Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

RESEARCH ARTICLE

# Project Management System for Graduating Student Progress Monitoring

**K Thanuja . P Sakethram Reddy . P Sharuk Khan . N Gunavardhan reddy**

School of Computer Science and Engineering, REVA University, Bengaluru-560064, India

Received: 13 April 2023 / Revised: 28 April 2023 / Accepted: 6 May 2023


**Abstract –** Project management system is brought into development to overcome the existing manual transmission process of the project reports. The existing process is very hectic, time consuming and also can inculcate a numerous number of human errors. It will be providing a user-friendly platform for the users (students as well as teachers) to interact with each other, share their progress and also maintain the deadlines accordingly. The special "PING" feature will be inculcated in the project that will help to notify the students if he/she is running behind schedule. also, the feature of automatic generation of the certificates i.e. the certificates will be provided automatically to the students once the entire process of the project has been completed is also an eye catcher. In all this will overcome the manual and time-consuming existing system and will help to make the process speedy and also error free mostly to be implicated at the institutional level.

**Index Terms -** project report, online submission, evaluation system, manual process, hectic, time consuming, human errors, user friendly, students, teachers, interact, share progress, deadlines, PING feature, notify, behind schedule, automatic generation, certificates.

## I. INTRODUCTION

The Project management system is a highly innovative web application that offers a plethora of benefits to students and lecturers. With this system, students can easily submit their project reports online, eliminating the need for manual transmission of tasks. The system enables students to update their project report's progress, and lecturers can view the progress and provide feedback promptly. Impersonation is one of the critical risks associated with manual transmission of project report-related tasks. However, the proposed system has been designed with tight security measures to reduce impersonation to a large extent. This ensures that the authenticity and integrity of project reports are maintained, which is essential for academic excellence.

As technology advances, there is a growing need for systems that can simplify and streamline academic processes, such as project report submission and evaluation. The proposed system is well-positioned to meet this need by providing a highly efficient and reliable platform that

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

is accessible to all stakeholders. One of the key advantages of the proposed system is its user-friendly interface, which makes it easy for students and lecturers to navigate and manage their project reports. The system also facilitates online discussions and document sharing between students and lecturers, enhancing collaboration and knowledge sharing.

Moreover, the proposed system incorporates automated notifications that are sent to lecturers and students via their registered mobile numbers when students are added to project groups. This ensures that all stakeholders are kept informed and up-to-date throughout the submission and evaluation process. The system also disables the upload button automatically after the deadline, ensuring that no late submissions are accepted. In conclusion, the Online project report submission and evaluation system is a highly innovative and efficient web application that offers numerous benefits to both students and lecturers. It leverages the latest technology and security measures to provide a secure, reliable, and user-friendly platform that simplifies the project report submission and evaluation process.

The proposed project management system aims to achieve several objectives that can improve the efficiency and accuracy of project management. Firstly, the system aims to facilitate online processing and submission of project reports, replacing the existing manual process that is time-consuming and prone to errors. This can save time and effort for both students and teachers and reduce delays in the project submission process. Secondly, the system aims to generate accurate results by providing clear guidelines and evaluation criteria for project reports. This can ensure that project reports are evaluated objectively and fairly, providing students with constructive feedback to improve their skills and knowledge. Thirdly, the system aims to reduce chaos and manual errors by providing a centralized platform for students and teachers to collaborate and manage project activities. This can help to streamline workflows, reduce miscommunications, and ensure that project activities are completed on time. Fourthly, the system aims to help management improve institutional facilities by viewing reports and data easily. This can provide valuable insights into the performance of students and teachers, enabling management to make informed decisions to improve the quality of education and facilities provided by the institution.

## II. LITERATURE SURVEY

Various research works have focused on developing electronic supervision systems for final year projects in universities. A prototype system for managing Computer Science final year projects was developed consisting of student and lecturer profiles, schedule monitoring and appointment modules. A logbook module is under development to document meetings between students and supervisors to address the increasing number of students unable to complete prototypes on time. However, the system remains incomplete. Another e-supervision system provides quantitative assessment by automatically recording teacher activities to evaluate teaching abilities. The system collects web log information to supervise and assess teachers and department heads. It aims to reduce workload and facilitate communication. However, feedback, questionnaires and other features are lacking. A university portal was designed to manage final year undergraduate projects and prevent duplication. It automates allocation of supervisors to students, allows students to communicate with

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

supervisors and upload reports for review and feedback. It facilitates student clearance by restricting access to clearance forms until requirements are met.

