facilities for searching and extracting any existing complain information.
c.) Provide facilities for fast retrieval of complainer's records for the purpose of enquires and investigation where applicable.
d.) An audit trail facility that can keep track of user logins and records of various complains entered by any user at any particular time and report generation.

3.3 System Design of the Tertiary Student CMS

The system design architecture is shown in Figure 2.0. it shows entire system consist of three layers namely the external layer or the frontend; this is where the users of the software interface with the computer system for input, queries and report generations. The second layer or the middle layer of the structure depicts the various processes and operations required to generate the needed responses to users' queries from the frontend. While the third layer or backend, refers to the data storage of the entire information of the CMS.

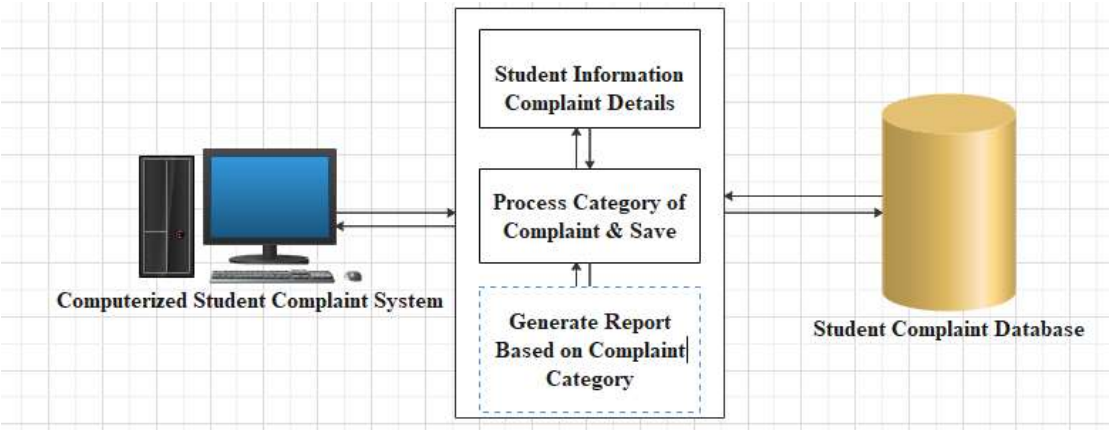

Fig 2: Student CMS Architecture

The system has only one master database file. This file is made up of one table as shown in Table 1.0. The table of the database file is designed with specific format for each field. Input is processed against the file to produce the necessary output. The method of access and record layout were put into considerations while designing of the files for the CMS.

Table 1: Student CMS Table

S/N	FIELDNAME	TYPE	SIZE
1.	Complainer's reference number	Text	8
2.	Surname	Text	15
3.	First Nmae	Text	15
4.	Other Names	Text	15
5.	Sex	Text	6
6.	Age	Number	3
7.	Home Address	Text	80
8.	Nationality	Text	20
9.	State of Origin	Text	20
10.	Local Government Area	Text	20
11.	Nature of complain	Text	20
12.	Complain	Text	255
13.	Date of complain	Date	10

The computerised student complaint management system was designed using the modular approach. In other words, the system comprises of several modules coming together to form the entire automated system. Each module was designed and developed separately and later linked together to form the coherent computerised complain management system. The processing functions of the computerised complain management system have been broken down into several major tasks for simplicity. Each of these tasks that remain relatively complex is further decomposed into sub-tasks. Visual Studio.Net was used in implementing the software development. It is an object oriented programming (OOP) language which has more advantages than its procedural language counterpart. It is quite flexible and effective in data base manipulations, accessing and retrieval of information, etc.

4. SYSTEM IMPLEMENTATION AND DISCUSSION

After developing the program in modules, unit test, integration test and system testing was performed. The computerised complain management system is test run with real life data and any other relevant data where appropriate and applicable. The system is meant for the student affairs unit of the university. However, the software functionalities can be expanded to include all other units in the university. The results generated from the computerised student complaint management system test carried out, goes a long way to ascertain the performance and how reliable the automated system can be. In terms of systems performance, the automated system tends to use computer resources economically and in terms of reliability, the system is less prone to errors and produces accurate results.

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Fig 3.0: Computerised CMS Splash screen

Figure 3.0 shows the splash screen of the developed computerised student compliant system. Subsequently, the user is expected to provide his username and password to enable him/her effectively use the application.

