

Student Management System CRM

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Abstract: *Student Management System (SMS) is a solution tool that is designed to track, maintain and manage all the data generated by a School, including the grades of a student, their attendance, their interpersonal activities records, etc. A CRM system helps companies stay connected to customers, streamline processes, and improve profitability. When people talk about CRM, they are usually referring to a CRM system, a tool that helps with contact management, sales management, agent productivity, and more. CRM tools can now be used to manage customer relationships across the entire customer lifecycle, spanning marketing, sales, digital commerce, and customer service interactions. This can make the system easier to navigate and to use maximizing the effectiveness of time and other resources. SMS allows the keeping of personal data in a form that can be easily accessed and analyzed in a consistent way.*

Keywords: Student Management System

I. INTRODUCTION

A Student Management System (SMS) is a System that manages the records of student regarding admission and examination part. A Student Management System (SMS) is designed to help colleges for management of dental student. Extensive information is available at your fingertips through this System. Viewing student data, managing admission and reshuffling, managing seats, quota, board, semester, faculty, category and for examination, block allocation, subject management scheduling exam, result and related issues are simple and easy. There are custom search capabilities to aid in finding student information and working on student records. This can make the system easier to navigate and to use maximizing the effectiveness of time and other resources. SMS allows the keeping of personal data in a form that can be easily accessed and analyzed in a consistent way. Some also use Moodle as a SMS system [5] Student management systems serve academic institutions in a variety of ways, the most important of which is centralized data administration and accessibility. Admin will be able to input, maintain, and access student data more simply.

II. MAIN OBJECTIVES OF THIS PROJECT

The project is about to handle all the information of the student and the organization in manner in which the record can be stored and accessed from any place and also the cost of loss of information, cost of physical store can be minimized as far as possible. Building an environment which is easy for everyone who uses this platform [6].

III. LIMITATION OF EXISTING SYSTEM

This application is built for a private organization and the limitation which this organization was facing using the existing platform are discussed further.

When we see the current existing system for organization management, a lot paper work along with man power [1] [2] is needed to keep student related information organized [3][4].

Keeping records as a hardcopy always bring risk of loss of data, data breach. Also, for storing such data we need physical storage place which adds up to the overall cost of the organization and keeping data as a softcopy is much structured way of organizing data which make data retrieval easy [7].

As an organization grows, the result of the past data is very important before deciding the next step which an organization takes [8][9], and when we have all the previous data in hand written format we will have to convert that data so that a representation of the previous result can be obtain (example: bar charts, pie charts and graphs).



Also, physical storage space to store hardcopy of records is much more expensive than storing them in nonphysical environment (softcopy) [10].

IV. PROPOSED SYSTEM

After the observations and research on existing systems, we have created a flowchart which helps to better understand the working of our project.



Figure 1: Flowchart

Discussing the flowchart, here we can see a complete flow of the app. Features like Login, View courses, send enquiry for a particular course, join classrooms are provided by this platform.

In this project we have 3 type people using this app:

1. Admin
2. Student
3. Faculty

4.1 Admin

As the name suggestion, admin is the person who is managing this app for his organization.

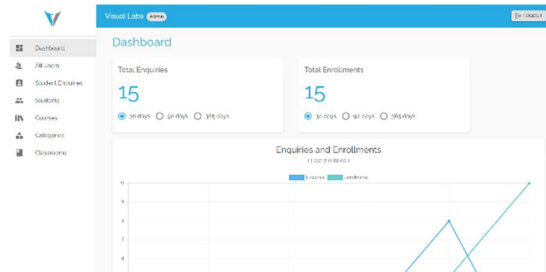


Figure 2: Admin Dashboard

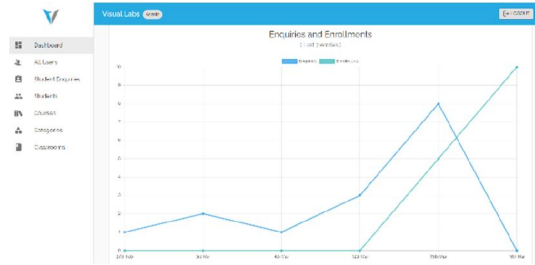


Figure 3: Admin Dashboard (Graph representations)

These two figures show the main dashboard of the admin panel. We can see different graphical representation of data here. This shows the enquires and enrollments for different courses in the past (span of 30,90 and 365 days). On the left side, we can see the navbar section.

