# STUDENT COUNSELLING MANAGEMENT SYSTEM USING MERN STACK

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**1.Abstract:** Counselling system defines the relationship between the mentor and the student. To automate the traditional method where faculty needs to enter the student's data in the paper. The main goal of the project is to reduce the paperwork, maintain transparency between the student and teacher, and to store the details of the student for longer period.

Nowadays, student's institutional information is stored manually. The mentors(counsellor) are allotted to the certain number of students by the admin where the mentor needs to enter the student information like results, attendance, entire information about student in all aspects like certification courses, extra circular activities and co-circular activities done by a student. The students register and then login into their account where their account has been created while registering. The students need to upgrade their certifications by uploading on the website. They need to provide feedback for the institution on the website. Admin needs to map the counsellor and the students, where the mentor gets access to only the allocated student's data like results, attendance, certificates, and additional information. The project provides authentication and security to the given information.

**2.Index Words:** Mentor, Transparency, Results, Certificates, Attendance, Feedback.

## 3.Introduction:

**Overview:** This project is designed in such a way where the mentor enters the student's data. Here the data refers to the attendance and results. The students enter the required information like uploading certificates and giving feedback where the admin maps the students to the respective mentor.

**About Project:** In this website we use password authentication where the different student's login through their password which is private. The website is designed in such a way to reduce the paperwork and to maintain the transparency between the mentor and student. Here the admin maps the students to the mentor where the admin sets the limit for student and mentor by mapping only certain number of students to the

mentor. Only the mapped students list is visible to that mentor. The student needs to enter the profile, certifications, and the feedback where the student certificates and feedback is visible to the mentor. The student needs to upgrade the certificates when they have done the internships, courses etc. The feedback given by the student is visible to the mentor where the mentor needs to work on it, like he/she is the responsible to rectify the student's problem which is mentioned in the feedback. The mentor enters the results and attendance of the mapped students. And the feedback which is entered by the student is visible in the faculty webpage. The results and attendance entered by the mentor is visible to the student in student webpage.

## 4.Literature Work:

**1.Digitalization:**

Gikandi, Morrow, and Davis (2011)[1] emphasize the transformative potential of technology in education, highlighting its role in improving administrative processes and communication within educational institutions. Picciano (2017) further explores the impact of digitalization on teaching and learning, discussing its implications for pedagogy and student engagement.

**2. Student Informative Management Systems:**

Zaied and Mansour (2017)[2] discuss the limitations of traditional paper-based methods for managing student data and advocate for the adoption of Student Information Management Systems (SIMS) to streamline administrative tasks and enhance data accuracy. Al-Naami and Al-Harbi (2016) examine the implementation of SIMS in educational institutions, focusing on its benefits and challenges.

**3. Mentoring and Student Support:**

Kuh et al. (2006)[4] underscore the importance of mentoring in higher education, highlighting its positive effects on student retention, academic success, and personal development. Eby, Rhodes, and Allen (2007) delve into the characteristics of effective mentorship relationships and their impact on mentees' academic and professional growth.

**4. Privacy and Security:**

Selwyn (2016)[6] discusses the ethical and privacy implications of the growing digitization of student records and emphasizes the need for strong data protection measures in schools. Hoffman (2018) discusses the use of privacy-protective technologies and data encryption methods to protect sensitive student information from unauthorized

access and abuse.

**5. Authentication and Access Control:**

Sharma, Kumar, and Verma (2015)[8] examine various authentication methods and access control mechanisms employed in educational systems to verify users' identities and regulate their access privileges based on their roles and responsibilities. They discuss the importance of implementing multi-factor authentication and role-based access control to ensure data security.

**6.Technology Stack:**

Rauch (2015)[10] provides an overview of the MERN (MongoDB, Express.js, React.js, Node.js) technology stack, highlighting its advantages for developing scalable and efficient web applications. Herman and MacDonald (2017) discuss the popularity of the MERN stack among developers and its suitability for building modern, interactive web platforms.

## 5.Problem-statement:

By storing the student and mentor institutional data in paper makes a lot of paperwork and causes time waste to reduce that we come up with the idea of making a website where the mentor and students have their accounts. They logins to their account and enters the required details. The students require their results and attendance, which is entered by the mentor in website. The monthly attendance is provided by the mentor with percentage. The results are entered by the mentor where the student's assignment marks. The students upload their certificates and provides feedback of the institution.

## 6.Proposed work:

"Why a website for student counselling management system?"

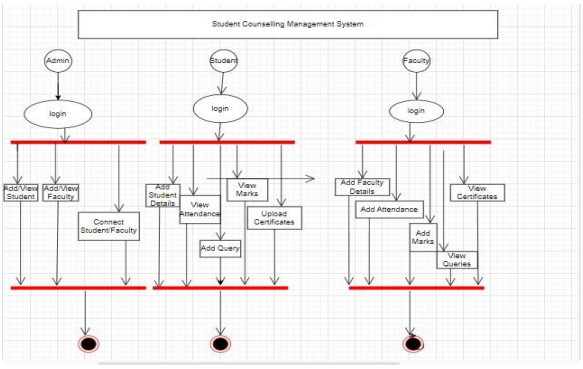
Almost 60% of today's students' profile information is still paper based.

