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University Drop out Management System using Data Mining

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ABSTRACT: University drop out management system can lead to error free, secure, reliable, and fast management system. This system will predict drop out percentage ratio before passing year .The organization can maintain computerized records without redundancy entity. Student should submit test for generating final result. College should enter all the information on software. student information if divided three categories like student personal information, educational information, curriculum activity.

Basically the project describes how to manage for good performance and better services for the university, so that their valuable data can be stored for longer period with easy accessing and manipulation of the same.

KEYWORDS: DM, EDM, Decision tree algorithm

I. INTRODUCTION

In existing system, university will not get drop out percentage ratio. Student should attempt exam then after getting result university will know about drop out percentage for current year. Now because of our propose systemuniversity will get drop out percentage ratio before passing this year.we have three module like first college module, second is student module and 3rd is university module. In this system student should submit one test. This test is totally about reasoning, English grammar, mathematical part etc.

College module contain some college information like branch, course etc. college should fill the information about student personal information, educational information, curriculum information. After getting information from college and student marks system will generate result. Only university will know the result, that result is divided for every engineering department and also university will get all over department result.

Higher drop out ratio can be harmful for any university.so if university knows drop out ratio before end of the year. Then this will help to reduce the drop out ratio as well as students also save the failure year. After considering parameters that project is helpful to student as well as to university.

This topic will help to know the drop out students in percentage format. Because of that project, university can understand no. failure students. If that ration is known before acutely happen then university can work on that. University can apply some different criteria to avoid that drop out ratio. If this will happen then drop out ratio can be reduce. If drop out ratio is less then that university can be top level university.

II. RELATED WORK

Ryan S.J.D. Baker, Kalina Yacef presented “The State of Educational Data Mining in 2009: A Review and Future Visions". In this paper, the author discusses the entire rapidly growing field of EDM. In this paper, the author points out that EDM remain used in Australia, New Zealand, North America and some part of Europe, with little participation from remaining part of the world. The impact of DM in education remains same like other related fields like data mining in intelligent tutoring system using artificial intelligence [1]. Cristobal Romero and Sebastian Ventura presented “Data mining in education”. In this paper, researcher brings the different community of educationalist and researcher together like computer scientists and learning scientists. Here author apply different DM techniques to analyze data generated during teaching and learning process in different education practice. After analysis, the result is used for further decision making to improve the educational practice [3]. Muna Al-Razgan, Atheer S et al presented “Educational Data Mining: A Systematic Review of the Published Literature 2006-2013”. The entire researchers on educational data mining domain are working toward the development of educational games, mobile application learning and ITS for learners. The study found that everyone is focusing on working on the educational games,

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intelligent tutoring and mobile development application[4].Kenneth R. Koedinger et al presented "Data mining and education". In this research, authors tries to describe the different, exciting and slowly growing areas of educational data mining. In his view, educational data mining areas are one of the interesting areas to study because it touches the basic research question that how students learn and behave in multiple disciplines of his life. This question is important to answer because it contributes to the development of the student as well as for the development of the society [5]. Laura Calvet Liñán et al presented "Educational Data Mining and Learning Analytics: differences, similarities, and time evolution". In this paper, the author presented the similarities between two different areas of research. They highlighted the goals, types of methodologies and techniques used in EDM and LA. They also reveal the difference between these two areas of learning like their origins and trends. But at last the outcome of each learning process leads to help the development of the society. As these two learning processes affect the society still they come up with some barriers, easy to understand tools [6].