An Online Project Evaluation and Supervision System (OPENS) for final year project proposals aims for paperless documentation. It allows coordinators, supervisors, evaluators and students to efficiently retrieve data and evaluate and monitor project progress. By reducing paper usage, it systematically and efficiently executes the final year project process. It also securely stores project information and evaluation scores. In summary, existing systems focus on automating and streamlining supervision and evaluation of final year undergraduate projects through online portals and e-supervision systems. They aim to reduce workload, facilitate communication and monitoring, systematically manage projects and prevent duplication. However, existing systems remain limited and incomplete. Further work is needed for full implementation and additional features like feedback forms.

**Problem Statement**

The management of project reports at educational organizations is a challenging task that requires significant time and effort. The existing system of manual submission and evaluation of reports is prone to errors and delays, resulting in reduced efficiency and quality of education. The proposed Project Management System aims to address these challenges by providing a user-friendly online platform for managing project reports. The existing system of manual submission and evaluation of project reports is time-consuming and prone to human errors. Additionally, it can cause delays in the submission process, as many students fail to submit their reports before the deadline. Moreover, the manual evaluation process requires a lot of workforce and takes a significant amount of time. To overcome these challenges, the proposed system aims to reduce the manual work and improve the efficiency of the project management process.

It offers an intelligent system that highlights the hidden relationships between different parameters, enabling easy analysis of the submitted reports. The system enables students to upload their reports phase-wise, making it easy to track the project progress and provide timely feedback. The proposed Project Management System offers an online platform that is user-friendly and facilitates collaboration between students and teachers. It can provide valuable insights into the performance of students and teachers, enabling management to make informed decisions to improve the quality of education. By implementing the proposed system, educational organizations can provide better facilities and corrective measures to improve the quality of education. In summary, the proposed Project Management System aims to address the challenges faced by educational organizations in managing project reports. It offers an intelligent and organized solution that reduces manual work and improves the efficiency and accuracy of the project management process. By implementing this system, educational organizations can enhance the quality of education and provide better facilities to students and teachers.

## III. METHODOLOGY

The proposed system utilizes an Agile software development methodology. This involves breaking down the system into individual modules developed incrementally in an iterative manner.

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

Unlike the Waterfall methodology, the Agile approach engages in continuous development and testing concurrently throughout the project lifecycle. The Agile methodology focuses on four key principles: Valuing individuals and interactions over processes and tools. This means focusing on people and collaboration rather than strict plans and methodologies.

Valuing working software over comprehensive documentation. The focus is on developing working systems over excessive documentation. Documentation is developed as needed. Valuing customer collaboration over contract negotiation. Close collaboration with customers and end-users is prioritized to ensure the system meets their needs rather than strict contracts. Responding to change over following a plan. Flexibility and adaptability to changes in requirements and priorities are emphasized over rigidly following initial plans. Plans can evolve through collaboration.

In summary, the Agile methodology adopts an iterative approach to incremental development with continuous testing. It focuses on people, adaptation to changes and developing working systems that meet customer needs rather than strict methodologies, documentation and contracts. This flexibility and responsiveness aims to build the right system that satisfies users. The proposed system leverages these Agile principles by developing the system in modules through continuous development and testing with collaboration from stakeholders. The key distinction from the Waterfall model is the iterative and incremental development of working systems with continuous testing and stakeholder collaboration. The Waterfall model follows a linear sequence of stages with little room for changes, prioritizing documentation and upfront planning. In contrast, the Agile methodology is flexible, collaborative and focused on building systems that work for end-users in an iterative manner.

There are three users in the proposed system: The admin, the faculty and the students. The admin is the first user. The admin can add and view students as well as faculty. He has the responsibility to maintain the updated project titles, phases and all the parameters. Only the students of that particular batch are allowed access to their respective projects by the batch no and password as allotted by the admin. The Admin adds the facilities to the system like education, infrastructure, digital infrastructure and general. The admin can add, update and delete project titles. For example, if a new project has to be added or a new student is to be allotted to any group then it can be done by the admin. The admin is allowed to allocate and DE allocate faculty member as well.

