FACULTY PERFORMANCE EVALUATION AND DEVELOPMENT SYSTEM

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ABSTRACT

This project introduces "Faculty Performance Evaluation and Development System" (FPEDS), a web application designed to gather student feedback on faculty performance. Built with Django, a Python framework, FPEDS leverages the strengths of both Python and Django for back-end development, while the user interface is constructed with HTML and CSS. FPEDS aims to streamline the faculty evaluation process by providing a user-friendly platform for students to submit feedback. This feedback will be critical for faculty development efforts, allowing institutions to identify areas of strength and weakness for each instructor. By fostering a culture of continuous improvement, FPEDS serves as a valuable tool for enhancing the educational experience for both students and faculty.

I. INTRODUCTION

Faculty Performance Evaluation and Development System is a Python-based web application designed to gather student feedback on faculty performance. It aims to improve the educational experience by providing a structured and anonymous platform for students to evaluate their instructors across various areas like teaching effectiveness, course content, and communication skills. This system will benefit both faculty and students. Faculty can gain valuable insights into their strengths and areas for improvement, allowing them to adapt their teaching styles and course materials. Students will have a voice in shaping their education and contribute to a more effective learning environment. The anonymous nature of the feedback encourages honest evaluations, leading to constructive criticism that ultimately benefits everyone involved in the educational process.

II. LITERATURE REVIEW

A. AUTOMATED FEEDBACK COLLECTION AND ANALYSIS SYSTEM

There is a rampant appreciation to the analysis framework which is a mean for drafting a vigorous and fairer educational institution system. In a developing country like India, where higher education is presaged to develop new resources for serving its people, an extremely effectual and fair reliable automated feedback system is essential for assessment. In this article, an automated educator feedback system is proposed. As faculty performance and feedback analysis are essential to facilitate educators find effectual teaching and learning in order to better engage students in classes. This system aimed at holding teacher's accountability for their performance. The proposed system is based on technologies like PHP, JavaScript, HTML, XAMPP server, MYSQL, and Google APIs. This system will help the institution bureaucrats to write confidential appraisal report. The proposed system analysis the feedback class wise as well as individual faculty wise and provide the analysis in the form of Google charts.

B. AN ADAPTIVE FEEDBACK SYSTEM TO IMPROVE STUDENT PERFORMANCE BASED ON COLLABORATIVE BEHAVIOUR

With advancements in educational technologies, e-learning platforms have evolved to provide learning environments to the privileged and underprivileged population so that they can learn at their own pace. The success of these systems relies on engaging experience and timely and accurate feedback to the students on their performance. Still, these systems suffer from high student dropouts, often due to a lack of personalization in student interactions. While students show different collaborative behavior, i.e., some students are social, and like discussions, while others are self-oriented and don't participate in any collaborative activity, the feedback and interactions with students are generally not customized based on their type of collaborative behavior. This

research aims to develop a method that provides adaptive feedback to each student according to their type of collaborative behavior and preferred gamification elements. Two experiments were performed to evaluate the system, and the results show that the system, with adaptive feedback, significantly improved student performance.

C. DESIGN AND IMPLEMENTATION OF STUDENT FEEDBACK SYSTEM AT EDUCATION SYSTEM

The main aim and objective was to plan and program web application for any domain. We have to apply the best software engineering practice for web application. As a web application developer, I was asked to develop an "Student Feedback System" using PHP and MySQl. This system is generally used by four kinds of users Student, Faculty, Head of departments, Admin. The application should evaluate the answers given by the students based on the feedback which will be given by the range. 1 – 10 and grade has to be generated to all the staff members of a particular department. These feedback report was checked by the HOD's. He can view overall grades and view the grades obtained to the lecturers and give this report to the principal and he can give counselling to the college staff. "By using this online system, we make it better and quick way."