Options include: Dashboard, All users, Student enquiries, Students, Courses, Categories and Classrooms

When we discuss about All user section, here we display all users who are currently using this platform. Student enquiry section has all the enquires which the people have raised for a particular course. Student section show all the enrolled student in the organization. The admin has the privilege to update the enquiry to enrollment once the student wants to enroll in a particular course. Also, he can delete a particular enrollment once the student has finished his course or leave the organization.

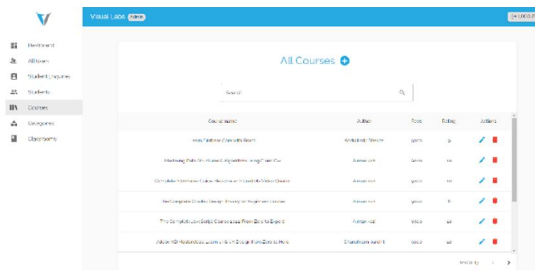


Figure 4: All courses

All courses section displays different courses which the organization provides and the admin has the privilege to edit each course data if needed. He can update the name of the course, author of the course, Description, fees etc. He can also delete a course if needed.

Now coming to the categories section, here the categories in which the courses are listed are displayed. By choosing the show more option admin can have an overview of that category.

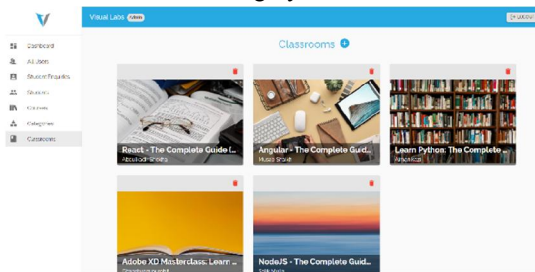


Figure 5: Classrooms

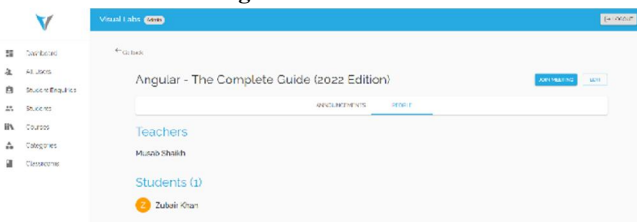


Figure 6: Classroom dashboard

Lastly, we have the classrooms section (Above 2 figures). Here we can see different classes this organization has. When we select on of them, we see two sections, announcements and people. Announcements are listed are people sections list all the people who belong to this class including the teacher and the students.

We also have an option to add meeting link at the top right corner (Fig 5). Students can use the Join meeting button to connect on an online video call with the faculty for the lecture.

4.2 Student

Whenever any student wants to view courses and enquire about them, they can signup on the app and view different courses which this organization provides. Once they select a course of their interest, they can raise an inquiry regarding that course. If the person is already enrolled in any of the courses, he/she can view course related information in the classroom section.

We also have a category section where the student can see the different categories which have different courses listed in them

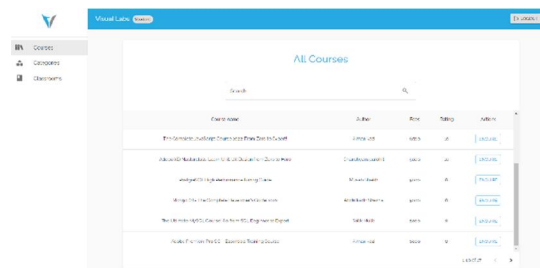


Figure 7: Student dashboard (All courses section)

The above figure shows the main dashboard section of the student. First section which is visible is the courses section. All courses which the organization provides are listed over here. Each of them have an enquiry button which the student can use to enquire about them.

