

Implementation of College Management System

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Abstract— College Management System is an automated version of student management system. The modules that are managed in this college management system are student personal details, student academic details, student exam result details. These are managed by an administrator. In this college management system the administrator side is designed a web panel with web scraping, where as the student side is designed as Android app. College Management System as categorize into different modules. The following modules are Andhra University Student exam results automation, Certificate Vault designed for both admin and student as web application and Android app, Student complete profile/academic details along with digital study resources.

Keywords— Automated, Web Panel, Web Scraping, Android App, Digital study resources.

I. INTRODUCTION

College Management System deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details and other resource related details too. It tracks all the details of a student from the day one to the end of his course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result; and all these will be available for future references too. Our program will have the databases of Courses offered by the college under all levels of graduation or main streams, teacher or faculty's details, batch execution details, students' details in all aspects.

This program can facilitate us explore all the activities happening in the college, even we can get to know which teacher / faculty is assigned to which batch, the current status of a batch, attendance percentage of a batch and upcoming requirements of a batch. Different reports and Queries can be generated based of vast options related to students, batch, course, teacher / faculty, exams, semesters, certification and even for the entire college.



Figure 1: Data which can be accessed by students.

II. PROBLEM STATEMENT

Every Educational Institution maintains a Database of Students and faculty members; it doesn't provide accurate and valid data their users and doesn't provide regular updates their students and staff members. To overcome this we can use Automatic updating system by using API, which is provided by their respected universities.

III. EXISTING SYSTEM

At present in college management system we have three different modules.

Module 1: Andhra University Student exam results automation.

Module 2: Certificate Vault.

Module 3: Student Complete profile details and Digital study resources.

Module 1: Andhra University Student exam results automation

Generally Andhra University Student results are out in the Andhra University (AU) Official website "https://www.aucoe.info". So that Students of Andhra University and affiliated colleges of Andhra University can see their results in AU website. But as the results are out the server is busy the student face some problem to view their results. And also the students need to address their Register Number (roll number) and verify using Captcha (Completely Automated Public Turing Test to Tell Computers and Humans Apart). Then only the students can view their results.

Disadvantage:

- Student may or may not know that the results are out.
- In case if the student did not take any digital copy like screenshot etc. The Andhra University database results will be shown only of 4 to 6 months. There is

the chance of student don't know their result.

- And the students result analysis is difficult. That is pass/fail percentage analysis on every subject, every branch is difficult to find.

Module 2: Certificate Vault

Every students need to submit their certificates for verification before joining of the college / institution. In case of emergency in need of certificates the student need to approach the college administration department and need to do manual process to get their certificates. It is somewhat difficult for student. So Certificate Vault is used to store the digital copy of certificates of students like student passport size photo, marks memo, transfer certificate (TC), Aadhaar card details, caste certificate etc. These are stored in the cloud platform of firebase console. The insert of student data, upload of scanned copies of certificates, and marks memos are managed and processed by administrator using admin panel.

Disadvantages:

- If the student submits all the certificates to the college in case of emergency in need of certificates the student need to write the letter and submit to the administration department and it takes a long process to get certificate soft copy.

Module 3: Student Complete profile details and Digital study resources

Student complete profile details are used to view the profile of the student using their respective batch, branch, year, register number etc. And we can write custom queries to retrieve data from the database. This is managed and processed by administrator. And digital study resource is easy way for students to get the study materials to study. The digital resource contains softcopy materials, blogs, websites URLs and YouTube videos.

Disadvantage:

- Sometimes it is difficult to maintain the student details manually.
- Student need to search for materials to study.

IV. PROPOSED SYSTEM

Module 1:

- College Management System is used to send their exams results as soon as the results are out to their email address, numbers for both parent and student in a PDF format.
- Along with that students result analysis report is sent to their email address, numbers so that it will be useful to the students who are suppose to appeal for revaluation, betterment examinations.

Student results analysis report is generated easily.

Module 2:

- By using the certificate vault application the student get their certificates, marks memo of every semester etc. In their vault.
- Designed admin panel using web application to upload

the certificates to firebase console and retrieve the certificates for administrator to easily manage and process.

- Designed student panel in Android app to retrieve their certificates using their login credentials. And the student can login using their login credentials in the Android app and get their certificates as softcopy known as certificate vault.
- In case if the student did not have the mobile to use the application they can consult the administrator and get their certificates to their email or to their pen drive as a softcopy as per the student consent.

Module 3:

- Maintaining a database of student profile records contains student complete details, academic details.
- Retrieve data using custom queries.
- Easy way to students to get the study materials and related resources to study.

V. METHODOLOGY

1. Andhra University Student exam results automation: University results are given in official website and then the automated system can access the data with the help API's provided by the University and retrieve the results of the students which are present in the college data base and send their results to the respected mail address without any conflicts.

2. Certificate Vault:

It works as a bank of Certificates for students. When a student joins the college they take their Certificates of their primary Schooling and other educational certificates and store them in the college data base as softcopy, When ever Students require there Certificates they can directly access the database and can download there Certificates softcopy and can a printouts.

