

Grading Based Analysis System

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Abstract: Accreditation of educational Institutions/programs is a global practice and which is to be known by various developing and developed countries for one or more purposes. Accreditation can be in general summarized as a process, based on professional judgment, for evaluating whether or not an educational Institution meets predefined specified standards of educational quality. In the existing result analysis system, the entire related job with the result analysis has to be done manually. For calculating the pass percentage or to extract the subject wise marks lots of paper work has to be done. It is quite a tedious work and requires lot of hard work. It can even incur errors which will ruin the complete work. Analysis and understanding of the result as well as comparison with the previous years is a difficult. We proposed an application for generation of a result analysis report which will be in format such that the parameters consider while NBA accreditation are satisfied. It will overcome all the drawbacks of the existing system. It will help save a lot of time and effort, as everything will be done in a computerized way, it will be less prone to error. For better understanding and comparisons year wise result, Graphical representations will also be included. This report of result analysis will clearly reflect about the quality of the methods and efforts taken by the institution for betterment of students' performance.

Keywords: CGPA, NBA, Accreditation, Graphical representations, Analysis, Successive, Completely computerized.

I. INTRODUCTION

A. NBA Accreditation:

The purpose of the accreditation is to promote and recognize excellence in technical education in colleges and also universities at both the undergraduate and post graduate levels. Institutions, students, and the public at large all benefit from the external verification of quality provided through the NBA accreditation process. Process of continuous quality improvement is also one of benefit provided, that is encouraged by the NBA's developmental approach is to promote excellence in technical education [1].

Through accreditation, the following main purposes may be served:

- Support and advice to the technical Institutions in the maintenance and enhancement of their quality of provision.
- Confidence and also assurance on quality to various stakeholders including students.
- Assurance of the good standing of an Institution to the government departments and other bodies that are interested.
- Enabling Institutions to state publicly that it has voluntarily accepted independent inspection and also have satisfied all the requirements for satisfactory operations and maintenance of quality in education.

The process of accreditation is undergone by every institution and many manual techniques are used for this purpose such as excel sheets and various other techniques which involve lots of human efforts and sometimes seems to be inconvenient but this application will completely automate the process of managing complete data related to the process and reduce the human efforts.

The user interface provided will be very convenient and easy to use.

Accreditation Criteria:

The criteria that are considered by NBA during the process of accreditation of a programme is determined by the NBA's definition of quality of programmes and it is relevance to the profession concerned. This criterion includes – Students' Performance. Therefore we are using Result analysis system[2].

Result analysis system is required for self-evaluation process conducted by the faculty or the administrators and the staff of the institution, resulting in a report that takes as its reference set of standards and criteria of the accrediting body as a first step in the accreditation process.

It is required by faculty to see students' performance in every subject and highlight near misses, so as to focus teaching where it's needed most. Also give this detailed feedback to students to help them prioritize their studies.

Identify areas for improvement by:

Highlighting which topics the students answered well and of those where improvements could be made.

Understanding how students fared against the key skills and also assessment objectives for each specification.

II. RELATED WORK

The purpose and impact of accreditation goes far beyond the quality assurance of an Institution. Major impacts of accreditation system are it encourages quality improvement initiatives taken by institutions and motivates faculty to participate actively in academics and related Institutional/departmental activities, and also Contributes to social and economic development of the country. Students studying in NBA accredited Institutions can assure that they will receive education which is a

balance between the high academic quality and professional relevance and the needs of the corporate world are well integrated into programs and activities. It signifies that he has entered the portals of an Institution, which has the essential features of the quality professional education.

Accreditation also assures prospective employers that students come from a programme where the content and quality has been evaluated by satisfying established standards. It also signifies that the students passing out of institution have acquired competence based on well established technical inputs.

It helps in gaining confidence of the stakeholders and in giving a strong message that as a country, our technical manpower is of international standards and can be useful in enhancing the global mobility for our technical manpower.

III. EXISTING SYSTEM

The existing system is fully manual. The student's marks are recorded manually on blank papers. The different calculations like percentage and who is the topper and how many students are pass and how many are failing in that subject, overall result are found manually consumes a lot of time. The need of analysis of result as a whole is very difficult and time consuming. The limitations like time consuming, insecurity and loss of data aroused the need for the result analysis application.

Drawbacks of Existing system:

- Fully manual
- More time
- More difficulty
- Requires lot of maintenance
- Difficult to analyze

IV. PROPOSED SYSTEM

The main aim of the proposed system is to automate the process and make the management of the huge amount of data required for the accreditation process effortless to achieve this goal the application will have a very easy and handy user interface from which the data can be easily managed by the admin and faculties can easily take a review of it, for betterment of the students' performance.

Benefits of Proposed Application:

- Completely computerized
- Quicker response
- Maintenance of records is not expensive.
- The screen layout is very user friendly; it gives the user of the system typical window look and feel.
- Once the papers have been submitted the admin can enter the marks into the database.
- The marks can be easily updated if some error has incurred.
- Easy to analyse

The proposed system maintains the consistency of data throughout the system. It also contains normalized data

which is easy to store and retrieve. It can generate subject-wise report, percentage-wise report; practical report and also overall result of class report and overall pass percentage in each subject report and also graphs for every report that are beneficial for the analysis of result.

A. System Architecture

The following architecture shown in figure represents the overall working of the system it shows the entities involved in the system and their role:

Admin: The role of admin is to keep the whole database updated.

Faculty: The role of faculty is to analyze the students' performance in their respective subject and take measurements for the betterment of weak areas to improve the performance.