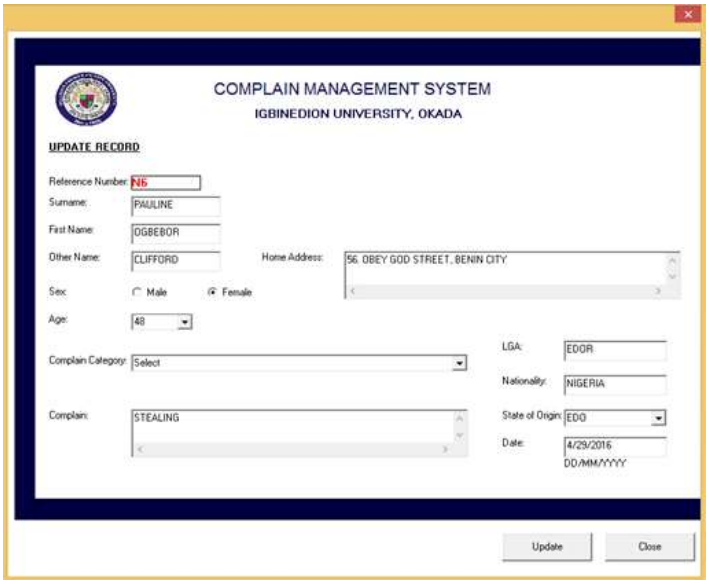

Fig 4.0: Complaint Filing Module Screenshot

Figure 4.0 shows the complaint filing module. Here, the system automatically generate a reference number on the automated compliant form, while the admin input other information such as student name, address, age, complain notes, category of complaint etc. As soon as the complaint form is completely filled, it is uploaded into the database by clicking on update.

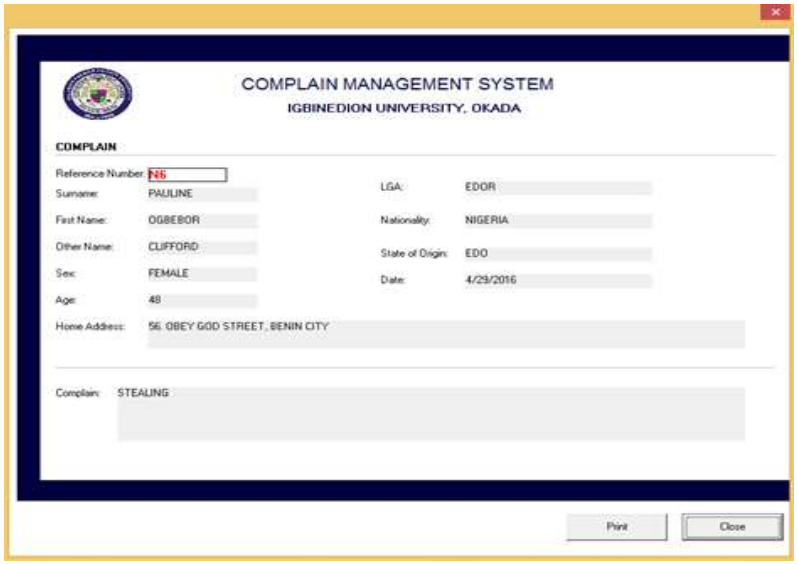

Fig 5: Student Complaint Report Screenshot

Figure 5.0 shows the screenshot a the automated report of a particular test care scenario. This report can be pulled out from the database by using the reference number. The reference number is the unique identifier required to pull out student complaint records from the database.

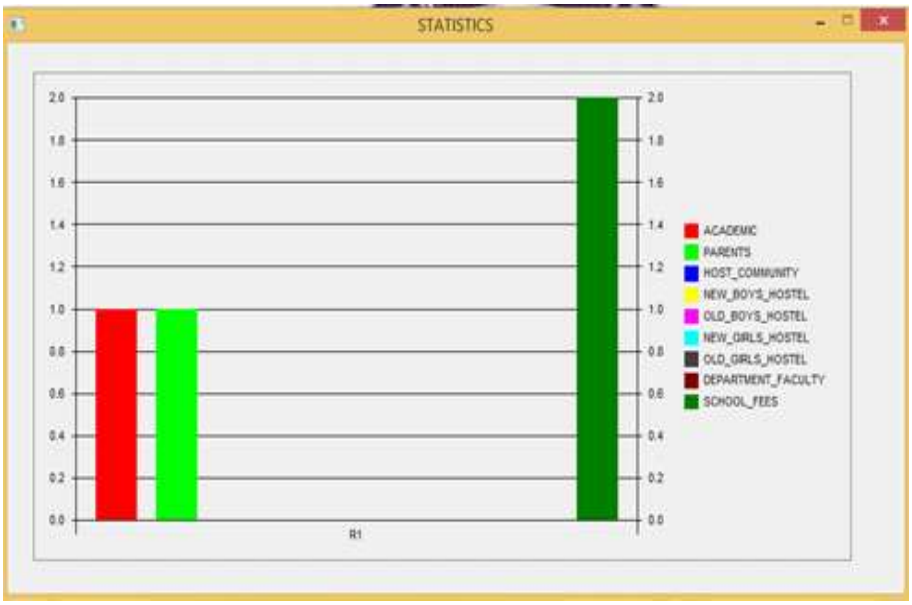

Fig 6: Student Complaint Report Analysis

Figure 6.0 depicts a screenshot depicting a bar chart generated by the computerised report generation module of the student CMS system. It shows the complaint frequencies distribution against the various complaint categories. With this automated report generating module, management can easily see at a glance the various categories of complaint among the students and the categories of most frequent complaint. Such information can further be used in management decision making.

5. CONCLUSION

The implementation of computerized student complaint system is highly effective in handling student complaints of various categories without delay and its equally useful in report generation and analysis, thus making it very effective in decision making by the university authorities. The computerized student complaint system, if fully implemented and adopted by the university will go a long way to curb the problems associated with the present process of complaint management such as poor filing, poor documentation resulting to difficulties in information retrieval and fraudulent acts perpetuated by some of the officials of the university as regard keeping away some complains from management.

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