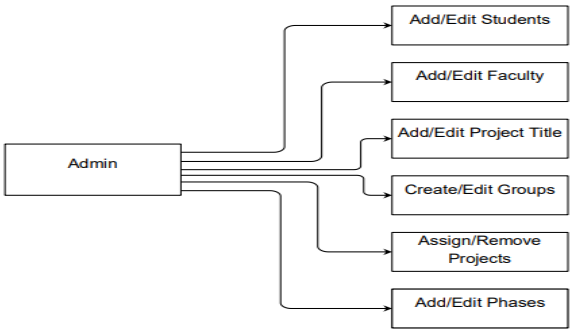


**Figure 1: System Architecture for Admin**

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

The faculty of the institution are the second user. To view any submitted report the faculty first must log in the system using his/her credentials for the respective batch they have been allotted to. The faculty can view the project and the details after he/she has logged in successfully.

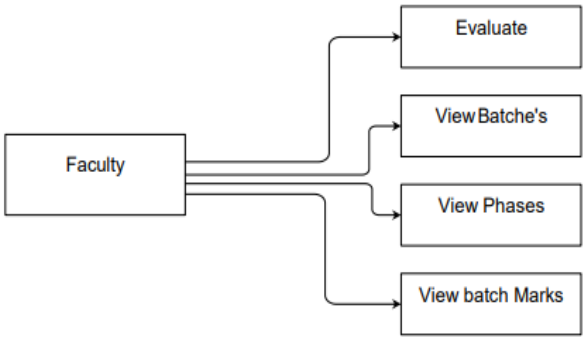


**Figure. 2: System Architecture for Faculty**

Thereafter the faculty can also evaluate the report for marks as well as download a copy of the same into their system so that they can verify it and upload it back to the portal back into the students side with the respective changes to be made marked in as notes so that the students can correct it and upload the final report back again with corrections. After the deadline is crossed, the marks allotted by the faculty automatically gets finalized.

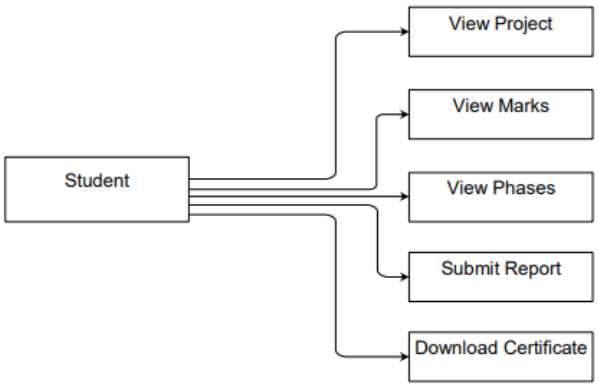


**Figure. 3: System Architecture for Student**

The students of the institution are the third user. To submit the report, the students must log in using their credentials as per issued to them by the admin. The student can view the project and the details after he/she has logged in successfully. Each student is supposed to submit their individual reports phase wise within the deadline embarked. Once the report has been submitted and the student wishes to submit the updated copy of the same, it's possible to do so only within the deadline

## IV. RESULTS AND DISCUSSION

The proposed system provides certificates generated from the system. The output shows the hidden relationships between the different entities of our system. The final certificate is generated

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

automatically once the deadline is over and the report was sent successfully by the individual students. The hidden relationships elaborate the need of improvement in different parameters facilitated by the institution.

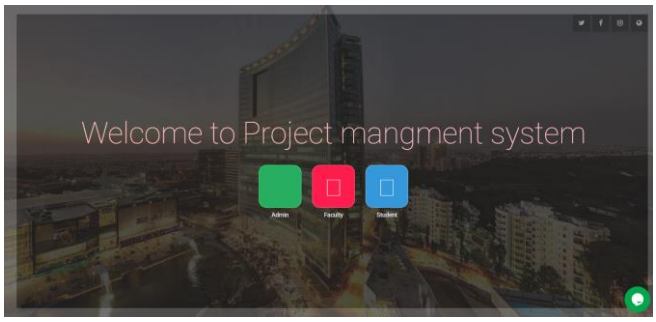


**Figure. 4: Home Page**

The home page consists of the login portals for admin, faculty and the student. The respective users can login accordingly and perform the respective tasks