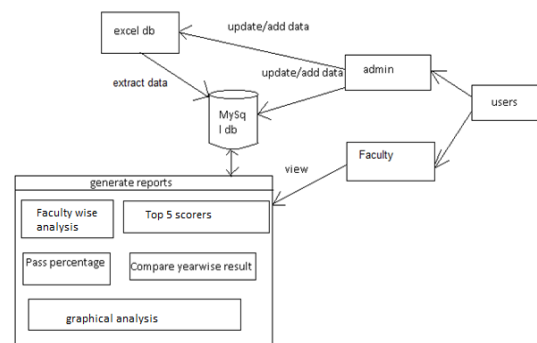


Figure 1: System architecture

B. Features

- Simple and easy to use. Reliable.
- Scalable solution which maintain large record of students.
- Supports the entire student lifecycle from enquiries, maintain record of the grades, and use.

C. Result and Discussion

Figure 1 shows faculty-wise analysis of results. It shows the pass percentage of students in the subjects taught by a particular faculty in a particular branch.

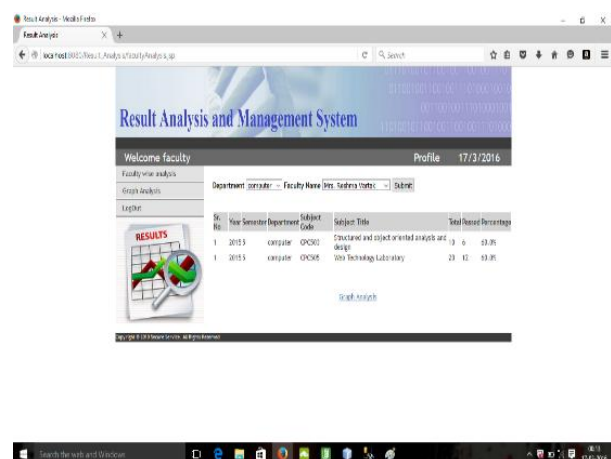


Figure 1: Faculty-wise analysis

Figure 2 is graphical representation of year-wise analysis. It shows pass percentage on Y-axis and subjects taught by the faculty on X-axis.

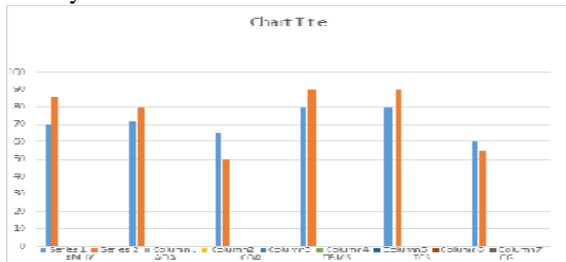


Figure 2: Faculty-wise analysis (graphical representation)

Figure 3 shows Result analysis done by admin. It gives total number of students passed out of total number of students appeared and pass percentage of the students of the specified branch, year and semester.

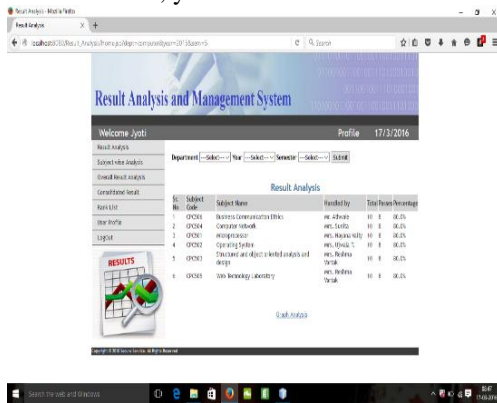


Figure 3: Result analysis (admin)

Figure 4 shows overall result analysis done by admin of a specified year and semester. It gives the total number of students passed, number of students having backlogs in the range of 0-5 and overall pass percentage.

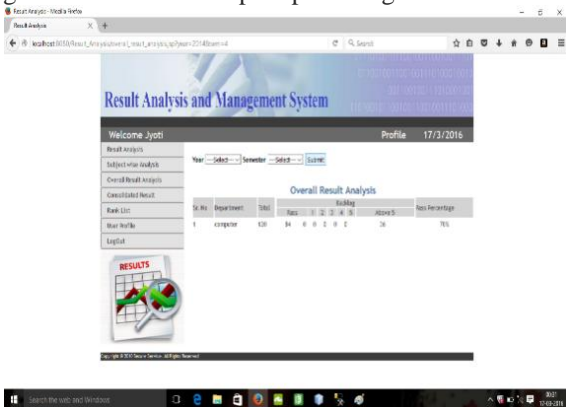


Figure 4: Overall Result analysis (admin)

V. COMPARISON BETWEEN EXISTING AND PROPOSED SYSTEM

Parameters	Existing system	Proposed system
Efficiency	Low	High
Time	More	Less
Efforts	More	Less
Maintenance	Difficult	Simple

VI. SCOPE

Our Application will find its use while dealing with analysis of result. Result Analysis Application will provide a very simple and efficient user interface and provision for all necessities required for result analysis such as overall pass percentage, top 5 scorers of each branch, year wise comparison, etc. Analysis of successive results of students in an institution will be considered in future scope of the application. Successive result analysis may include calculating API and success rate from result and admission database.

VII. CONCLUSION

Major impacts of accreditation system are it encourages quality improvement initiatives taken by institutions and motivates faculty to participate actively in academics and related Institutional/departmental activities, and also Contributes to social and economic development of the country by producing high quality of technical manpower it also helps in securing necessary funds and enrolment of students in terms of both quality and quantity. This application will provide a very simple and efficient user interface and provision for all necessities required result analysis such as overall pass percentage, top 5 scorers of each branch, subject wise scores, etc. It will analyze the result of each subject, each class and finally of each department.

REFERENCES

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- [2]. <http://www.nbaind.org/En/1051-nbas-accreditation-parameters-criteria-and-processes.aspx>