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Challenging Approaches in Project Repository Management System

Ridhima Rajesh Khyalappa[1], Ankit Verma[2], Clarence Franklin Fernandes[3], M. Nitish Reddy[4], Deepak G[5], Harish Kumar N[6]

[1, 2, 3, 4]*Final Year student, Dayananda Sagar College of Engineering*
[5]*Associate Professor, Dayananda Sagar College of Engineering*
[6]*Assistant Professor, Dayananda Sagar College of Engineering*

Abstract: ***Managing and controlling projects using traditional ways is a very difficult job. The main motive of this application is to create an automated or easy way to store as well as manage the data. In this paper, we propose a solution that is useful for students, project coordinators, and project guides to manage the project repository efficiently. The major focus is on the usability and the backup system for the stored data. The cloud infrastructure for backup is recommended in this paper. The system includes a few features such as auto-filling which would make it much easier to enter all the details, a feature to store all the previous remarks which any faculty would access. The system would also consist of the remarks on plagiarism checks on the reports.***

Keywords: cloud platform; plagiarism check; data management, repository, review remarks

I. INTRODUCTION

Project management is an essential requirement. Most of the projects are larger and more complex and depend on the ability to respond to changing requirements and resources. All the records of the projects are required to be stored at one location. The accessibility should also be taken care of while uploading the projects. It can be tough sometimes to manage a huge number of projects. Handling the code and other documents of the project should be easy. This project is mainly a repository management application based on the cloud platform. The basic things that need to be focused on are usability and the backup system for the project. A few features include auto-filling which would make it much easier to enter all the details and a place to store all the previous remarks which any faculty would access would be created.

Management of data is most important. The core intention of data management is to help people with the management of data, which allows for more time to focus on the research or process itself. The best thing about data management is that it benefits everyone – from college students to experienced researchers working with huge amounts of data! Wherever you are in the research process, data management is an important part of conducting research.

Data management is an easy way to manage our information through:

1) Creating naming standards, for consistency and easier location.
2) Carefully record all the details, including decisions made during the project.
3) Saving copies of your data in more than one place to prevent loss.

MySQL is one of the best ways for creating databases for projects. MySQL is an open-source management system for a relational database. MySQL is a fully-managed database service to run cloud-based applications. It can be used to run a very small amount to terabytes and gigabytes of data. Firebase is also an excellent way for databases. Firebase is a platform that is developed by Google. Firebase is a Backend-as-a-Service (BaaS) app development platform that provides hosted backend services. Firebase helps users to build as well as run successful applications.

In case of a system crash, all the data will be deleted and it would almost be impossible to retrieve all the data. So, we plan to use Google could platform for backup. Cloud computing allows all the users to store the required data as well as run their applications which can be retrieved anywhere and anytime. Cloud Computing provides an on-demand and highly available service. Cloud allows users to store their data on multiple third-part servers instead of any dedicated server which were previously used for data storage. It is highly secure and all the security requirements are taken care of while working on the cloud system. The data that is stored on the cloud stays forever and is never affected by any system failure. Cloud services provide a great way for future IT ventures. It is positively impacting the IT sector by using the Internet as it allows users to pay based on service.

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II. LITERATURE SURVEY

Research work and studies have been done regarding Repository Management System. In a project repository management system, several new features have been introduced. Some of the features are monitoring data in near-real-time, Chatbox to easily manage and access data, automatic notifications and alerts as well as efficiently managing all the tasks. Among them, the most useful and important features suggested are- demolition or decomposition of the task that is already completed, tracking the data flow in near-real-time, automatic generation of graphs and charts to explain amounts of data, and automatic generation of alerts as well as notifications regarding upcoming deadlines. The papers mainly analyze the problems that were already present in the previous projects of the university repository management systems and suggest the creation of a university repository management system along with a research management application of the process. The paper proposes to combine all the digital assets with the institution's repositories and can prove to be a highly excellent platform for future research and development. Therefore, it can make university scientific research work.

The previous study describes two approaches to solve the requirement model and to develop a FileNet web-based repository system. The study suggests a cloud-based infrastructure that would use the internet to automate, computerize as well as schedule a few department tasks. Learners will learn a variety of things as a result of this work.

