**WEB-BASED STUDENT SIWES DEFENCE HALL 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 defense halls and assessing siwes is done manually. Assessment of students is done in one way, the panel would assess the student based on the activities they carry out during the siwes period; namely the 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 defense halls, considering the number of students is not easy to assign and group students to halls, and this is done 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-hall allocation and assessment system that will be used by the department in assessing student siwes defense, thereby increasing work efficiency among coordinators and defense panelists.

**1.2 STATEMENT OF THE PROBLEM**

It has been a mere saying that students are to be allocated to defense halls on time but the reverse is the case due to the series of monotonous activities involved in the process, 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 siwes 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**

To develop a student siwes hall allocation and assessment system for the computer science department at Kaduna polytechnic**.**

**Objectives:**

**The objectives are stated below:**

1. **Student and supervisor data sets will be extracted from the department as both the student and supervisors are not to perform registration on the site. The registration is automated**
2. **To implement the development the system using high end sophisticated modern 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**

**2.1 LITERATURE REVIEW**

Article Title: E-Assessment in Higher Education: Students’ Perspective

Authors: S. S. M. Huda, Md. Kabir & Tanvir Siddiq (2020).

**Summary of the work**

This paper assesses the effectiveness of e-assessment in higher education from the student perspective and examines their reactions to this method. It explores the benefits and challenges of e-assessment as institutions transition from traditional methods. The study is based on the feedback of a randomly selected sample of university students, revealing mixed reactions. While students recognize the importance of e-assessment, concerns about technology-based exams and varying IT competencies among students emerge. The research suggests the need for further investigation into additional aspects of e-assessment in higher education.

**Methodology**

The study utilized both primary and secondary data sources. Primary data was gathered through a survey conducted with a random sample of 200 undergraduate and post-graduate students from various universities in Dhaka, Bangladesh. The survey questionnaire comprised 27 Likert-scale statements developed based on existing literature. Secondary data were sourced from academic journals, research papers, and reputable websites.

**Recommendation**

The study recommends that educational institutions should invest in IT skills development alongside academic programs, ensuring that students are proficient in technology use. This investment can help alleviate the stress associated with transitioning to e-assessment and make the learning experience more seamless.

**Research Gap**

While this study sheds light on students' perspectives on e-assessment in Bangladesh, there remains a research gap in the comprehensive understanding of all factors affecting e-assessment. More extensive research is needed to investigate the broader implications and complexities of e-assessment, especially in the context of Bangladesh. Furthermore, future research can delve into the specific challenges and opportunities presented by e-assessment, aiming to provide a more holistic view of its role in higher education.

Article Title: Design and Implementation of Students’ Projects Allocation System

Authors: Amadi, Anthony Ndubuisi; Ololo, Emmanuel Chimezie (2021)

**Summary of the work**

This work presents the design and implementation of a software system aimed at facilitating the allocation of students' projects, particularly dissertations, at Imo State Polytechnic Umuagwo. Utilizing the Model View Controller (MVC) methodology, the system employs a MySQL database and PHP for implementation. The research successfully yields a project allocation system that enables final year students to apply for projects online. This system streamlines the process by allowing supervisors to evaluate and score student proposals, ultimately allocating projects to students based on the highest proposal scores awarded by the supervisors.

**Methodology**

The methodology for this project involved the application of the Model View Controller (MVC) methodology in the design of a project allocation system for final year students at Imo State Polytechnic Umuagwo. MySQL was employed as the database system, and the system was implemented using PHP. Data collection for this research utilized both primary and secondary sources.

**Recommendation**

The study recommends that the institution or relevant authorities consider implementing and deploying the software system online to improve the efficiency and transparency of the project allocation process. This step would enable students to propose project topics, allow supervisors to access and evaluate these proposals, and ultimately allocate projects to students based on the highest-scoring proposals.

**Research Gap**

While this research has led to the creation of an effective project allocation system, there is still room for further exploration and development in the field of software systems for academic institutions. Future research could focus on enhancing the software system's features and functionalities, addressing potential scalability challenges, and improving the user experience for both students and supervisors.