III. SYSTEM ARCHITECHURE

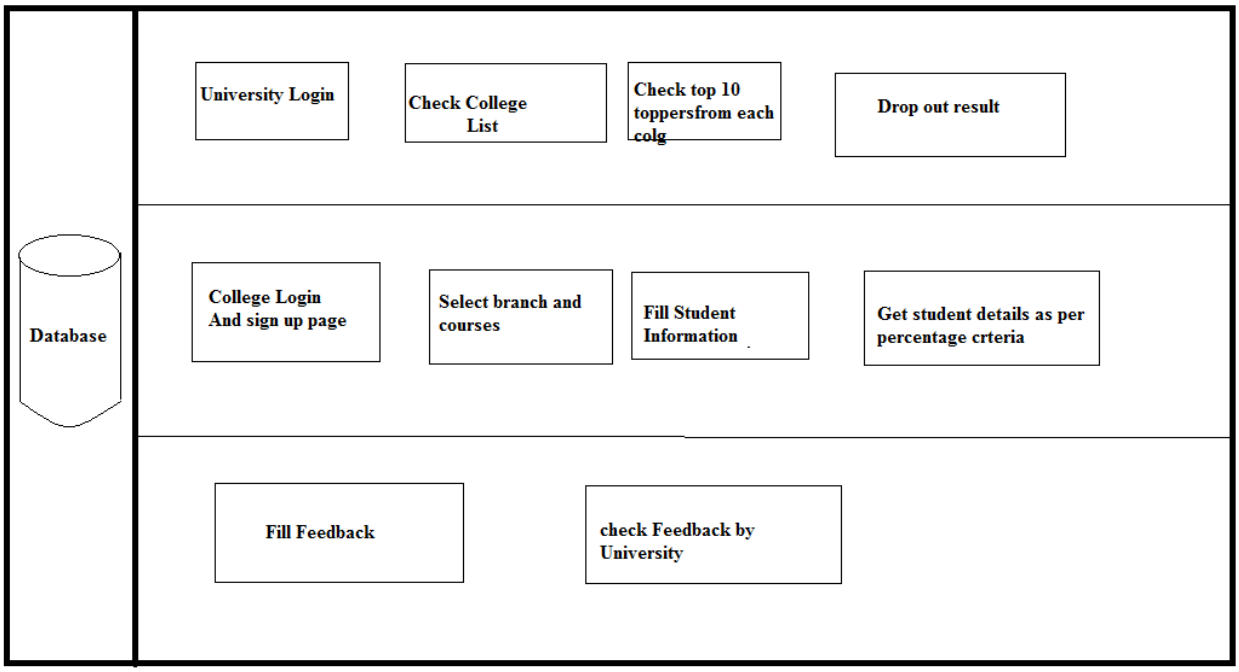

Fig1: System Architecture

Modules are as follows:

1. University Login
   This is the entry point to enter into the system. After entering into the system university site holder can check dropout result for this year, check feedback, check colleges list under university.

2. College Login/Sign up
   From this module college can enter into the system. If college doesn't have id and password then college need to go through sign up page. For sign up into the system college need to fill some information like college id, college name, address, email, contact us, password, confirm password.
   To enter into the system college need to fill college id and password.

3. Feedback
   Anyone can submit feedback or any issue to a system. To submit Feedback user need to fill some information like college id, name, email, suggestion or problem, remark.
   This feedback is considered by university.

4. Branch and Courses
   College can insert their courses and branches through this page.

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After insertion, college can check that information is added to a system or not at bottom of the page.

5. Fill Student Information
   College need to fill student information to check drop out result.
   Information like student name, address, roll no, 10th score, family background, economical background, unit test marks ,submission regularity, Behavior, attendance etc

6. Drop out Result
   Drop out result display on the basis of student information. Whatever data is present into the system that is going to be considered for final result.

IV. PROPOSED ALGORITHM

Input : student test marks and student information.
Output:P:drop out percentage ration in pie chart.
Step 1:start
Step 2: student should login and attempt the test, result is stored as p.
Step 3: college need to fill information about student into three categories.

i) Student personal information as S
ii) Student educational information as E
iii) Student curriculum information as C

Step 4: After submitting student test marks and student information as S,E,C, System will generate result automatically.
Step 5: update p for j=1,…. M by:

$$Pj(m+1) = \sum_{y}^{1} \sum_{j}^{m} P\,j + p$$

Step 6: After updating each student status of failure ,we use decision tree algorithm for taking decision about each student failure status.
Step 7: If P is less than 7 marks then that student is under failure tree.
Step 8: collect all the information about no. of records, how many student did not attempt test and drop out percentage ration will be shown in pie chart

