**ONLINE CLEARANCE SYSTEM FOR GRADUATING STUDENT**

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**1.1 BACKGROUND OF THE STUDY**

Before receiving other important documents like certificates and comparable other sensitive things, students in an academic setting are required to show certain critical documents as proof during their clearance (Nneji & Monday, 2018). This means that in order to gain access, a person must pass through a few departments, each of which is often responsible for carrying out a certain task (Fatima, 2021). This is the situation with students who are in their last year of study and whose results must be cleaned before they can be properly awarded their diploma.

Since it is customary for final students to walk from one office to another while waiting to be cleared (Usman et al., 2017), and because this practice is usually well documented on paper for record-keeping purposes, even more every clearing activity is completed manually. However, the majority of organizations understood that the data recorded during student clearance is vulnerable to harm and may even be lost or stolen. In response, several schools began automating the procedure. Due to this, computers are now being used to keep track of the student’s records. It is noteworthy that tertiary institutions have developed an interest in the numerous online educational possibilities due to recent technological advancements (Fatima, 2021).

E-learning is one of the benefits of this significant technological effect on education. E-learning as a concept and as a technology presents a variety of opportunities. Online learning is now more effective and convenient because it has made learning possible from an infinite range and without having to take place in a set structure (class). It has also made people of all ages familiar with and dependent on the internet for information (Nneji & Monday, 2018). By creating online learning platforms, this movement of computerizing education also raises the possibility that an e-clearance system is also necessary (Tunde & Victor, 2021). Since the abilities required to access and understand material online are becoming more widespread and since wireless computing is flexible, it follows that any location can serve as a classroom (Fatima, 2021).

Since the advancement of technology has not only successfully established the possibility of clearance online but has also brought with it the traditional undergraduate and general study program, it is now known that well-organized and competitive integrated online learning resources, as well as those with degree options, have a well-structured online clearance system (Tommy, 2019).

**1.2 STATEMENT OF THE PROBLEM**

Handling student clearance information and the clearance procedure is done manually. This processing technique takes a long time and is frequently inconvenient. This can be attributed to a variety of issues, including the processing of the clearance form taking longer than anticipated and the absence of key employees who are critical to the clearance's development. The procedure of signing and submitting the essential documents to show that one is a genuine student of the school can be highly hard because there is no predetermined or structured manner of doing so. Students are trapped with the tedious and time-consuming procedure of walking in circles from office to office seeking for staff members who can sign, stamp, or validate some payment or another. As a result, it is critical to seek a simpler, more effective method of making clearing less difficult and unpleasant. In this regard, the project research provides a solution to the previously described issues by developing an online clearance system for graduating students.

**1.3 AIM AND OBJECTIVES**

The project is aimed at designing a clearance system for graduating student Kaduna polytechnic

**OBJECTIVES**

The objectives of this research work are as follows:

1. Student data set will be generated upon registration on the website.
2. In the front-end development modern technologies such as HTML, CSS, and JavaScript will be employed to create an interactive UI and UX as well as Django which is a Python web framework will be employed in developing the back-end
3. In storing and retrieval of the collected dataset; MySQL which is an open-source relational database, will be used as the database technology.
4. Vital testing will be carried out in ensuring the efficacy of the research work
5. To implement a system free from bias and interest, reducing difficulties for students during the process.

**2.1 LITERATURE REVIEW**

Design and Implementation an Open-Source Web Based Clearance System for Iraqi Educational Institutions a recent study by Ramadhan, R. N., Manguri, K. H., & Manguri, B. H. (2020). Clearance is a requirement at practically every university. Graduate or undergraduate students must go through the process of obtaining authorization to take the final examinations. In addition, students must have stamped clearance paper in order to get their final test results. Over the previous few decades, clearing has been done manually. Students who use the manual clearance procedure must go through a lengthy and arduous process of signatures and stamps. The process in the Iraqi educational system entails visiting numerous departments, including the library, registrar, accounting, housing, laboratory, storage, sport and artistic activity departments, and the dean's office, only to get the clearance verified. This project's goal is to provide an open-source clearance system. On the other side, its back-end is built using PHP scripts and MySQL for the database. In general, the system requires four equally significant key tasks to be completed in order to receive approval. Registration, unit administrator (to validate a clearance status as Cleared/Not Cleared), Exam committee (to check whether a student's clearance status), and ultimately a system administrator are the duties (to manage the entire system). Furthermore, system administrators have the ability to add or delete any unit administrator or student from the system.