30% of all faculty time is spent finding students data.

The average time to manage a single document is 12 minutes, 9 minutes to re-file and 3 minutes to process.

Hence the requirement is to develop a system that minimizes all these overheads. The basis for the project is to develop a college website for student counselling management system which helps in reducing the paperwork. It also helps in reducing the time.

## 7.Architecture:



## 8.Modules Description:

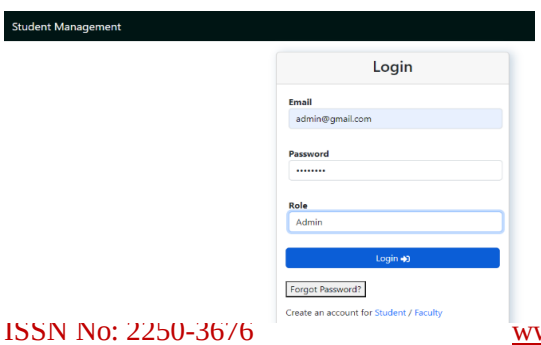
Student counselling management contains three modules, they are:

**Student Module:** The student needs to register on the website while registering the profile has to be created. After login the student is allowed to upload the certificates and enter the feedback, views attendance and results which are entered by the mentor. The student can't edit the attendance and results, they can only view them.

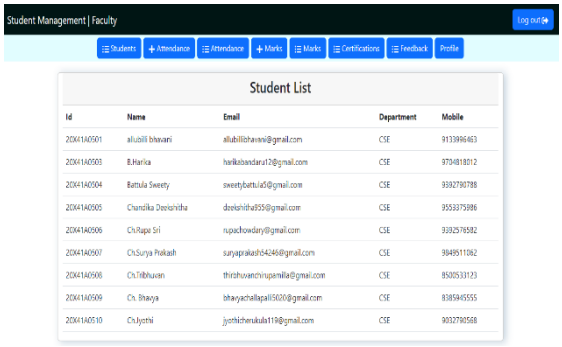
**Mentor Module:** The faculty needs to register on the website while registering the profile has to be created. After registration the mentor login to their account then enters the results and attendance of the students. The mentor views the feedback and certificates uploaded by the students. The certificates are categorized as co-curricular, extra-curricular.

**Admin Module:** The admin maps the mentor and students. The mentor range is limited to the particular number of students because only one mentor can't handle the number of students, so the mentor is limited to a certain number of students.

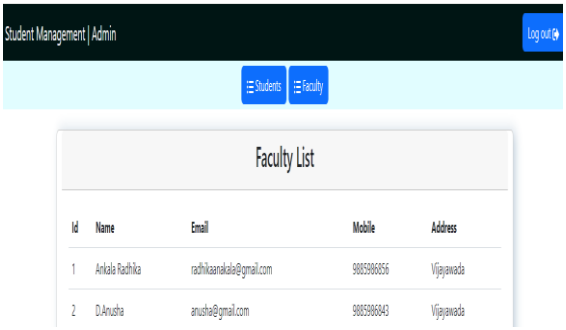
## 9.Results and Analysis:



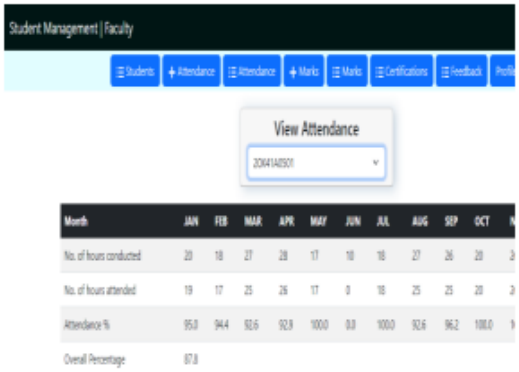

9.1 The above page shows the login page of admin. Similarly, the mentor and student's login pages are defined. Admin maps the students and mentor.




9.2 The students and mentors list are visible to the admin where the admin maps the students to the mentors.

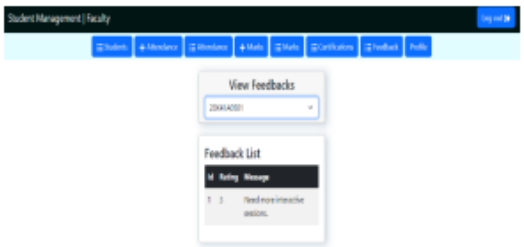



9.3 The mapped student's data is visible to the mentor which is mapped by the admin. The above image shows the attendance, marks, certifications, and feedback of the student and profile of the mentor.



9.4 The attendance of the student is entered by the mentor by using the student's college id and can't be edited by the student. In the same way the marks are entered and can't be edited by students.


9.5 The above shows the student web page where view marks and attendance which are entered by the mentor, feedback should be given by the student, and certificates are uploaded by the student.




9.6 The above shows the feedback entered by the student.

## Conclusion:

This project is the MERN-based system that offers a revolutionary solution to the challenges in student-faculty relationship management. It streamlines record-keeping, reduces paperwork, and enhances transparency. By empowering students with individual accounts and facilitating seamless communication, the system fosters a dynamic learning environment. Embracing digital solutions paves the way for academic excellence and innovation in education.

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