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Project Guidance and Management System

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Abstract: ***In the academic environment of today, students must do projects as part of their coursework in order to earn a degree, but they often do not know where to begin. Project Guidance and Management System is a web-based application designed to address this issue by enabling students to access and exposure to projects developed by their seniors and mentors. The system aims to serve as a reference tool for students and help them better understand the intricacies of a project.***
Students can discover from a project list and seek guidance from their mentors and contact developers. The Mentors can manage their students' project work and choose to accept or reject it, this acts as a check that only legitimate projects are uploaded on the portal providing authenticity. Users can enquire by asking queries and get replied to by the developer. There is an enquiry list which acts as a discussion forum.
Keywords: Academic project, Web-based application, Technology, Student resources.

I. INTRODUCTION

Project management systems are crucial in academic settings, as they equip students with essential skills such as time management, collaboration, and problem-solving that are transferable to the corporate world. Students who develop these skills early on are better prepared to navigate the complexities of professional environments and excel in their careers This paper proposes a method to develop strong relationship between students, mentors, and the area of interest for the final year project with the aid of project and research done by seniors and categorized by fields which eases in selecting their final year project. The obtained correlation between the all entities, which is the key contribution of the paper, creates a platform for further research into developing a guidance system that can assist final year projects students in selecting the most suitable research area for their final year project and a management system for mentors to help students in this journey.

II. LITERATURE SURVEY

As we studied many previous papers and the methods used in that, we studied about that and tried to find out the shortcomings. The literature survey reveals that most available project management systems are desktop applications and are not easily accessible to students. Furthermore, most of the literature available is focused on project management for industries, with little attention given to academic projects. As a result, there is a gap in research on web-based project management systems for academic projects. This paper aims to address the gaps in the existing literature by proposing a web-based project management system that is tailored to the needs of academic projects. Specifically, the proposed system is designed to enable students to access and see their senior batchmates' projects, search projects based on different technologies, and receive feedback from mentors as well as ask doubts and queries. The main idea of the "Project Guidance and Management System" is to leverage the existing web infrastructure and provide an easy, accessible, and cost-effective way for students to further their research and learning anytime, anywhere, making the project development process more streamlined and efficient.

III. FIGURES/USE CASE DIAGRAM

At its most basic level, a use case diagram is a depiction of a user's interaction with the system and shows the requirements of a use case. A use case diagram can show the numerous system users and the various methods in which they interact with the system.

Actors/Fields/Users of the System are:

1) *User:* Refers to a user of the system, that are of two types i.e., registered users and unregistered users (visitors).
2) *Unregistered Users (Visitors):* They can view the project list and if they wish can also download it and get themself registered through a registration page.
3) *Registered User:* They can along with functionalities of unregistered users can also log in, ask enquiries, and view enquiry lists (forum)

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4) *Developer (Student):* Refers to a developer of a project, who can upload projects, reply to enquiries, and view project status.
5) *Admin (Mentor):* Refers to an admin of the system, who can add developers, view developer and project lists, and accept or reject projects over a task.