Previously, there were a few problems that were observed in the older versions of the projects on this subject. The main challenges were usability and backup. If the system gets corrupted, all the data stored over the years will be lost and there is currently no other way to retrieve the data. Synchronization is another challenge in the current projects. Review process synchronization needs to be looked after. All the processes should be carried out in a proper flow and any tampering of data should not take place. Review remarks need to be visible to all the faculty and should be easy to update. As of now, the previous projects did not have the feature of review remarks management. Usability needs to be improved, that is, everyone should be able to work with the application easily. Some tasks also need to be automated.

III.PROPOSED SOLUTION

A. A database would be created through which faculty can store and view the remarks It would be well managed so that they can update the details as required and hence storing as well as managing data would be convenient.

B. The proposed system would automatically generate a block for students of a team with different sections and faculty can easily enter the remarks for each student.

C. To make it feasible to access different kinds of data it is suggested to have a link that would directly navigate the user to all the required documents (PPT, Code, Report, Synopsis, etc.) of a team.

D. Different features of JavaScript would be used to make the application more usable.

E. To store the information regarding the projects, a database using MySQL or Firebase would be created in this project. Upon checking the usability of each one, the best out of the two would be used.

F. If a system crashes, all the information will be lost. A solution to this is to have a robust way to solve this problem and have multiple backups for the data using cloud infrastructure. The solution proposed is the Google cloud platform.

G. This project would effectively solve the problem of review and process management of projects, improve project management efficiency, save the working hours of project management personnel, review project, promote the results, and realize the informationization of university project management. Text Font of Entire Document

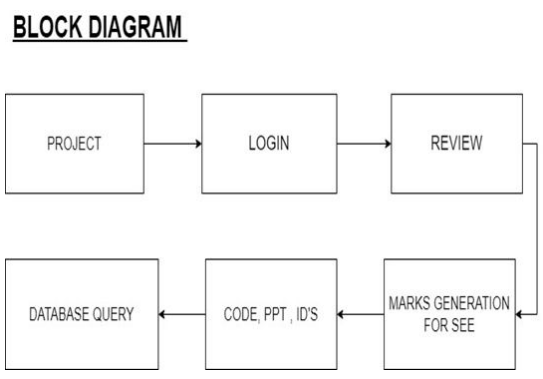


Fig. 1 Block diagram of the proposed solution

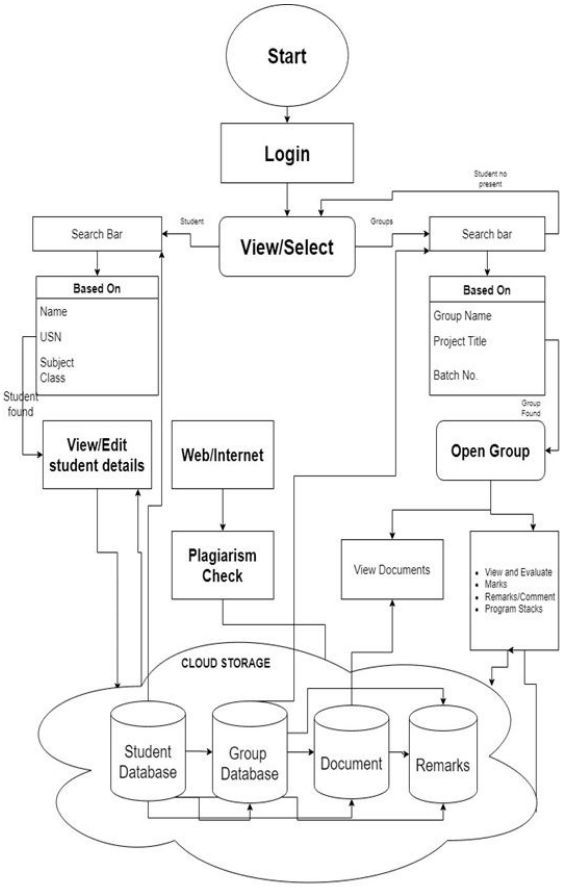


Fig. 2 Algorithm of the proposed solution

IV. CONCLUSIONS

In today's world, managing all the information is a tedious job. Thus, this study suggests creating a cloud-based project repository management system. All the code, synopsis, and other details would be stored efficiently. Another feature stated in this study is plagiarism check based on the synopsis. According to the study, artificial intelligence would be used to work on the plagiarism feature. Therefore, after studying the challenges faced in the previous work, the above study has been suggested and it would prove to be more efficient.