Nneji, G.U., Deng, J., Shakher, S.S., Monday, H.N., Agomuo, D., & Dike, I.D. (2018) recently conducted research on An Improved e-Clearance Management System for Graduating Students in a University Environment. In every university, clearance for graduating students is a continuous procedure. Over the years, clearance has always been a manual procedure. This study seeks to improve the present system by investigating its flaws. Front-End HTML is used to generate web pages, CSS is used to style web pages, JavaScript is used to program web pages, Sublime Text 3 is used as a code editor, PHP is used for the back-end, MySQL is used for the database, and the XAMPP servers are used to develop and implement the proposed system. Structured System Analysis and Design is the approach employed in this work (SSADM). By removing paper work, the suggested system minimizes process time, document loss, document forgery, and physical presence, making it more efficient, secure, and reliable than the present technique. It also has payment alternatives for your convenience. The findings of this article reveal that electronic clearing processing time was greatly lowered, resulting in an efficient and dependable electronic clearance system for graduating students.

Development of Online Clearance System for an Educational Institution by Jonathan, O., Misra, S., Makinde, F., Damaševičius, R., Maskeliūnas, R., & León, M. (2019). Graduating students of an educational institution must depart the system in a timely and orderly way. Students frequently undertake this as part of the required clearance procedure. The manual approach is time-consuming and demanding since students must go from location to location to get their clearance papers endorsed. It has also been discovered to be prone to fraud and other vices. The few automated ones have certain functional constraints as well, such as a non-user-friendly interface, a lack of appropriate information to the user, non-prioritization of operations, and so on. As a result, this study presents a solution that addresses the problems associated with manual processing while improving on the discovered automated ones. The project uses a case study method to develop a functioning prototype of a comprehensive manual system for a prominent institution of learning in Southwest Nigeria. First, a comprehensive comprehension of the current technique is performed. A new web-based system is constructed utilizing Hypertext Markup Language (HTML), PHP for the business logic layer, CSS for correct rendering of front-end display pages, and MySQL for the data layer. The new approach will minimize the amount of time and effort spent on student clearance, as well as the expense incurred by the institution on paper.

A Web-Based Database-Driven Students' Clearance System by Agbo-Ajala, O., & Makinde, O.E. (2015). A clearance is a certificate that allows you to leave an institution. Final-year students who have completed the academic prerequisites for graduation must go through a clearance process before they can leave the University. The clearance procedure encompasses the Academic Department, Faculty, Bursary, Students Affairs, Library, Hostel, Sport Department, Health Center, and Registry (Exams and Records). A student may obtain his or her graduation certificate only if he or she has been cleared to do so. Currently, student clearance is handled manually at institutions. The goal of this project is to design and implement an online student clearing system utilizing PHP and MySQL that will remove manual process delays and provide a single repository for students to be cleared. It will be developed as a web-based platform that will serve as a clearing student repository. The clearance system's key modules are Main Module, Clearance Registration, Cleared/Not Cleared, and Administer. The Administer module is used by the Systems Administrator to create and manage the user.

**3.1 PROPOSAL METHODOLOGY**

A comprehensive inquiry such as this is used in the research technique to unearth new facts or information about the current system. The research method used in this study combines direct observation from the department and the internet.

**3.1.1 DIRECT OBSERVATION**

This method was utilized to collect information/data for this study by assessing how the manual system was carried out; the method provides varying degrees of control over the context in which they are employed, and rigorous assessment highlighted the evident shortcomings in the current system.

**3.1.2 INTERNET**

The internet will be used as a data-collecting strategy, sourcing information on areas that appear difficult or perplexing in order to achieve a functional conclusion.

**3.2 CHOICE OF PROGRAMMING LANGUAGE**

This research work will be a web-based application and will be implemented on a relational database system (SQLite). HTML (hypertext markup language), CSS (cascading style sheet), and JavaScript will be employed in the frontend while Django(python) will be employed for the backend programming. The above are the modern languages used in implementing this system.

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