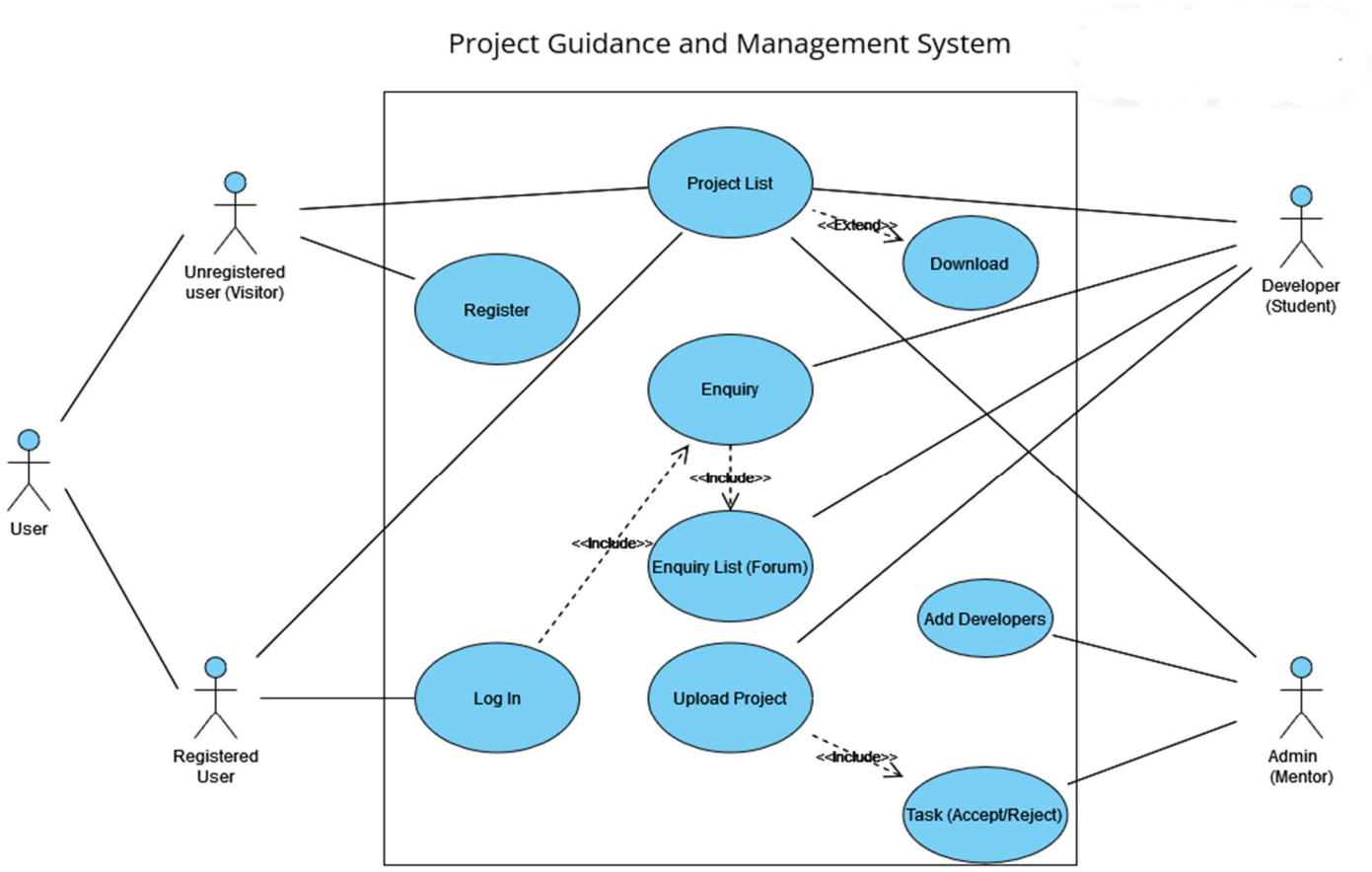

Fig. Use Case Diagram

IV. PROPOSED METHODOLOGY

The Project Guidance and Management System is designed using PHP, MySQL, HTML, CSS, JavaScript, and Bootstrap. The system will consist of three portals: the student/developer portal, the admin/mentor portal and the user portal. The system will use checks to ensure that only valid projects are uploaded onto the portal.
Here is a brief overview of the responsibilities and roles of everyone involved in system:

A. *Admin User*

The admin user is responsible for managing the overall system and ensuring that it runs smoothly. Some of the key responsibilities of the admin user include:

1) *Adding and Managing Developers:* The admin user is responsible for adding and managing developers who are authorized to upload projects to the system.
2) *Managing Projects:* The admin user is responsible for reviewing and accepting or rejecting the projects uploaded by developers.
3) *Managing Users:* The admin user is responsible for managing the user accounts, including approving new user registrations, and resolving user issues.
4) *Monitoring System Usage:* The admin user is responsible for monitoring the system usage and identifying any issues that arise.

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B. Developer

The developer is responsible for creating and uploading projects to the system. Some of the key responsibilities of the developer include:

1) *Uploading Projects:* The developer is responsible for uploading projects to the system, including project details and associated files.
2) *Managing user Questions:* The developer is responsible for responding to user questions about their projects.
3) *Monitoring Project Status:* The developer is monitoring the status of their projects, including whether they have been accepted or rejected by the admin user.

C. *User*

The user is the primary user of the project guidance and management system. Some of the key responsibilities of the user include:

1) *Browsing projects:* The user can browse the projects that have been uploaded to the system and download them if they wish.
2) *Registering for an account:* The user can register for an account on the system by providing their details such as name, email address, and password.
3) *Logging in:* Once the user has registered for an account, they can log in to the system using their email address and password.
4) *Asking questions:* The user can ask questions about the projects they are interested in by submitting their questions through the system's enquiry section.
5) *Monitoring question status:* The user can monitor the status of their questions, including whether they have been answered by the developer.

