Automatic Generation of Result Analysis

P.Ilakiya [1], S.Anusuya[2], B.Devishri[3]
Assistant Professor [1], UG Scholar [2], [3]
Department of Computer Science and Engineering [1],[2],[3]
SNS College of Engineering, Coimbatore-107

Abstract

The student result analysis system is used for educational measurement processes test and results analysis of annual examination based on the university exam of the student. This system is mainly based on the database technology and the credit based system. The exam has two parts: internal exam and external exam finally result of each subject is calculated grade wise. It gives the statically analyzing of student result.This application is useful for storing student's information and annual result in the database and shows the student performance. And it gives the comparative information among the students such as toppers, boy's vs girl's performance, merit vs management etc., the main goal of the system provides a single platform that will be used to manage the processing of all examination records within the institution.

Keyword: *Micro Analysis, Credit based system.*

I. INTRODUCTION

Student Result Analysis System is helpful for students as well as the college authorities.In the current system all the activities are done manually, it is very time consuming. Student Result Analysis System deals with the various automated process related to the students. Here it is going to be a web application was the accessibility of the result analysis details is brought up everywhere. By this application data analysis is done as much as easier and faster.

Initially it holds the student database and the students, admin have their individual logins for data access.In that the student can able to view the data alone but the whole data made by admin and they can able to edit and manage the uploaded data. During analysis, data collected on the various files, decision points and transactions handled by the present system.

In entry status, the admin will upload the student profile information, list of subjects and electives offered by a university and continuous assessment on student internal performance are uploaded. Follow that, university results of the end semester are also uploaded.

A. Macro Analysis

Macro analysis will helps to show the overall department result and year wise result and also it deal with grade wise subject analysis, subject wise failure analysis, faculty wise analysis. These types of analysis help to evaluate the result in different forms.
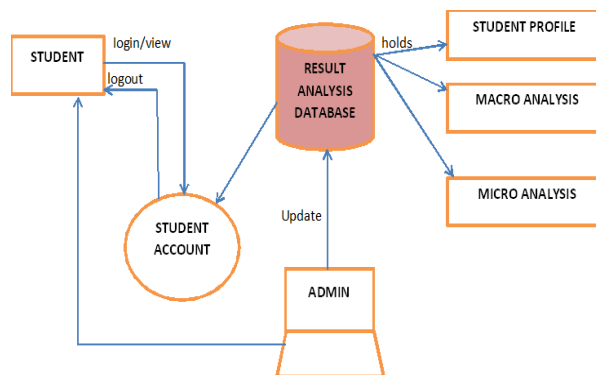

Fig 1: Architecture Diagram

B. Micro Analysis

Micro analysis only focuses on students of every year. It performs the analysis results among boys vs girls, merit vs management, day scholar vs hosteller, urban vs rural, first graduate vs others. All this type of analysis is helps to evaluate the students in different aspects and the fallout of this institution can able to improve the performance of each individual.

II. TECHNIQUES USED IN STUDENT RESULT ANALYSIS SYSTEM
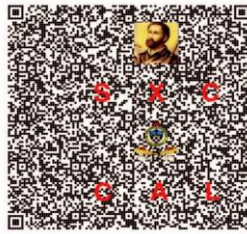
A. Credit Based Result Analysis Systems

The credit system allows an institute to specify programs and individual courses in terms of their required credit load. This in turn gives a clear picture of the learning effort that a student will have to put into each course as well as the overall program.Being at the beginning stage of the credit based result analysis Systems, computerization of the student result analysis is tedious task. The main reasons for using computer base result analysis system are to calculate the individual result, college result and to find out the first three topper ranker. In other words, Credit Based Result Analysis Systems increase effectiveness and efficiency by saving time. And it does not match the comparisons in micro level.

B. *Cumulative Grade Performance Index (Cgpa):*

An up to date of an overall performance of student from the time he/she enrolled in the university is obtained by calculating a number called cumulative grade performance index. It is calculated in. CGPA is responsible to reflect final pass or fail status of student. $CGPA = C_1g_1 + C_2g_2 \dots Cng_n / C_1 + C_2 \dots Cn$. Though it improves the way of result analysis providing rich functionality, it doesn't provide any comparison like micro analysis and macro analysis.

C. *Qr Code Generation*

QR Code is a type of 2 dimensional matrix barcode, which gained popularity because of its large capacity to hold digital data and it can be integrated in any mobile devices. In mark-sheet system, we save the essential data of each student in the QR Code, like the student's name, roll number, registration number, semester and year of study, marks obtained in different subjects and grades secured. But, all the data saved and embedded in the QR Code, are encrypted, and then the QR Codes are printed in the mark-sheet of the student. So, in future if the student or any other person wants to see their marks digitally or wants to send their academic information to any University or Organization in digital format, then they can just scan the QR Code, decrypt the data and send the data.