3. Student Complete profile details and Digital study resources:

Administrator is the person who holds the complete profile of the student whenever a head of the Department or faults request the student profile the administrator generates the report of the student with every single details like his progress in studies and if he has any dues or not. Student can access the digital resources to refer the study materials of their respected subjects.

VI. IMPLEMENTATION

Module 1 is implemented using VB (visual basic) script. The dataset is downloaded in csv (comma-separated values) format, and we convert that into excel and write a macro like taking the data from excel to designed PDF template using VB script and sent the email. And softcopy is sent using web using python script.

Module 2 is implemented using Node.js and store the

data in firebase console. And student can login and retrieve their data using Android app.

Module 3 is implemented using PHP and data is stored in MySQL database. Administration / college faculty can view the student complete profile and academic details. And the Student can get the study materials like softcopy materials, YouTube videos etc, in this module.

VII. FINAL RESULTS

Module 1:

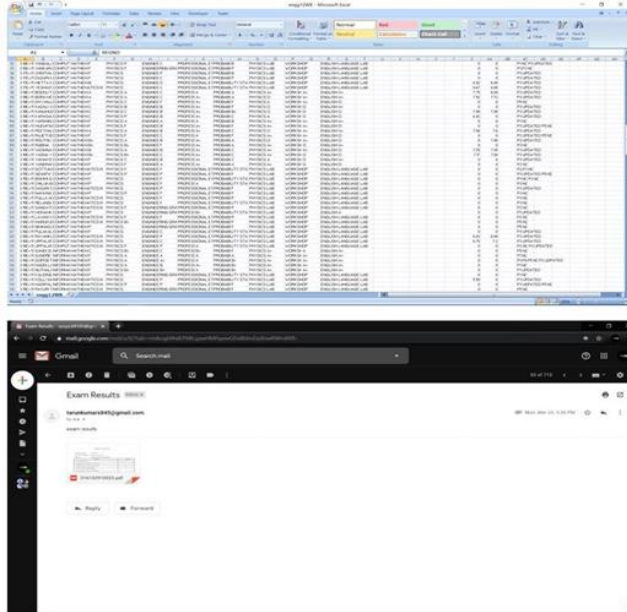


Figure 2: Student data set with e-mail

Module 2:

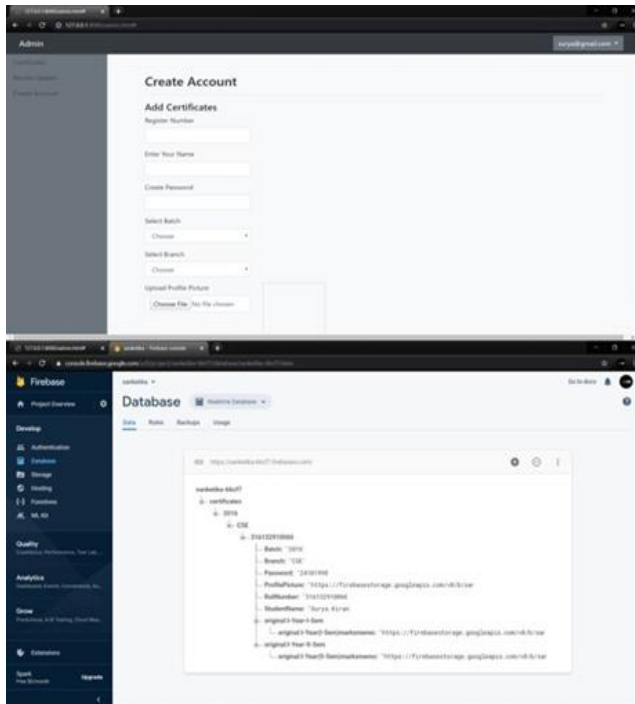


Figure 3: Admin panel with firebase storage

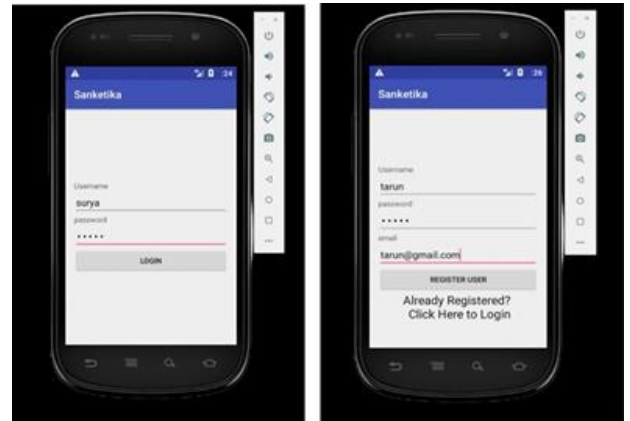


Figure 4: Student Panel



Figure 5: Front end and Back end of Student profile

VIII. CONCLUSION

The main aim of college management system is in the module 1 is used to get the Andhra University results are automated and results are mailed and also get the softcopy in and a notification alert. Module 2 is used to get the certificates softcopy to the android app. Module 3 is used to get the student complete profile / academic details and also student can have the digitals study resources.

FUTURE SCOPE

Additional future can be added like online assignments submission and evaluations, online multi chat application for better scope.

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