D. DEVELOPMENT OF A WEB-BASED FEEDBACK SYSTEM FOR ACADEMIC STAFF ASSESSMENT

Web-based feedback systems for the purpose of evaluating and assessing academic staffs by students in higher education has been in existence in most developed and some developing countries. This has been proven to be effective as it tends to enhance academic staff performance, from the feedbacks and comments students give online. However, in developing countries like Nigeria, such feedback systems have neither been deployed nor effectively functional. Hence, in this study we develop a web-based feedback system for academic staff assessment that can be adopted by tertiary institutions. The web-based feedback system is developed using the waterfall model approach. This approach is suitable due to the possibility of following a sequential process. Also, the various modules of the online feedback system were designed using Hypertext Markup Language (HTML) for the frontend; NoSQL for the database; and PHP for processing data between the frontend and backend. The designed web-based feedback system will be effective to enhance academic staff performance within higher institutions.

E. A SYSTEMATIC REVIEW OF THE EFFECTS OF AUTOMATIC SCORING AND AUTOMATIC FEEDBACK IN EDUCATIONAL SETTINGS

Automatic scoring and feedback consist of calculating grades on students' work and providing personalized feedback using technological tools that do not require human participation. These tools play a significant role in online learning. Like massive open online courses (MOOCs), many new learning environments would not be possible without them. Automatic scoring has been a tool for a while, and multiple-choice tests have been available for a long time. Large-scale multiple-choice tests have been possible since the introduction of the Scantron. This tool continues to be used today.With the rapid growth of technology and internet access, the use of automatic scoring and feedback has accelerated. The benefits for institutions and instructors of the usage of these tools are apparent. The institutions and instructors acquire the ability to increase students per instructor and provide fast and consistent results. However, all these advantages come with potential drawbacks.

F. A FEEDBACK SYSTEM SUPPORTING STUDENTS APPROACHING A HIGH-LEVEL PROGRAMMING COURSE

The ability to write programs has recently gained importance. Nearly 30 countries have formulated policies in this regard, hoping to strengthen the information capabilities of their citizens from an early age to improve the overall competitiveness of the country. In 2017, Japan proposed the "Future Investment Strategy 2017" and planned to incorporate programming education into the curricula of the compulsory education stages of primary and secondary schools from 2020 as well as further improve the digital teaching materials and evaluation system. The UK also incorporated programming into the curriculum in 2014. There, children start to learn the basics of programming at the age of five, and by the age of eleven they must have the ability to use two programming languages. Besides, universities require at least half of the undeclared students to study programming within five years before graduation to prepare to learn about and apply their knowledge to artificial intelligence. In a society heavily reliant on information and electronic devices, letting the public

understand the principles of program operation could help people to avoid being help-less with respect to information technology (IT). However, not everyone knows how to write programs, but with the aid of basic computational concepts, it is possible to think about more diverse ways of using IT and the Internet. Students can also obtain better logical thinking from correct programming education, thus enhancing their creativity and preparing for solving many related problems in their future.

G. STUDENT FEEDBACK SYSTEM

Student Feedback system is used to get the feedback from the students. It generates the reports for the faculty on the basis of given feedback by the students. The staff will be provided with separate usernames and password in order to check the results. The total report is visible to the people like chairman and principal. It contains the modules like student, faculty and admin. Admin is the responsible for creating a class and assigning the corresponding faculty to the class. Within short time we can get the performance of the faculty from the student point of view. There are 15 questions to evaluate the status of faculty and each question contains 5 options like Excellent, very good, good, Average and Poor.

H. STUDENT FEEDBACK MANAGEMENT SYSTEM

The creation of a student feedback system has allowed for the evaluation and analysis of the college faculty's performance. In the educational system, student evaluation of instruction is essential. The main objectives are to analyse the students' responses and gain their opinions. The academic staff can be evaluated and assessed by students in higher education using web-based platforms that provide feedback. This has been shown to be advantageous because, based on online reviews and comments from students, it frequently enhances the performance of academic staff. Students can submit their views by logging in with their login information to the online portal for student feedback. Through the admin login, administrators may view the comments. The automatic model we created has an accuracy rate of 96.82%.