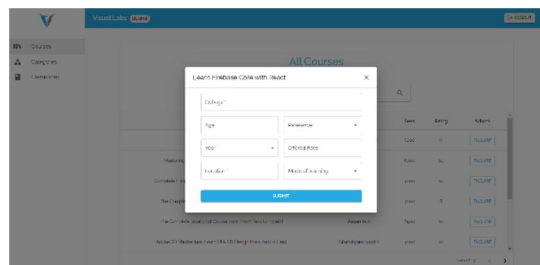


Figure 8: Enquiry form

Here we can see the enquire form which needed to be filled to enquire about a particular course.

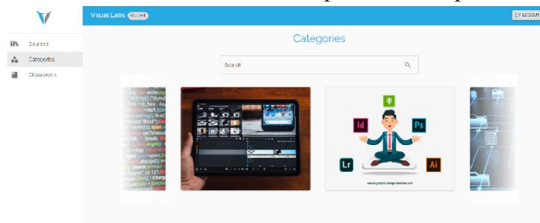


Figure 9: Categories section

Now we come to the categories section. Here we have all the categories listed and the student can see all the courses which come under each category. Basic information which is important for the student to know is shown here example: Fees, Rating & Author.

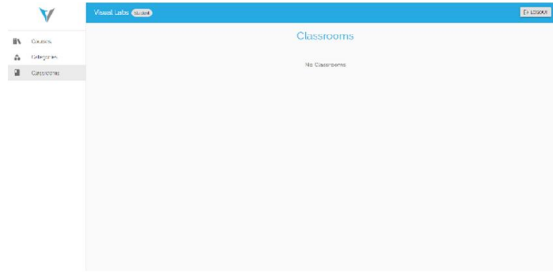


Figure 10: Classrooms

Finally, we have the classrooms section. If the student is enrolled in any of the class, he will see those class related data here.

4.3 Faculty

A faculty of this organization can access this app by using his credentials. The faculty dashboard has 3 sections: courses, students and classrooms.

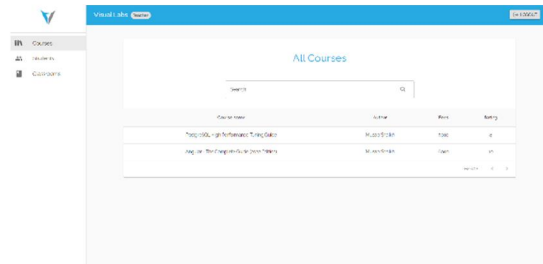


Figure 11: Faculty dashboard

First, we have look at the courses section as soon as we login as a faculty. Here, we can see all the courses which are tough by the faculty himself and also few details like fees, rating and author.

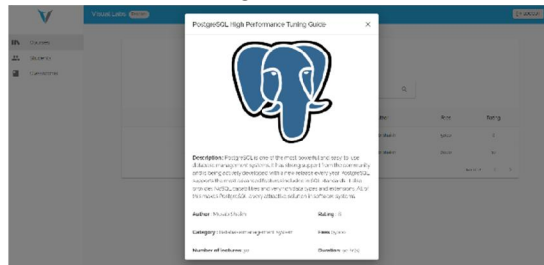


Figure 12: Course information Popup window

By clicking on any of the courses we get a popup window which shows more details related to the course.