Article Title: Mobile-based SIWES Placement Recommendation System

Authors: Segun, O., & Blessing, K. (2018).

**Summary of the work**

This research aims to address the persistent challenge of higher institution students in Nigeria finding suitable placements for their Mandatory Industrial Training (SIWES) program. The proposed solution is a mobile-based system that offers real-time recommendations for organizations based on students' preferences. Data from previous internships and placements were used to populate the database, enabling the mobile application to make tailored recommendations, ensuring a more relevant training experience.

**Methodology**

The methodology employed in this study involves designing a database system intended for implementation using MySQL stored procedures. The database structure is carefully crafted to align with the algorithm's requirements while adhering to the fundamental principles of sound and legal database design. This approach ensures that the database system effectively supports the algorithm while maintaining data integrity and reliability.

**Recommendation**

The study suggests that the proposed architectural framework and mobile-based system for recommending suitable placements for industrial training should be further developed, tested, and deployed on a broader scale to benefit students in Nigerian tertiary institutions.

**Research Gap**

A notable research gap in this study is the limited scope of implementation, focusing primarily on Adekunle Ajasin University as a case study. Further research is needed to assess the scalability and adaptability of the proposed system in diverse Nigerian tertiary institutions.

Article Title: Web-based project assessment

Authors: Supianto, K., & Khaerudin. (2020).

**Summary of the work**

This research examines literature related to web-based assessment and project-based assessment. It investigates various aspects of web-based assessment, highlighting its flexibility and advantages such as reduced paper usage, fast data handling, prompt feedback, and support for e-learning. However, challenges related to user interface design and effective student engagement exist. The study also explores web-based project assessment, including methods like peer assessment and self-assessment for evaluating student projects online.

**Methodology**

This research employs a library research methodology to explore relevant literature addressing issues related to affective assessments and the integration of social media in learning and assessment. Data collection involved a comprehensive review of literature sources pertaining to these topics, and the analysis encompassed processes such as editing, classification, and interpretation.

**Recommendation**

The study recommends that future research should focus on enhancing user experience and overcoming hardware and software constraints in web-based assessments. This involves utilizing user-friendly web development frameworks and content management systems, simplifying navigation, and ensuring compatibility with various devices. The research should also aim to make web-based assessments more flexible by allowing students to submit projects at their convenience and assessors to evaluate work without time or location constraints.

**Research Gap**

Existing research has yet to address the limited flexibility of current web-based assessment models, which often mimic traditional testing methods. Future research opportunities lie in developing more learner-centered web-based project assessment models that prioritize user accessibility and active student participation, fostering creative exploration while preserving assessment elements.

Article Title: E-Assessment in Higher Education

Authors: Martin, A., Fanus, V (2018)

**Summary of the work**

The study delves into the realm of e-assessment, addressing key aspects such as definitions, delivery platforms, accessible tasks, benefits, challenges, and principles. It emphasizes the significance of e-assessment in higher education, underlining its effectiveness when assessments are credible and characterized by authenticity, consistency, transparency, and feasibility. The research highlights the potential to evaluate higher-order assessment tasks through e-assessment, showcasing the relevance of this modern approach in the context of evolving technology and e-learning systems.

**Methodology**

This research employs a literature review methodology involving the collection and analysis of existing scholarly works, research papers, and publications on e-assessment. It covers a wide range of topics related to e-assessment, such as definitions, delivery platforms, assessment tasks, benefits, challenges, and principles. Data analysis entails categorization and interpretation of the gathered information from these sources, offering a comprehensive examination of e-assessment based on an extensive body of literature.

**Recommendation**

It is recommended to focus on engaging, authentic, and aligned assessment tasks, integrating e-assessment into students' academic progress. Acknowledging students' perceptions and feedback is crucial for continuous improvement. Institutions should invest in assessment policies and faculty development for ethical e-assessment implementation.

**Research Gap**

Research gaps include the need for empirical studies on practical e-assessment implementation, examining the interaction between students and e-assessment platforms, assessing long-term impacts, and staying updated with evolving e-assessment trends.

1. **PROPOSAL 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

**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 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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