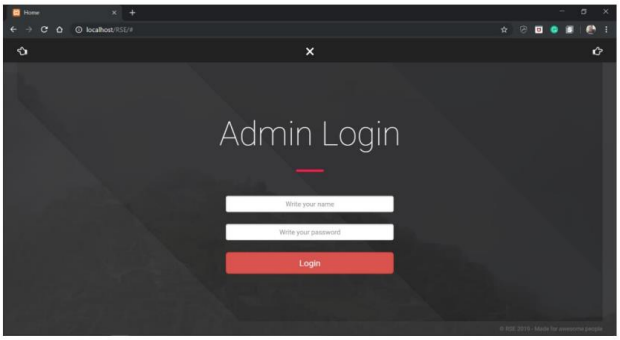


**Figure. 5: Admin Login Page**

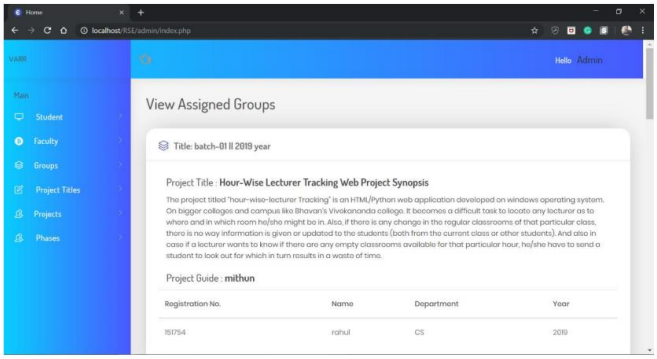


**Figure. 6: Admin Main Page**

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

The above panel shows the login options for both the admin, the student and the faculty separately. The username and the password are the authentication credentials used here. Can switch login by clicking on the back or forward hand pointer on the top sides each. The above snapshot is of the admin main page. The admin here is given the privilege of adding students, faculty as well as creating phases and adding the students respectively to the respective project groups and also can import the list of entire class of students as under.

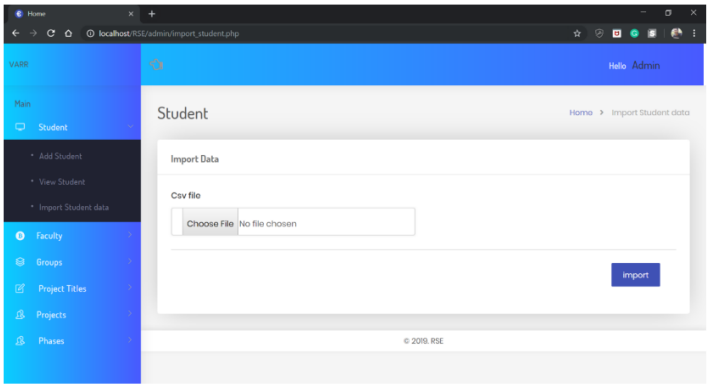


**Figure. 7: Importing Students Data**

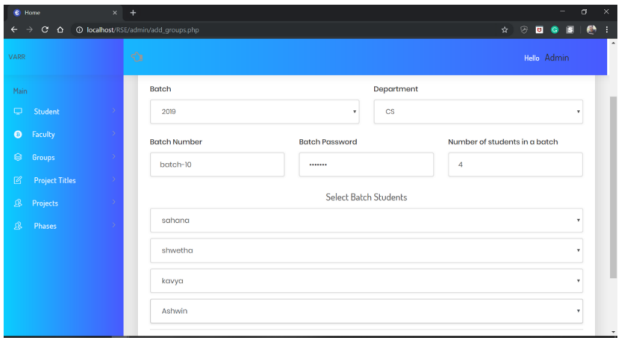


**Figure. 8: Creating Batches**

Here the admin can import the entire list of students in the form of a .csv file and also if some student was not mentioned in the list, he/she can be also manually entered by the admin later on or as preferred. This panel provides a display for creating the project batches and adding the respective student the that project group. here the eye catching feature is that firstly the system does not allows the admin to add more than 4 students in a batch and also the students who are being already allotted to any project group will not be displayed in the selection list. The batches have been designed and now in the above window the admin will assign the faculty for that particular batch. As soon as the faculty is assigned to that batch the student as well as the faculty member will get an alert message in their phone regarding the same. one faculty can be assigned to more than one projects.