V. DEVELOPMENT

A. Requirement Gathering

In this step, the requirements of the project will be gathered from both the student and mentor. The requirements will include functionalities they want, specifications, expectations, and other necessary details.

B. Design

The design phase includes creating the architecture of the system, defining the database schema, and designing the user interface for all portals. The design phase will also involve identifying the security protocols to be used in the system.

C. Implementation

In this step, the system will be developed using PHP, MySQL, HTML, CSS, JavaScript, and Bootstrap technologies. The system will be implemented by creating the necessary tables, views, and stored procedures in the database.

D. Testing

After the system has been implemented, it will be tested to ensure that it meets the specified requirements. The system will undergo various testing phases such as unit testing, integration testing, and system testing to ensure that it is functional, secure, and user-friendly.

E. Deployment

Once the testing phase is complete, the system will be deployed on a web server for public access. The deployment phase will include installing the necessary software and configuring the server to host the system.

F. Maintenance

The maintenance phase will involve monitoring the system to ensure that it continues to function as expected. Any bugs or issues that arise will be identified and fixed promptly. The system will also be updated to incorporate new features and technologies as necessary.

Overall, the proposed methodology aims to create a robust, secure, and user-friendly web-based project guidance and management system that meets the requirements of all users.

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VI. IMPLEMENTATION

Fig 1. Home Page

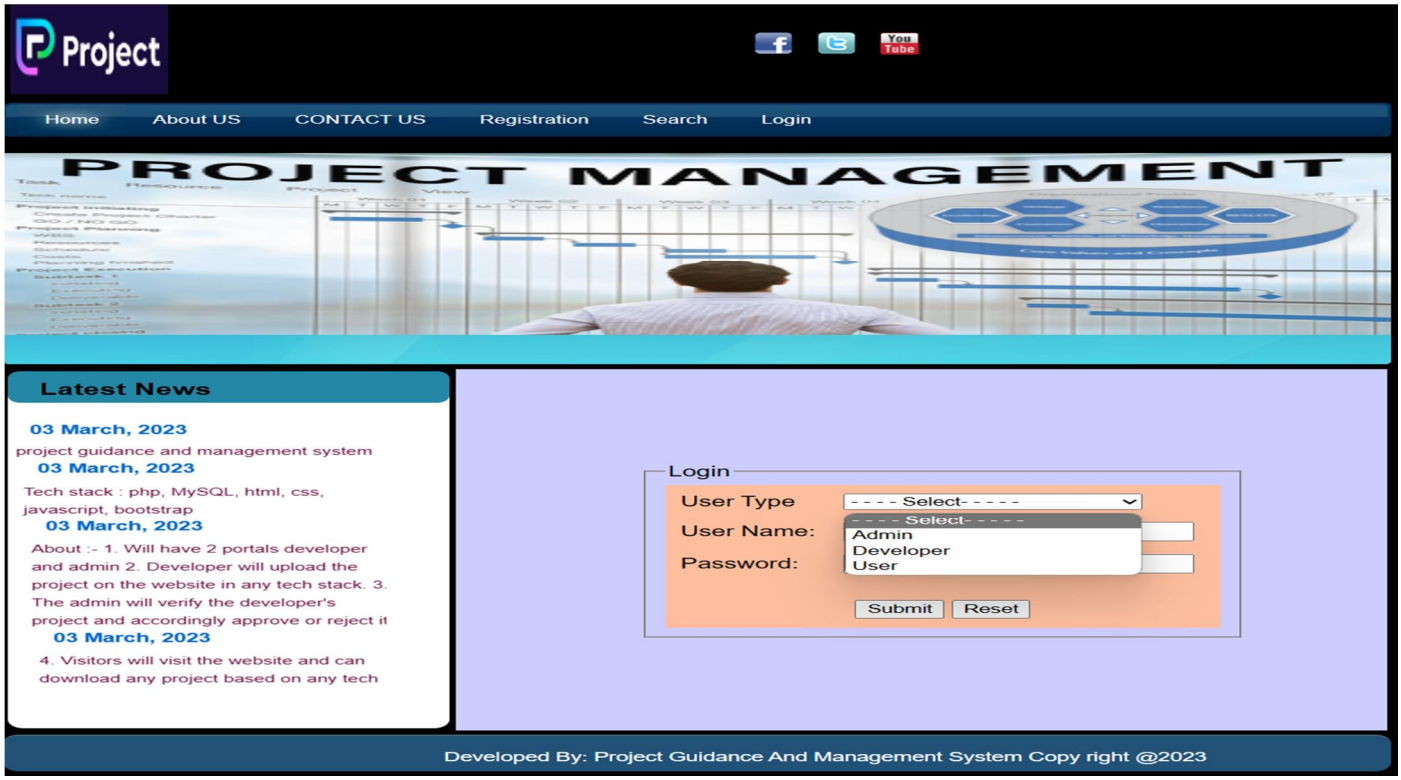

Fig 2. Login Page

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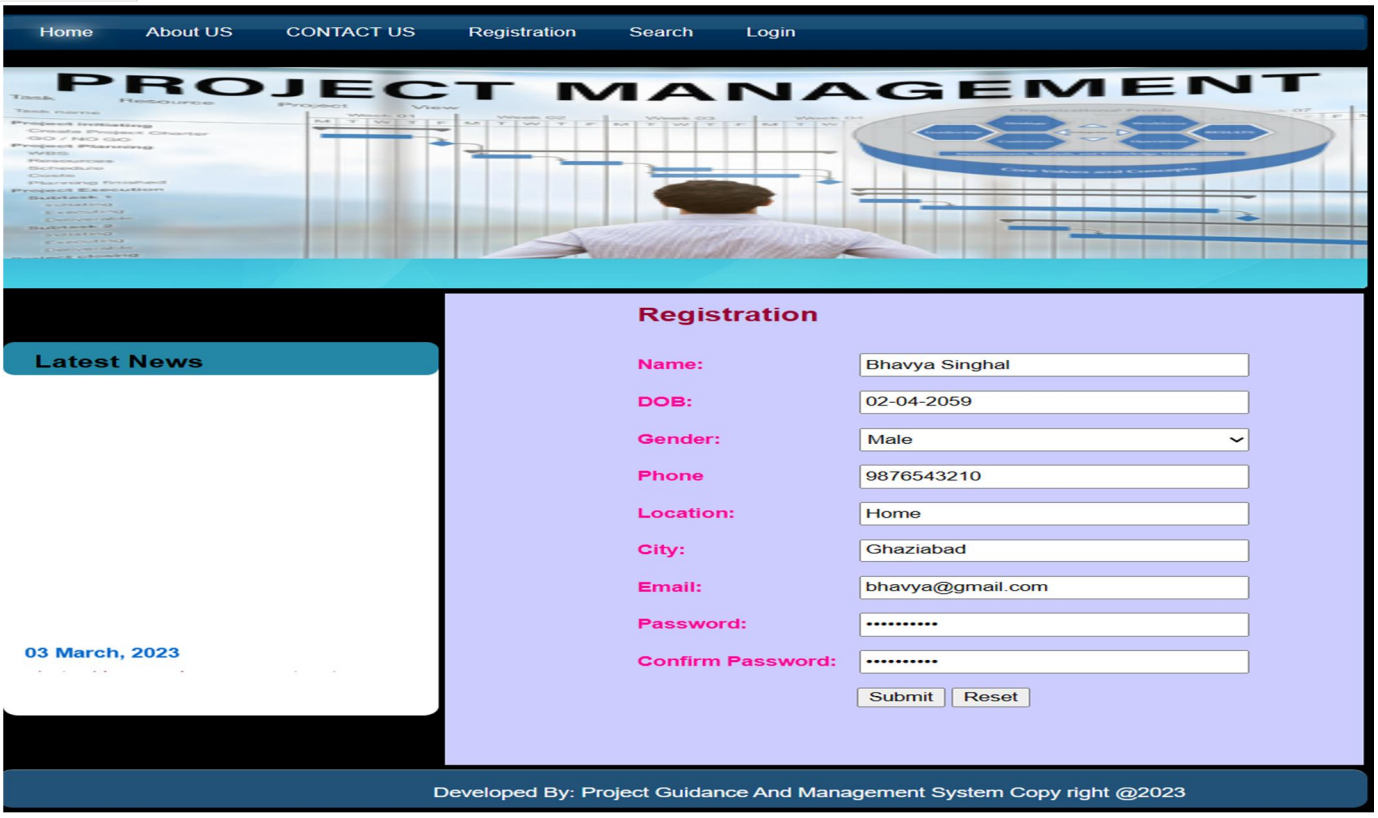