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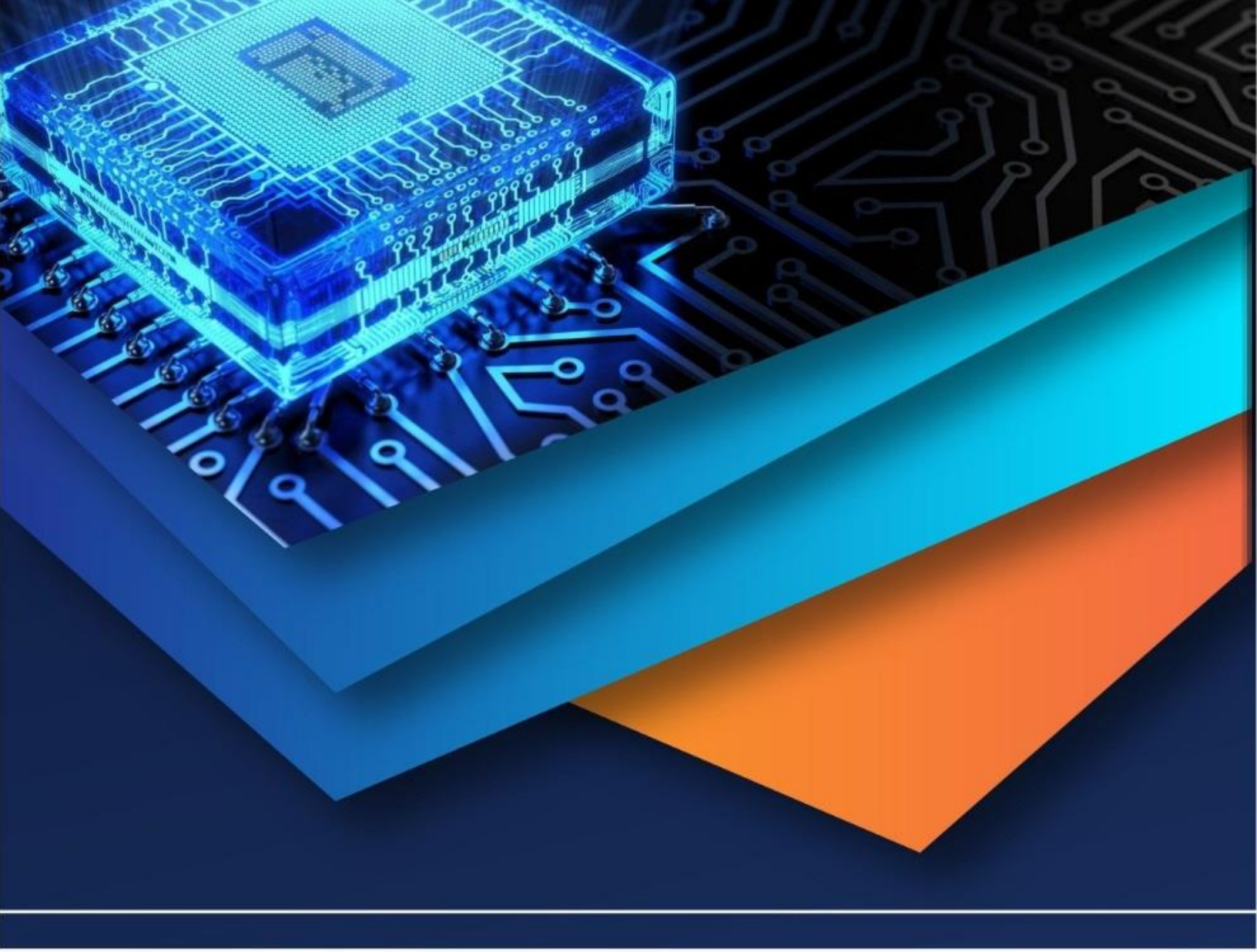
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