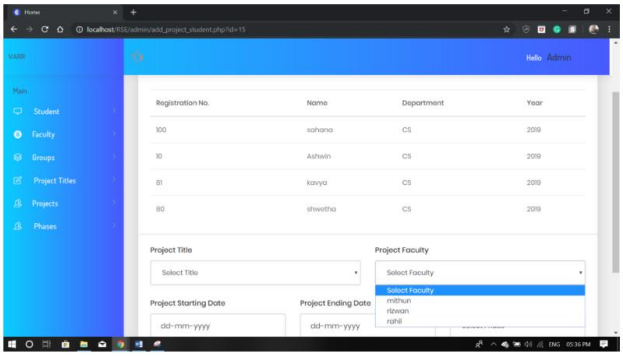


**Figure. 9: Assigning Projects**

Here the final view can be obtained of the projects along with the faculty assigned to them and the students in that particular project batch. If in the previous step some mistake was made by the admin in adding the students, here they can remove the student or students from the batch or they can also delete the entire group as well. If any batch has less than 4 members, extra members can also be added here.

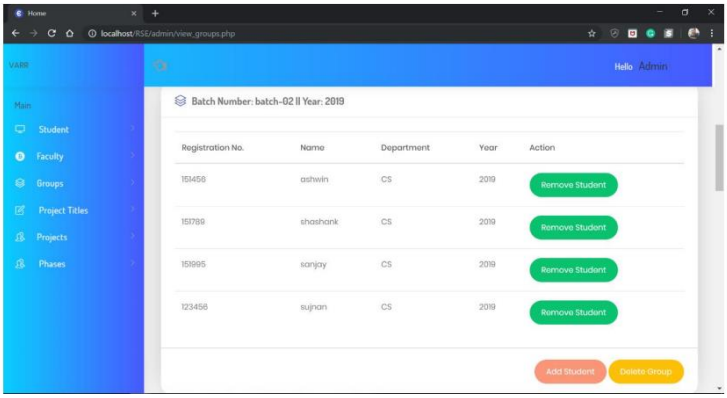


**Figure. 10: View Groups by Admin**

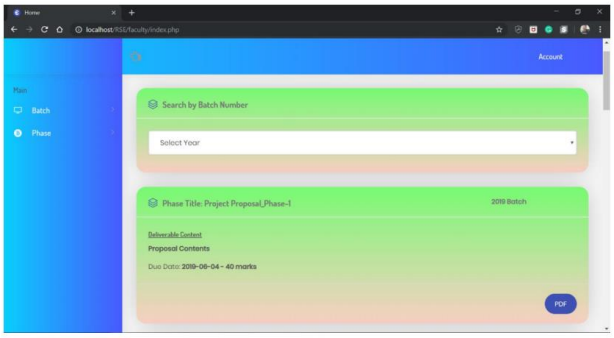


**Figure 11: Faculty Home Page**

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

The faculty logs in here by using their respective login credentials .As we can see that one faculty can be added to more than one batch ,all the details will be visible here of all the batches he /she is been allotted to. Here year wise filter exists where in the faculty can view the filtered out detailed allotments to that particular batch and also can view the batch marks assigned to that batch students for their respective report. The faculty can view the phases here and can also View a sample copy of PDF uploaded by admin. If already the students have sent the report, the faculty can evaluate in over here.