Fig 3. Registration Page

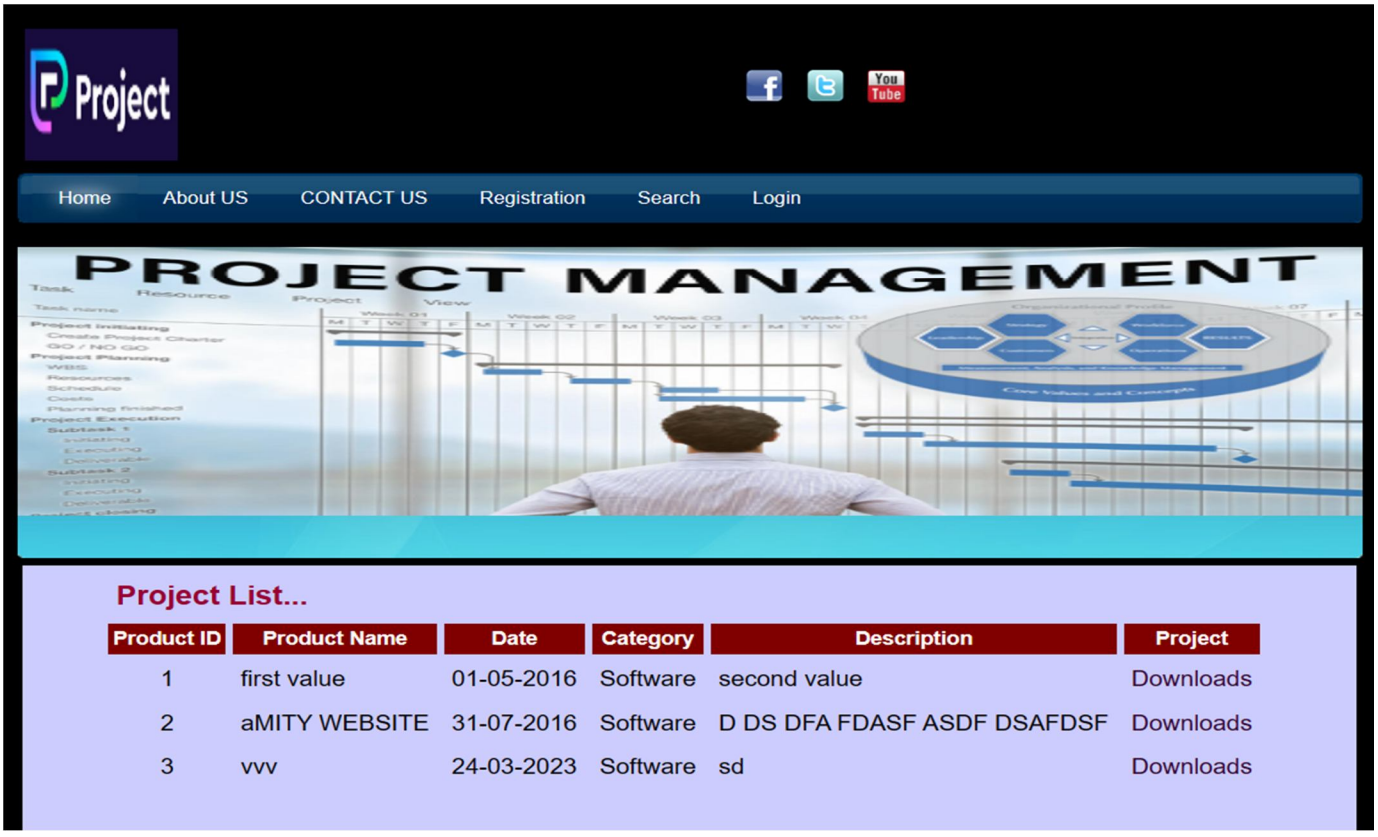

Fig 4. Project List

Fig 5. Upload new project page

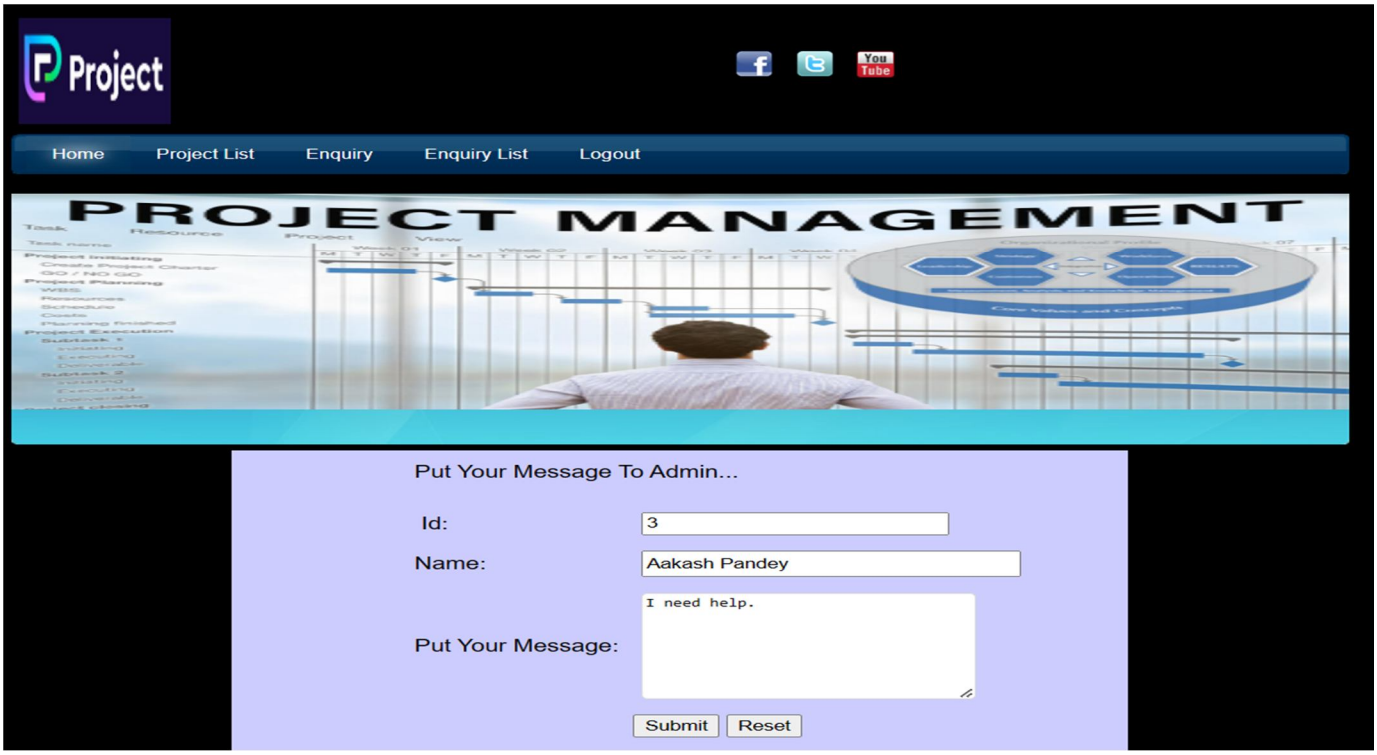

Fig 6. Enquiry Form

VII. RESULTS

The project guidance and management system developed in this research provides an effective and efficient approach for managing student projects. The system's features, including the ability to upload and download projects, submit and answer enquiries, and track project progress, were found to be useful in enhancing project management, documentation, and accountability. Additionally, the system's user-friendly interface and clear workflow were noted as advantages, making it easy for all stakeholders to navigate and use.

Overall, the system has the potential to enhance the success of student projects, streamline project development processes, and improve collaboration among stakeholders. The research findings suggest that the system can be a valuable tool for colleges and universities to manage student projects effectively and efficiently. Further research and evaluation are recommended to assess the effectiveness and impact of the system in a real-world setting.

VIII. ADVANTAGES

1) Simple, easy to use and paperless.
2) The interface is user friendly.
3) No complication in storing data as data is stored in MySQL database.
4) It is convenient and flexible.
5) The system helps in creating and maintaining comprehensive project documentation of every project made in the academic year by different students.
6) The system allows students to access and see projects developed by their seniors and peers, covering a wide range of technologies. This exposure to different technologies will help students broaden their knowledge and skills, giving them an edge in the job market.
7) By accessing and analyzing completed projects, students can learn from practical examples of how to plan, design, and implement a project. This will enable them to develop a deeper understanding of project management and enhance their critical thinking skills.
8) The system will promote collaboration among students, as they can work together to complete projects or build on existing ones. This will help students develop their teamwork and communication skills, which are essential in the professional world.