Decryption of Data
From QR Code

Figure 2: Student's Information in Form of Encrypted QR Code

In the above diagram with the help QR code system gets displays the mark which are saved in the mark sheet. And it displays the mark in secured manner with the help of cipher method but it doesn't perform any comparison among the students.

III. PROPOSED SYSTEM

The analysis of student result is done and data's of their result are stored and managed in an efficient manner. It provides the result for credit based system in very user friendly manner. This system reduces the manual efforts. A feature of this system is that it aims at improving and easing out the work of the existing system in very sophisticated way.

The technology is rapid able to generate, store and display the result. It calculates the grades based on university rule with the information provided in the database. Therefore, in this research, the exam tests used in these subjects are analyzed and their characteristics are discussed. The structure of the test is described along with the scoring and grading system. Each student has 2 areas to score marks they are internal and external marks. Internal marks is the mark given by the individual subject faculty and it will be calculated based on the student performance.

The three internal assessment examinations to be conduct and calculated to 20 marks overall. External marks is a mark given by the person correcting the student theory paper written in university examination. Initially the external mark will be given for 100%, when both are over it will combine. Theory marks is converted to 80% from 100% then internal marks is converted to 20% from 100%. Finally the grade is then being processed based on the credits of each subject.The Student Result Processing consists of 3 users or modules, they are:

- Admin
- Student
- Faculty

A. *Admin*

The admin is responsible for uploading the results that has been generated. He can add the subject marks and make any kind of modifications like storing, updating, deleting. Apart from the regular results, the supplementary results can also be uploaded by the admin.

B. *Student*

Student must be an authenticated user of the college to access this application. The student can view the semester marks, individual subject marks and aggregate till the current semester.

C. Faculty

Faculty must also be authorized users of the college. Faculty can view the class result, subject wise result. The percentages of students pass/fail in a subject can be viewed. The total marks (internal, external and both) can be calculated.

D. Entry Status

This subject creation of the entry information indicates the entry which has been manually set by the admin. It includes student profile, subjects and electives, internal marks, attendance, university results, other college results.

1) Student Profile

Student profile is an excellent way to introduce the student and to highlights the particulars to others. The entry of each student details has to be made by the admin and also managed. The profile consists of name, reg no, date of birth, address, etc.

2) List of Subjects and ELectives

The subject and electives were entered by the admin in order to create and manage it. The entering data should specify with subject area, semester and elective subject which is called optional subject, that the student have a choice to select which subject they want to study.

3) Internal Mark

Creation of internal marks is also made by the admin for analysis of result. The internal mark is the mark given by the subject faculty which is based on the student performance which includes (IAE I, II, III). This mark will be converted into 20 marks.

4) University Results

The admin have to make an entry of the university grade of subjects for each student. The grade like(S, A, B, C, D, E, U) is calculated based on the performance of internal marks, external marks and the credits of the subjects accordingly. The current GPA of the student can be known only by knowing the grade of each subject.

IV. CONCLUSION

The application will manage the information about various students enrolled in this course in different years, the subjects offered during different semesters of the course, the marks obtained by the various subjects in different semesters. The application will greatly simplify and speed up the result preparation and management process.

REFERENCES

[1] Isabelle Guyon, Steve Gunn, Asa Ben Hu, Gideon Dror, (2003)" Result Analysis of the NIPS 2003 Feature Selection Challenge", Also Available at :http://papers.nips.cc/paper/2728-result-analysis-of-the-nips- 2003-feature-selection-challenge.pdf

[2] Kaspříková, N, (2012), 'Statistical Evaluation of Examination Tests in Mathematics for Economists' , Journal on Efficiency and Responsibility in Education and Science, vol. 5, no. 4, pp. 203- 211 Also available at http://dx.doi.org/

[3] Somdipdey (2013), New Generation of Digital Academic Transcript using encrypted, Proceedings of IEEE 2013 International Multi Conference on Automation Computing, Communication, Control& Compressed.

[4] Trisha Chatterjee, Tamodeep Das, JoyshreeNath, ShayanDey, AsokeNath, "Symmetric key cryptosystem using combined cryptographic algorithms - Generalized modified Vernam Cipher method, MSA method and NJJSAA method: TTJSA algorithm", Proceedings of Information and Communication Technologies (WICT), 2011 held at Mumbai, 11th – 14th Dec, 2011, pp.1175-1180.