**Mini Project Report on**



**EVALUATION OF ACADEMIC PERFORMANCE**



**Submitted in partial fulfillment of the requirement for the award of the degree of**

**BACHELOR OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE & ENGINEERING**

**Submitted by:**

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**CANDIDATE’S DECLARATION**

I hereby certify that the work which is being presented in the project report entitled **“Evaluation of Academic Performance”** in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in Computer Science and Engineeringof the Graphic Era (Deemed to be University), Dehradun shall be carried out by the under the mentorship of **Dr. Aditya Pai H. , Designation**, Department of Computer Science and Engineering, Graphic Era (Deemed to be University), Dehradun.

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**Chapter 1**

**Introduction**

In the following sections, a brief introduction and the problem statement for the work has been included.

* 1. **Introduction**

A management system is important since it manages the students’ and lecturers’ works online. It has multiple functionalities for it’s users to interact with ease. It lets the students to access their details and view their academic performance at one place. Our system stores, organizes, and manages a large amount of information like student details and their results within a single software application. The use of this system increases the efficiency of business operations and also reduces overall costs.

The problems faced by the current manual system are data redundancy, difficult to update and maintain, inconsistent data, insecurity, difficult to impose constraints on the various data file, and difficult to backup. It is also very time consuming, is less data secure and also requires more paperwork to be done. The universities provide lots of opportunities to the students however most of the students do not even know they exist.

The application is modified as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system and therefore, it proves it is user-friendly. As described above, the project can lead to an error-free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather than concentrating on the record keeping. Thus it will help organization in better utilization of resources.

The management system has lots of information to keep track of and they need to be organized well to reach data rapidly. So that we decided to design a new database management system for our college. This new database will be used by both students and lecturers.

Our database design provides a clear explanation about the classes and their details to the lecturer and the students. Our proposed project already has some essential properties such as student information, results information etc. The system provides a connection to the examination database and the students will be able to view and acess their academic performance and faculty is able to keep track of all of it.

Every organization, whether big or small, has challenges to overcome and managing the information of results of students in every subject, every semester. Every Management System has different Student needs, therefore we design exclusive management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning, and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy faculties who are on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

Our system can lead to error-free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

The aim is to automate its existing manual system by the help of computerized equipments and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. Basically the project describes how to manage for good performance and better services for the clients.

**Chapter 2**

**Literature Survey**

Undeniably, it is more significant in dealing with subjective and imprecise data compared to the traditional average rating method that is widely used. Numerous studies have introduced the application of fuzzy logic approaches in the education system for evaluation purposes. These researches covered various levels in education from preschools to higher learning institutions.

In preschool level, Pazil, Mahmud, Jamaluddin, Mazlan & Rahman (2018) conducted a research in 17 selected preschools in Johor where a fuzzy logic approach was implemented to evaluate the performance and quality of preschool. Four major factors were used as input parameters in their study namely physical, socio-emotional, spiritual and intellectual of the preschool children in their learning process. Output obtained through this study showed five selected schools were identified as successful in their learning process.

In secondary school level, Gran, Ajol, & Ali (2019) conducted a case study in one of the

secondary schools in Mukah, Sarawak. The objective of the study was to propose an alternative for a systematic students’ performance evaluation tool based on a fuzzy logic approach to identify the most qualified student to be awarded as the Best Student in the school. It was found that the Fuzzy logic approach was useful and beneficial to the school by providing an efficient tool in solving the problems encountered by evaluators during the evaluation process. Undeniably, one of the problems was solved when applying a fuzzy logic approach by measuring the imprecise data such as students’ behaviour at school and roles or responsibilities held by each candidate. Similarly, multiple researches were conducted on the application of fuzzy logic approach in evaluating university students’ performance. Yadav & Singh (2011) introduced academic performance evaluation using soft computing technique where the development of their model includes the combination of fuzzy logic techniques. Subsequently, Yadav, Soni & Pal (2014) proposed New Fuzzy Expert System (NFES) as an alternative to be used by educators to evaluate students’ academic performance and their proposed method contributed to better decision-making when compared with the existing statistical method. Both of these studies were based on academic assessment.

Tay et al. (2009) presented a novel Fuzzy Inference System-based CRA model that provided an aggregated score as a measure of overall achievement where subjectivity was involved. The study included assessment of students’ activities in Electronic Circuitry Design, Electronic Circuitry Development and presentation. Meanwhile, Rao et al. Asian Journal of University Education (AJUE) Volume 16, Number 4, December 2020 (Special Issue) 14 (2017) proposed an application of Fuzzy Inference System (FIS) to evaluate student performance including designing scoring rubric criteria and the 5-input used in their study are identify, understand, apply, analyse and design.