IX. ACKNOWLEDGMENT

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It is with great honor that we present this project to Dr. Ajay Kumar, our director. We would also like to thank Mandeep Singh Katre, who served as our mentor, for supporting and advising us throughout this process.

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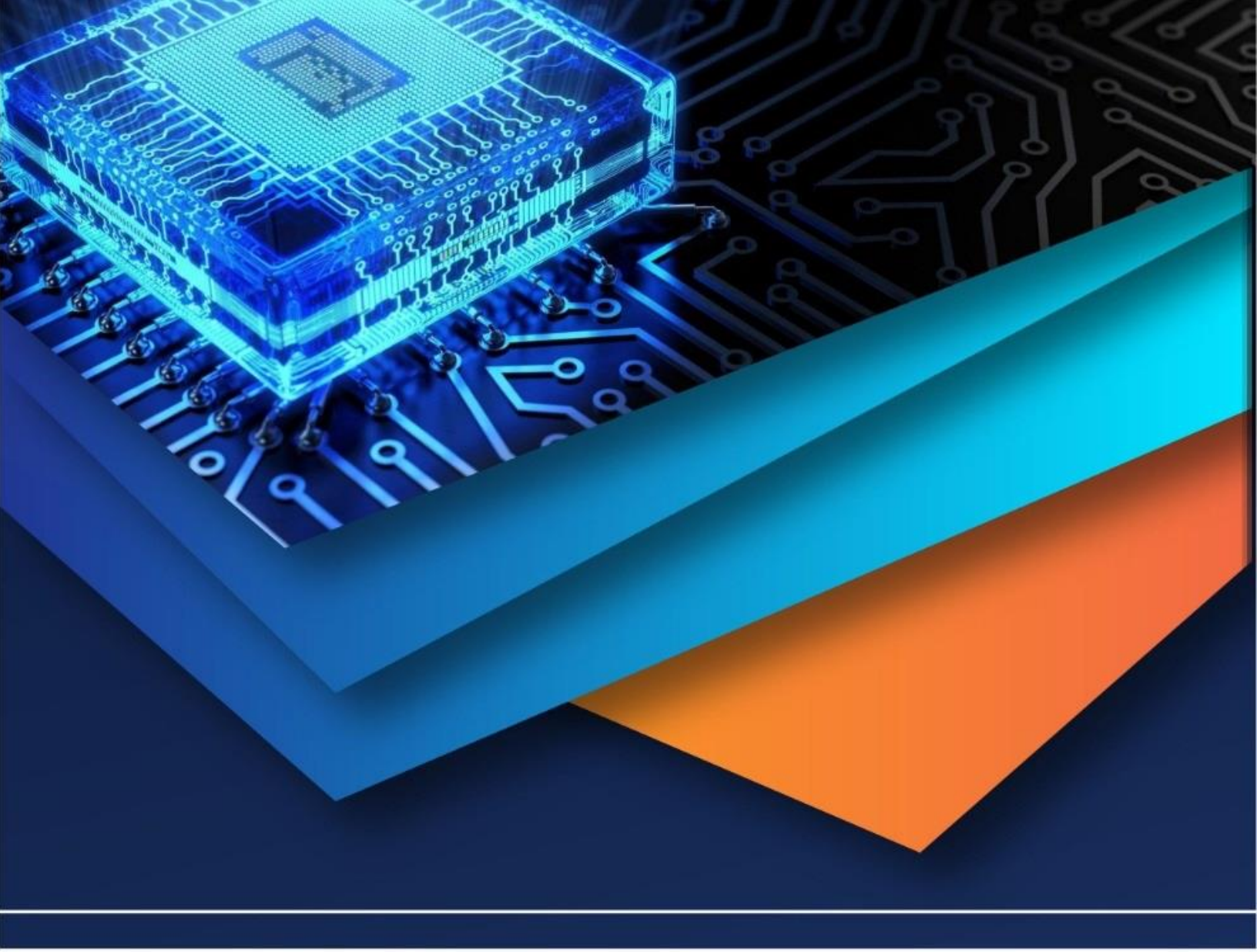

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