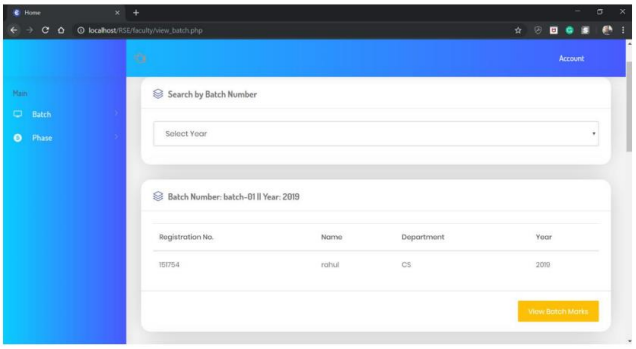


**Figure. 12: View Assigned Batches by Faculty**

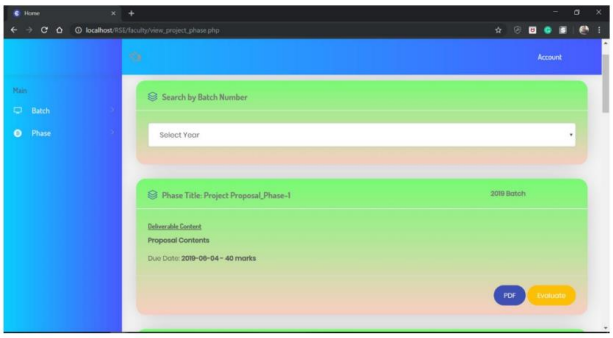


**Figure. 13: View Phases by Faculty**

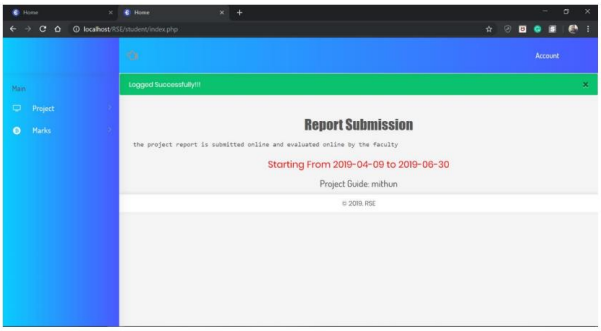


**Figure 14: Student Home Page**

This page is visited when the student logs in with his/her respective batch no and password. They can view only their batch and only their own respective reports here.

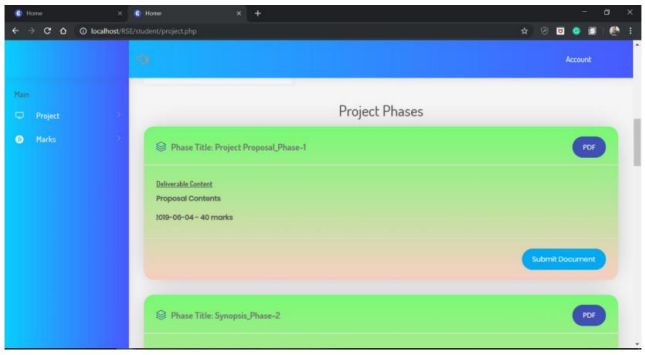


**Figure. 15: View Phase by Student**

Here the student can view sample copy of PDF uploaded by admin to and they can refer it to send their individual reports from the "Submit Document" button. Here the student can upload the pdf format file into the portal and click on the send button to send it to the faculty.

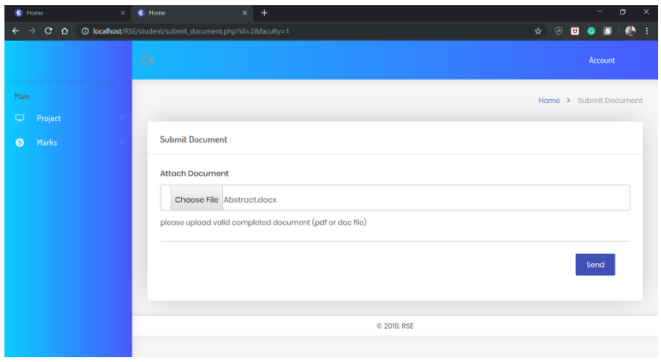


**Figure. 16: Submit Document by Student**

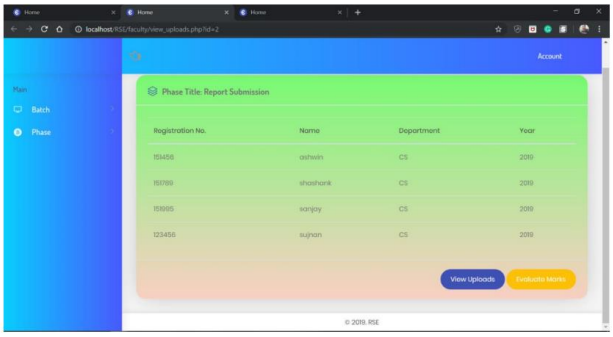


**Figure. 17: Page to View the Uploaded Doc By Faculty**

Here the faculty can view the file sent by the students. He/she can evaluate it and also can marks corrections if any. The reports get opened in a new tab from where it's even possible for the faculty to download it on their system or check it there itself.

