**WEB-BASED STUDENT-TO-SUPERVISOR ALLOCATION AND ASSESSMENT SYSTEM**

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**1.1 BACKGROUND OF THE STUDY**

As a result of technological advancements and the rapid pace of globalization, higher education institutions are now either partially or entirely involved in an online environment. The recent expansion of computer networks, specifically the World Wide Web (WWW), has enabled individuals to communicate, socialize, and interact via the internet.

Since the inception of the department of Computer Science, allocation of students to supervisors and assessing student projects and seminars is done manually. Assessment of students is done in two ways, the student supervisor would assess the student as well as the panel which would access the student twice; namely the seminar and final defense assessment. This is done to ensure that the student carry out their project themselves or participated, which will then be used to grade them. The assessment sheet has to be printed in copies by the student depending on the number of assessors in that particular venue, similarly, with assigning students to supervisors, considering the number of students is not easy to assign and group students probably using excel, it is monotonous and quite inefficient.

This approach has been taken repeatedly over the years and causes a lot of paperwork with a possibility of poor documentation. This study will develop a student-to-supervisor allocation and assessment system that will be used by the department in assessing student project and seminar defense, thereby increasing work efficiency among project coordinators and defense panelists.

**1.2 STATEMENT OF THE PROBLEM**

It has been a mere saying that students are to be allocated to supervisor on time but the reverse is the case due to the series of monotonous activities involved in the process, not enough time is given to the student in completing the project, even when allocated student find it difficult in reaching out to the supervisors, student would deliberately refuse to come for the defense until the last day increasing work load for the assessors. A lot of paperwork is involved in assessing students both in the seminar and project defense, which if not well documented may lead to incorrect grades input for that particular student, the highlighted problems jogged my interest to embark on the project.

**1.3 AIM AND OBJECTIVES OF THE STUDY**

To develop a student-to-supervisor allocation and assessment system for the computer science department at Kaduna polytechnic.

**OBJECTIVES**

The objectives of this research work are as follows:

1. Student and supervisor data sets will be extracted from the department depending on the student that qualified for that year’s project as both the student and supervisors are not to perform registration on the site. The registration is automated
2. Django which is a high-level python web framework will be employed in the backend development, Modern technologies like HTML, CSS, and JavaScript will be employed in front-end development, open-source relational database; MySQL will be employed as the database technology.
3. Unit and Integration testing will be carried out to ensure the effectiveness and efficiency of the design making sure that the functionalities are error-free

**1.4 LITERATURE REVIEW**

Design and implementation of student project management and allocation system research recently conducted by Ojo, T., M., Shuaibu, N. Nasir B., S., (2022). The goal of this project is to create a web-based system that handles the activities of "student Project Management and Allocation." This system will handle the database and keep track of all students or groups of students who have registered as finalists on the site, as well as those students who have been shortlisted and met the eligibility requirements provided by the lecturer/supervisor. HTML, CSS, JAVASCRIPT, PHP, and MYSQL are the programming languages used. This language was ideal for constructing internet applications due to its object-oriented capabilities and class buries.

Supianto, K., & Khaerudin. (2020) relates to research recently conducted on Web-based project assessment. The purpose of this study is to conduct a literature review on project-based learning and assessment. The researcher briefly defines web-based assessment and then maps the benefits of web-based evaluation. According to the findings of this study, web-based assessment refers to assessment models such as e-tests, e-assessments, computer-based tests, and internet-based tests. Web-based assessment is more flexible, reduces paper consumption, data collecting and analysis is quick, gives immediate feedback, simplifies instructor assignments, and encourages e-learning. However, there are other roadblocks, including the aesthetic style of the online interface, which may cause issues for consumers. Users lose too much time due to ineffective menu layout and bad navigation. It is also vital to guarantee that students can efficiently use the online learning system. In reality, web-based project appraisal can modify current assessment methodologies such as peer evaluation, self-evaluation, and group evaluation. These are alternate exams that educators might use to evaluate student efforts on the web.

According to a recent study by Arumugam, V., Singh, P., Padhiyar, K., Manek, R., & Sayyad, S. (2021). On Academic Project Information Management System. Academic projects are an essential component of every undergraduate Engineering course. It allows students to demonstrate whatever they have learned. This paper describes an automated approach for managing final-year projects. Many universities now manage final year project data in an offline fashion, which includes spreadsheet entries for all groups, manual group formation and supervisor assignments, and retaining paper copies of the materials given by students. When there are more groups, there is a greater chance of errors occurring during the updating process. The article describes how a web-based automated system would resolve all faults and mistakes while remaining operational offline. The goal of this research is to offer a system for managing groups, automatic guide allocation, document sharing, smoothing the process of communication between guides and students, keeping a log of all actions, and monitoring student project progress.

A preemptive goal programming for allocating students into academic departments of faculty research was recently conducted by Hassan, N. (2016). A goal programming model is created to maximize the placement of students in a faculty's academic departments. The goal programming approach considers space capacity, budget allocation, the number of teachers, and affirmative action quotas as goal constraints that must be met. Each constraint has a priority level and a weight associated with it. This goal programming paradigm is then applied to the University Kebangsaan Malaysia's Faculty of Science and Technology. The weighted mean absolute percentage error is then used to compare the outcomes of the preemptive goal programming model to those of the existing allocation. The successful implementation indicates the goal programming model's capacity to meet the academic departments' student intake requirements and goal limitations.

**1.5 PROPOSED METHODOLOGY**

The research approach is a rigorous investigation like this to uncover new facts or information about the existing system. This study’s research technique comprises firsthand information from the department and the internet.

**Primary Source of Information**

This includes data gathered directly or indirectly from target users, with no edits or suggestions from other writers. This main source's material is considered more accurate and credible. As a result, the goal is to incorporate the knowledge gleaned from this source into the project in order to satisfy the criteria. Interviews and observations were used as primary source data collection strategies.

**Secondary Source of Information**

This essentially includes all of the information that someone can receive from existing sources such as books, the internet, case studies, articles, newsletters, and other relevant publications. The resources obtained from the internet in particular were quite relevant; various search engines, particularly Google, made it very easy to find information.

**1.6 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 for the frontend development 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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