Optimizing the Processing Of Results and Generation of Transcripts in Nigerian Universities through the Implementation of a Friendly and Reliable Web Platform

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Abstract: There is no doubt that every student upon successful completion of an academic calendar seeks to know their performance and the only manner student performance can be presented after evaluation is via the results and transcripts. Result and transcript generation or processing system is a vital aspect of any formal education as the student results determine how high such individual can attain professionally. This research project was carried out in the field of software engineering with the sole purpose of optimizing or improving the result and transcript generation in Nigerian institutions by designing, developing and deploying a web based result and transcript processing system. The system was developed using software development tools such as WAMP which implies Windows version 7 as the operating system, Apache as the web server, MySQL as the database management system and PHP as the web scripting language used alongside HTML and JavaScript.

Keywords: Optimizing, Result and transcript processing system..

1. Introduction

Over the years, one has witnessed a phenomenal expansion of the Nigerian university system which started with the oil boom of the 1970’s doubling every four years. As of today, Nigeria has more than one hundred universities (“List of Universities in Nigeria”, 2015). There has also been a great advancement in information technology tools and techniques; as a result of these advancements information technology has been employed in various fields to enhance their productivity.

A transcript, mark sheet or report card is an inventory of the courses taken and grades earned by a student throughout a program of study. There are official transcripts and transcripts which can be made by the student and verified and attested by an authorized person. In some countries mark lists are a substitute for transcript. Transcript of records and diploma supplements are a fairly recent development in most countries. Students who obtained academic degrees in Europe prior to the Bologna Process of 1999 typically will not have received transcripts or diploma supplements and they cannot be produced retroactively for these students (“Transcript (education),” 2015).

Adekiigbe and Amosa (2009) observed administrative problems in the issuance of transcripts in our tertiary institutions of higher learning. According to them, one of the top challenges for institutions and students of higher learning in Nigeria today is the issuance and collection of transcripts. Students sometimes apply for transcripts from their respective institutions and it takes several months before such transcripts are issued to the applicants. These scenarios do cost the applicant a number of failures. Admission process is not complete without including the transcripts with the admission forms especially for students going for higher degrees in other institutions. So, in some cases students lose admission due to late arrival of transcripts. (Adekiigbe & B.M.G, 2009).

1.1 Organization of the Paper

This research paper is divided into four sections; the first section introducing the topic, the second section giving a review of recently carried out related research projects, the third is the analysis and design of the system, the fourth section explains the implementation of the design of the system.

1.2 Transcript

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countries mark lists are a substitute for transcript (“Transcript (education),” 2015).

1.3 Processing

Processing can be defined as a series of things that are done in order to achieve a particular result (Oxford Advanced Dictionary, 2015).

2. Literature Survey

This section comprises of the different articles, publications and recently carried out research closely related to the research paper being carried out. For this research, three articles were reviewed.

Christian et al., (2006), carried out a research which described a secure, convenient and reliable system to use computer-based grade records instead of the paper-based transcripts. The system design used three types of grade records, course and degree AGRs used to provide information about student’s academic performance, and a term AGR used to ensure that students do not conceal their bad grades. All records are signed with private keys, later to be verified with corresponding public keys. The keys were created by different procedures, depending the level of security required. Records were kept in two copies, one with the student, and another at the School’s Registrar’s office.

Kanu (2011) carried out a research that focused on using computers for course registration and result processing in Information Management Technology department of Federal University of Technology, Owerri, Nigeria. The objectives of the system were to:

i. Ensure a reliable result processing system.
ii. Ensure timely delivery of results.
iii. Ensure a human interference free system.
iv. Ensure database maintenance for the students’ records.
v. Ensure data integrity

The work was successfully developed using Java programming language, a user- friendly programming language, and the package was tested and improved upon which yielded an automated course registration, examination processing and transcript processing system.

Iwuagwu (2013) carried out a research project on computerizing information management for transcript management to over-come the undesirable problems associated with misplacement of student records, student’s grades, slow and strenuous accessibility of student report and record, inaccurate record keeping and poor information management within Caritas University, Enugu, Nigeria. The benefits of the system are:

- Easy retrieval of student records and increased system security.
- Reduction in data redundancy.
- Students can be attended to without the staff being overworked.
- Reduction in time spent on retrieval of student files.
- Reduction in bulkiness of files and record.

3. Existing System

The integration of information technology in Nigerian schools is on the increase as institutions are looking for ways to make school management easy. The case study for this research was Babcock University Management Information System. Students can register for classes, make online payments, access grades and use many other features which include:

- Register for class
- Check personal details
- View/print GPA reports
- View degree details
- View/print a copy class and exam time table
- View a student copy of unofficial transcript
- View student account
- Pay fees into student account

The system provides adequate security by ensuring that users in the school can only access data and information that they are authorized to have access to. This is to ensure that the integrity of data is not compromised.

Babcock UMIS has many functionalities, it manages almost all academic and non-academic activities of the school.

Users of the system can easily understand and use the system, the interface is simple and very interactive.

The limitations of the existing system are that:

- The maintenance cost is high
- The system on its own does not process the official transcript only unofficial transcript.
4. Proposed System

In the proposed system, the student can perform all functions of the existing as well as request for their official transcript and have it printed from the system without following all protocols in the conventional manual system.

The system was designed using HTML, Php, CSS, JavaScript, MySQL and Apache server.

The requirements for the system are:

- Users must login before they can gain access to the system.
- The Student must be able to register for courses.
- The Student must be able to view and print their result and transcript.
- The Lecturer must be able to enter student scores.
- The Admin must be the only user that can add and remove users.
- The Admin must be the only user that can add courses.
- The Admin must be able to assign course(s) to lecturer.

The database for the system contained 7 tables each representing different segments of the system. The different tables are:

- Student: The student table contains the following attributes: matric num, first name, middle name, last name, password, school, department level, and semester.
- Enrolment: The attributes of this table are: enrolment id, matric num, course code, attendance, quiz, assignment, mid semester, exam, total, grade, result id, year, student matric_number, course course code, result result.
- Course: The attributes are: coursecode, lecturerid, course name, description, unit, course year, semester, school, lecturer_lecturerid
- Result: The attributes are: result id, semester units, cumulative units, Gpa, cgpa
- Admin: The attributes are: admin id, email, password, first name, last name,
- Head of department: id head, first name, last name, school, password, email

Figure 4.1: Entity Relationship diagram design of the system.

Figure 4.2: The Student Homepage

Figure 4.3: The Admin Homepage

Figure 4.4: Student Result page
5. REFERENCES