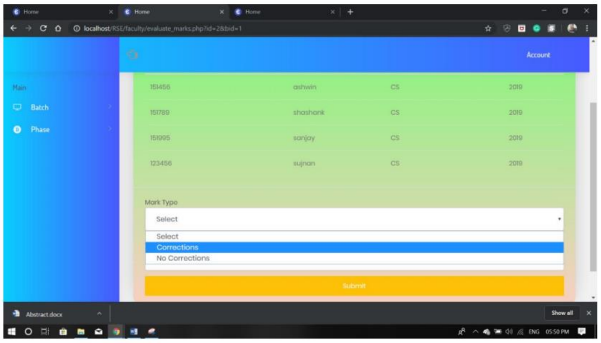


**Figure. 18: Page for Marks Allotment**

Here comes the evaluation part by the faculty where he/she can allot the marks to the students and also can mark the corrections to be made as in the form of a note or even upload any file to be sent to the student for reference purpose. The marks allotted can be changed only till the deadline is not crossed else the same marks get automatically finalized.

## VII. CONCLUSION

As technology continues to advance, the demands placed on systems are constantly increasing. The proposed system aims to address the limitations of previous versions, as identified in the literature survey. The system offers a more user-friendly interface, with smooth accessibility, and electronic marking of student project reports that can save time, effort, and expenses while improving accuracy and reliability. The flexibility of the system allows for the addition of new features and reusability. A valuable functionality that could benefit students would be the inclusion of a forum for project-related discussions. In the future, a platform for students to upload their project applications for instructors could also be added. Overall, the proposed system has the potential to greatly benefit institutions and their students.

## REFERENCES

1. Bakar, M. A., Jailani, N., Shukur, Z., & Yatim, N. F. M. (2011). Final year supervision management system as a tool for monitoring Computer Science projects. *Procedia-Social and Behavioral Sciences*, *18*, 273-281.
2. AlBar, A. M. (2012). An electronic supervision system architecture in education environments. *European Journal of Business and Management*, *4*(8), 140-148.
3. Abdulkareem, A., Adewale, A. A., & Dike, I. U. (2013). Design and development of a University portal for the management of final year undergraduate projects. *International Journal of Engineering and Computer Science*, *2*(10), 2911-2920.
4. Ismail, S. I., Abdullah, R., Kar, S. A. C., Fadzal, N., Husni, H., & Omar, H. M. (2017, December). Online project evaluation and supervision system (opens) for final year project proposal development process. In *2017 IEEE 15th Student Conference on Research and Development (SCOReD)* (pp. 210-214). IEEE
5. Soyemi, J., & Isinkaye, F. O. (2017). A web-based final year student project duplication detection System. *International Journal of Computer Application*, *7*(1), 1-7.
6. Syed Thouheed Ahmed, S., Sandhya, M., & Shankar, S. (2018, August). ICT's role in building and understanding indian telemedicine environment: A study. In *Information and Communication Technology for Competitive Strategies: Proceedings of Third International Conference on ICTCS 2017* (pp. 391-397). Singapore: Springer Singapore.

Int. Jrl. of **Computational Learning & Intelligence**
Vol. 02, Issue 02 (April), 2023

7. Lynch, K., Heinze, A., & Scott, E. (2007). Information technology team projects in higher education: An international viewpoint. *Journal of Information Technology Education: Research*, *6*(1), 181-198.
8. Collins, T., Woolley, S. I., Rawson, N. C., & Haroon, L. (2016). Final-year projects using open source OpenEEG. *Computer Applications in Engineering Education*, *24*(1), 156-164.
9. Ramaiah, N. S., & Ahmed, S. T. (2022). An IoT-Based Treatment Optimization and Priority Assignment Using Machine Learning. *ECS Transactions*, *107*(1), 1487.
10. Leung, C. H., Lai, C. L., Yuan, T. K., Pang, W. M., Tang, J. K., Ho, W. S., & Wong, T. L. (2015). The development of a final year project management system for Information Technology programmes. In *Technology in Education. Transforming Educational Practices with Technology: First International Conference, ICTE 2014, Hong Kong, China, July 2-4, 2014. Revised Selected Papers* (pp. 86-97). Springer Berlin Heidelberg.
11. Katwa, C., Sanjana, K., & Parmar, P. (2016). Final Year Placement Management System. *International Journal of Scientific and Technical Advancements*, *2*(1), 233-234.
12. Abeid, J., Allouche, E., Arditi, D., & Hayman, M. (2003). PHOTO-NET II: a computer-based monitoring system applied to project management. *Automation in construction*, *12*(5), 603-616.
13. Basha, S. M., & Ahmed, S. T. (2021). *Handbook on Information and Communication Theory-Fundamental Approaches & Techniques-Part I*. MileStone Research Publications.