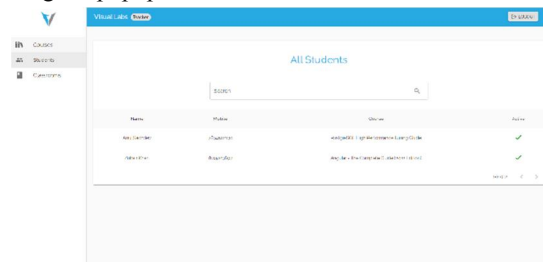


Figure 13: All students section

Coming to the Students section, we see all the students who are enrolled in each course the faculty is teaching. The status of the student can also be seen which shows whether the student is active or is not active (left the course)

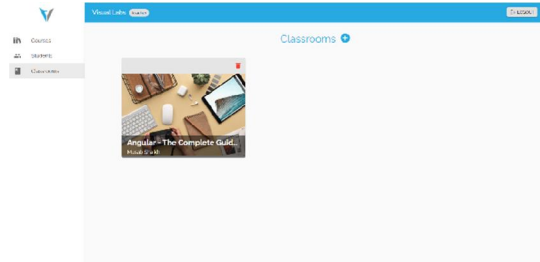


Figure 14: Classrooms

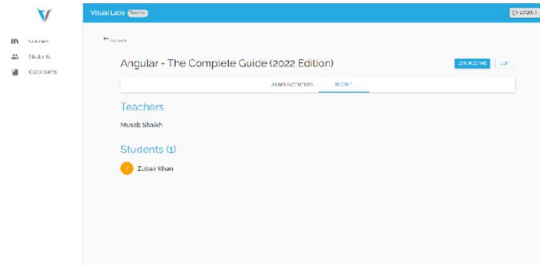


Figure 15: Classroom dashboard

Finally, we have classrooms section. Here the faculty can see the classrooms which he has created for his course. Inside this section we have announcements and people tab where we can find relevant information accordingly.

4.4 Login and Signup Section

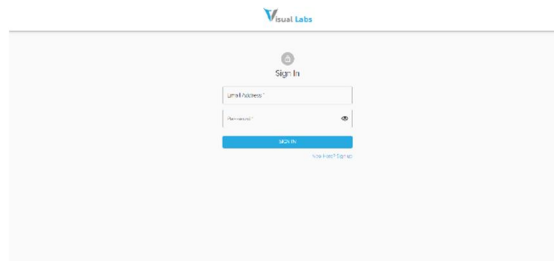


Figure 16: Login page

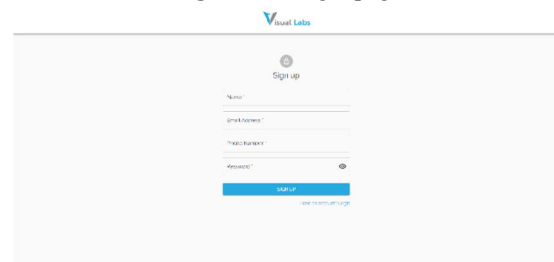


Figure 17: Signup page

Above two figures show login and signup section. Login requires email id and password and to sign up to this app, you need to enter name, email, phone and password.

V. TECHNOLOGY STACK

To Build this application we have used the MERN stack which comprises of MongoDB as a backend (no sql), Express, React.js for front end and Node.js. MongoDB offers scalable document-oriented database storage. This makes it ideal for apps requiring real-time scalabilities. On the other hand, the main benefit of using ExpressJS is its ability to use JS on both the front end and backend. And when we speak about React.js, In laymans term we would say that speed with which it renders is just excellent and also it is the most flexible programming language.

VI. SUMMARY

The student management system is an environment where all the process of the student in the institution is controlled and managed. It is done through the automated computerized method. Conventionally this system is done using papers, files, and binders. This system saves the time of the student and of the administrator and also decreases workload.

It includes task like registration of the student's details, assigning the department based on their course, and maintenance of the record. This system reduces the cost and workforce required for this job and hence saves money.

VII. CONCLUSION

Student Management System can be used by educational institutions to maintain their student records easily. Achieving this objective is difficult when we use the manual system as the information is scattered, and can also be redundant, also collecting relevant information may be very time-taking job. All these problems are solved by this project.

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