III.   PROPSED APPROACH

The proposed Faculty Performance Evaluation and Development System (FPEDS) is a web application built with Python that gathers student feedback on faculty performance. FPEDS will utilize a user-friendly interface where students can anonymously evaluate instructors on pre-defined criteria like teaching effectiveness, course content, and communication skills. The system will employ a scale-based rating system alongside open-ended text boxes for in-depth feedback. To ensure data security, FPEDS will implement mechanisms to restrict access to identifiable student information. After each evaluation period, anonymized reports will be generated for faculty and department heads, highlighting strengths, weaknesses, and areas for improvement. This data-driven approach will empower faculty to develop their teaching methods and ultimately enhance the student learning experience.

ALGORITHM

1. Setting Up Users and Permissions

2. Creating and Deploying Surveys

3. Students Providing Feedback

4. Data Collection and Analysis

5. Reporting and Actionable Feedback

6. Taking Action on Feedback

IV. SOFTWARE FLOW
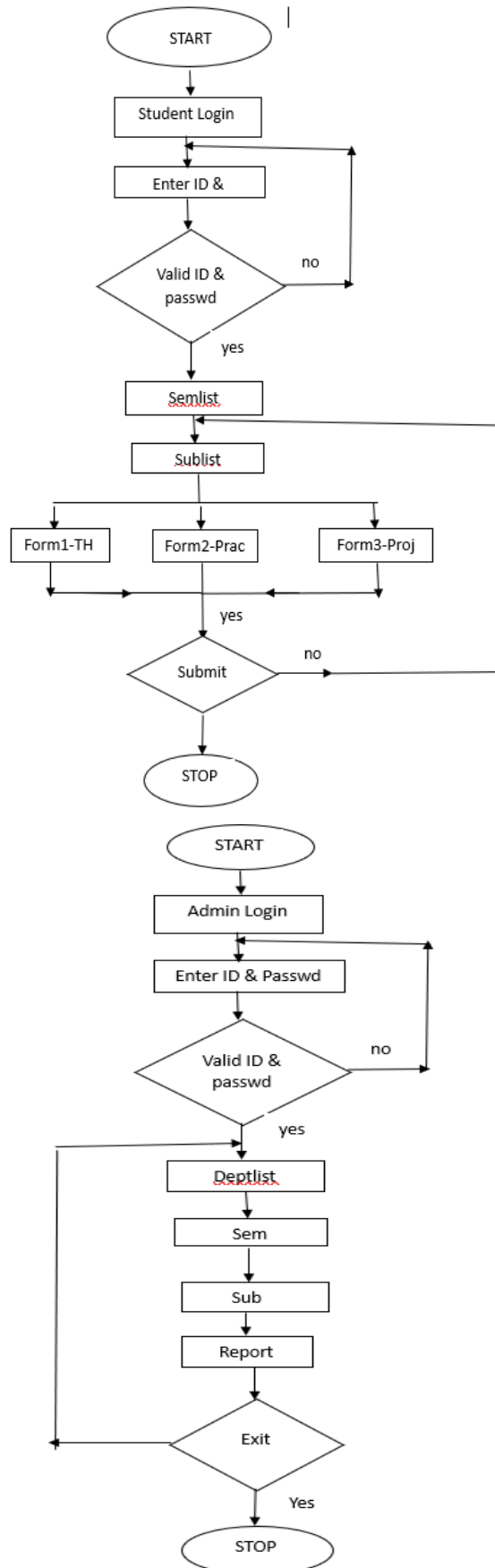
V.   CONCLUSION

In conclusion, the "Faculty Performance Evaluation and Development System" web application, built using Python, offers a valuable tool for educational institutions to gather student feedback and promote faculty development. This system facilitates a structured and transparent evaluation process, allowing students to provide honest and specific feedback on various aspects of faculty performance, including teaching effectiveness, course content, and communication skills. By analyzing this data, institutions can identify areas where faculty excel and areas for improvement. This feedback can then be used to guide professional development programs, support faculty in refining their teaching methods, and ultimately enhance the overall student learning experience.

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