V. RESULTS

index page -this is the first page of our system. from this page ,we can go through university login, college login, can submit feedback, see contact details.university login -we develop this system is only for single university. because of that login id and password is fixed. login id is ux2021 and password is drop@111.after successfully login into system, we can jump to check result or to check feedback.check feedback by university-any one can send feedback to the system. if any one is having any issue related with the system that can be send into feedback.this all feedback are consider by university. check colleges under university-with the help of this page we can check colleges which are under our university.
college id, college name, contact no is present.college sign up-to enter into the system college need to have id and password. for that reason college need to signup into the system. college need to fill information like college id, name, address, contact no, password and confirm password(password and confirm password should be same).college login-after successfully signup into the system. college need to enter id password to enter into the system .
now college can select branch and courses, fill student information etc.insert branch and courses-college can insert their courses and branches through this page. after insertion, college can check that information is added to a system or not at bottom of the page. college should fill information about student.
submit feedback-any one can submit feedback or any issue to a system. to submit feedback user need to fill some information like college id, name, email, suggestion or problem , remark..

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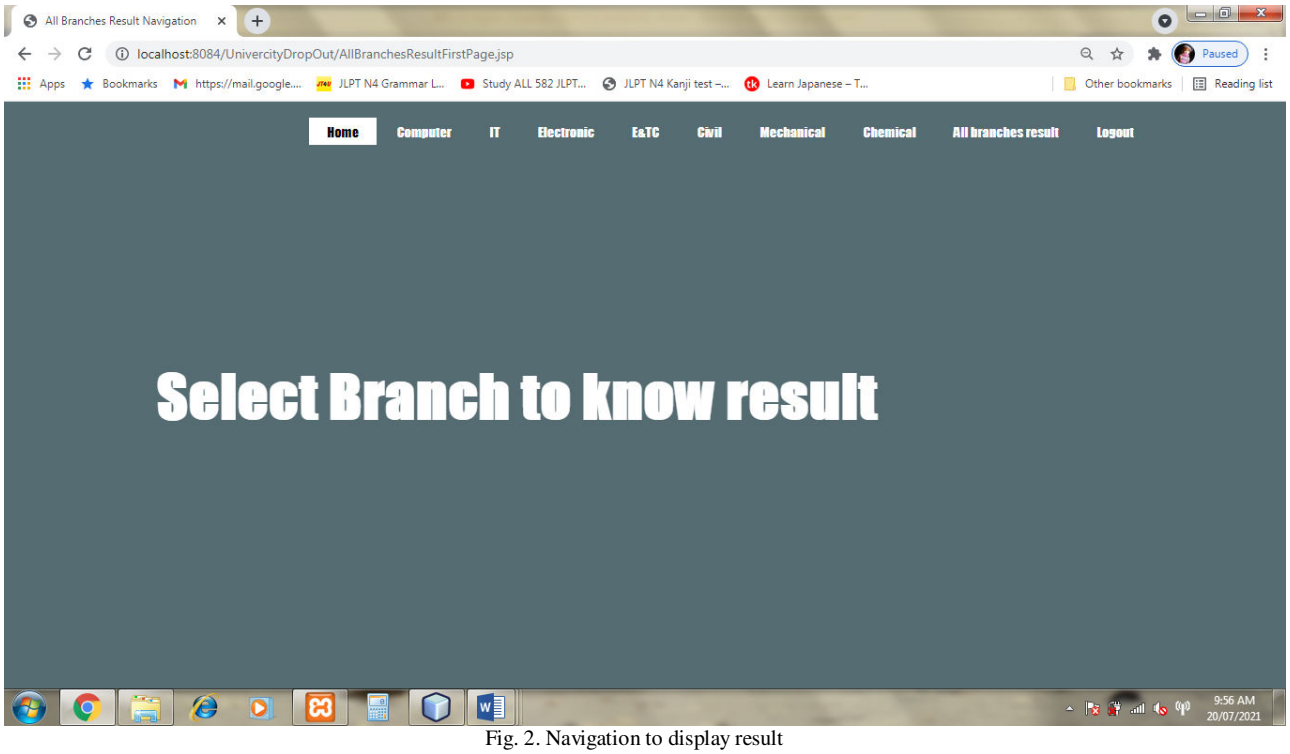