Although both studies employed scoring rubrics in an input process of fuzzy logic approach to evaluate the student performance, their criteria in evaluation were only based on academic performance. Hence, this paper proposed a development of an evaluation system based on an application of fuzzy logic to evaluate student performance by not emphasizing merely on academic criteria (CGPA) but also to include non-academic criteria such as leadership, discipline, teamwork and communication skill. In addition, the present scoring rubric assessment was designed specifically to provide evaluators with a clear guideline. It is very crucial for the evaluators such as educators and top management to evaluate student performance fairly and transparently as their decision will have an impact on the students particularly upon graduation and job application in the future. Most importantly, the development of I-SPE in this study is aimed to solve the uncertainty problem frequently faced

by the evaluators in selecting the best student by providing them with an improved systematic student performance evaluation system.

**Chapter 3**

**Methodology**

This project is designed in Python using GUI(Graphical User Interface). We also used

XAMPP software to keep database tables and to write SQL queries.

Student

View Details

Validation

View Results

Search

Results

Login

<<includes>>

**STUDENT CASE DIAGRAM**

Admin

Add/View/

Update Student Details

Add/View/

Manage Results

Add/View/

Manage Courses/

Subjects

**ADMIN CASE DIAGRAM**

In this project we have many tables in the database ‘eap’. We use the ‘student’ table to keep a record of student details. ‘result’ table is used to store marks of students. ‘login’ table stores the login information required to login into the system. ‘course’ and ‘subject’ table to store the courses and the subject information,semester-wise.

* - Primary Key

eap login

* **id** : int(11)

**type** : varchar(1)

**user** : varchar(9)

**psswd** : varchar(20)

**update\_time** : timestamp

eap student

* **id** : int(11)

**sid** : varchar(9)

**name** : varchar(100)

**rollno** : int(7)

**email** : varchar(50)

**gender** : varchar(10)

**dob** : date

**cname** : varchar(10)

**sem** : int(4)

eap result

* **id** : int(11)

**rollno** : int(7)

**sub\_id** : varchar(10)

**marks** : int(10)

eap course

* **id** : int(11)

**name** : varchar(10)

**sem** : int(4)

**charges** : int(10)

**desc** : varchar(200)

eap subject

* **id** : int(11)

**subid** : varchar(10)

**sname** : varchar(100)

**sem** : int(4)

**DATABASE DIAGRAM / ER DIAGRAM**

**Chapter 4**

**Result and Discussion**

The main points that emerge from the strategic results are as follows:

1. The main drivers for most of the metrics are:
2. Reduce risks of manual method
3. Reduce time consumption
4. . Importantly, the proposed system developed in this study provides an ultimate advantage because it is more systematic, less time consuming and is able to generate quick results as compared to the conventional method.
5. There will be no issues related to biases or favouritism as the outcome generated by this project is apparently transparent and untenable.
6. The institutions as well as students find it easier to interact with student information and results.
7. There is also no use of paper as there was in traditional method which is good for the environment.

**Chapter 5**

**Conclusion and Future Work**

In near future, the system interface could be improved, with more attractive, interactive and meaningful images; with an email and SMS or email notifications. Or Enhancing the current system by computerizing almost all the services provided by the institution, turning it into a complete Student Management System. And evolve the system by developing several versions through users feedback if a complete solution has not been worked out.

Qualitative evaluation involving assessment is usually subjective, which can lead to difficulties in opinion and thus, arising difficulties in terms of deciding students with better performance when there is a range of criteria involved in the evaluation. Evaluation of Academic Performance is an application and can be used at any place, any time and by any student or faculty. This application will avoid the calculation and simplify the process of visualizing results by students as well as faculty. Moreover, it simplified the tasks of evaluators because they do not need to perform the complicated and time-consuming operation, compared to the current existing traditional method practices. Ultimately, the proposed system is designed specifically to ensure fairness and transparency during the evaluation of student performance. Thus, any unfavourable and unethical conducts of evaluators such as biasness, favouritism, stereotype, unfairness and prejudice can be avoided. Dissatisfaction among students can be minimized because they know the process of selecting the best student is fair and transparent by using a system that is not merely based on human judgement. Thus, the objective of this study, which is to reduce risks of traditional system and to reduce time consumption is achieved. The development of this project was proven to assist evaluators in providing an improved decision-making solution to the evaluators durinthe evaluation process.

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