Fig. 2. Navigation to display result

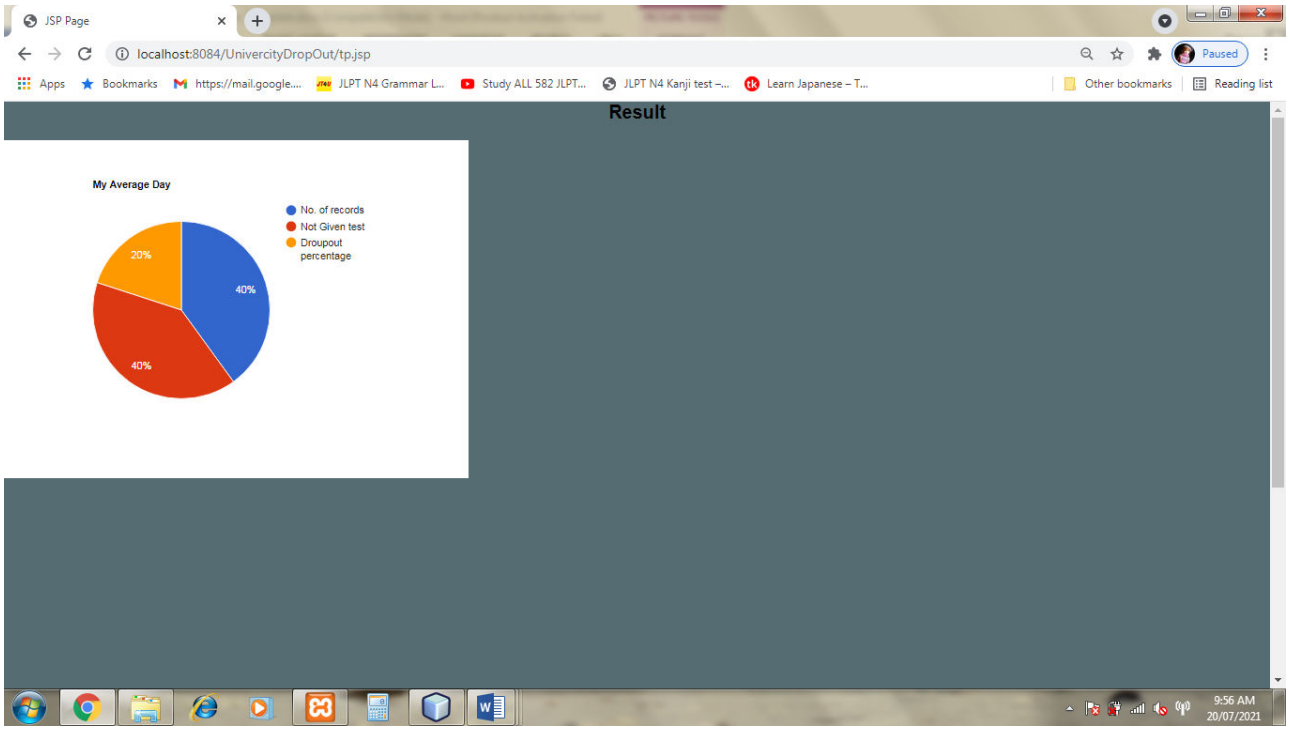

Fig.3. Result to show drop out ratio

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VI. CONCLUSION AND FUTURE WORK

The **"University drop out management system"** will created with the intention of providing an Drop out ration before passing the year. As a proposed work we are dividing our module into three part like student module, university module, college module. Each of having different functionality. Student should give test. College will provide information about student. University will get dropout percentage result for each department. That will help to university to know drop out percentage.All the requirements specifications will follow as far as possible and few additional features were added that can make the application more user friendly and less complicated. As a future work we can add some extra work like adding more than one university, use big data to store information etc.

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