# Research Proposal

## Title

Development of a Project Management System ERP for Enhanced Team Collaboration and Task Management

## 1. Introduction

Effective project management is crucial for organizations to deliver tasks on time and within budget. Many existing solutions lack tailored features that enhance collaboration, monitor progress, and integrate seamlessly with team workflows. This research proposes the development of a Project Management System ERP designed to address these challenges by offering advanced functionalities for administrators and users, emphasizing task allocation, team collaboration, and project tracking.

## 2. Background and Problem Statement

\*\*Background:\*\*  
Organizations face challenges in:  
- Assigning tasks and monitoring their completion effectively.  
- Managing team collaboration in real-time.  
- Tracking project progress with precision.  
- Notifying team members of important deadlines or updates.  
  
\*\*Problem Statement:\*\*  
Existing tools, such as Trello and Asana, provide general solutions but often lack the flexibility needed for specific organizational workflows. This creates inefficiencies in task allocation, tracking, and communication, leading to delays and reduced productivity. Thus, there is a need for a tailored ERP system that bridges these gaps and caters to both administrative and user needs.

## 3. Objectives

\*\*General Objective:\*\*  
To design and develop a Project Management System ERP to improve project tracking, team collaboration, and task management.  
  
\*\*Specific Objectives:\*\*  
1. To develop an admin dashboard for task creation, team management, and project tracking.  
2. To design user interfaces for viewing assigned tasks, joining teams, and tracking progress.  
3. To implement notification features for deadlines and updates.  
4. To integrate a real-time team chat system to enhance communication.  
5. To evaluate the effectiveness of the system through user feedback and system testing.

## 4. Literature Review

Studies have shown the importance of ERP systems in improving organizational productivity. Research by Smith et al. (2023) highlights that tailored ERP solutions significantly enhance workflow efficiency. However, many systems lack user-specific features, leading to underutilization. By incorporating task-focused modules and team collaboration tools, this project aims to address these shortcomings.

## 5. Methodology

\*\*5.1 Research Design:\*\*  
The project will adopt a design and development methodology, combining system development with iterative testing.  
  
\*\*5.2 Data Collection Methods:\*\*  
- Surveys and interviews to gather user requirements.  
- Analysis of existing project management tools for benchmarking.  
  
\*\*5.3 System Development:\*\*  
The system will be developed using Python and Django for the backend and JavaScript for the frontend. The development process will include:  
- \*\*Requirement Analysis:\*\* Identifying system features.  
- \*\*System Design:\*\* Creating UML diagrams and wireframes.  
- \*\*Implementation:\*\* Coding the system’s features.  
- \*\*Testing:\*\* Conducting unit testing and user acceptance testing.  
  
\*\*5.4 Evaluation:\*\*  
System evaluation will be conducted through user feedback and performance metrics such as task completion rates and user satisfaction.

## 6. Expected Outcomes

The proposed ERP system will:  
- Streamline task assignment and monitoring for administrators.  
- Improve team collaboration through integrated chat and notification systems.  
- Enhance user experience with intuitive dashboards and real-time updates.  
- Provide actionable insights through progress tracking and reports.

## 7. Significance of the Study

This research will contribute to the field of project management by providing a customizable ERP solution tailored to organizational workflows. It will empower teams to collaborate more effectively and enable administrators to monitor progress with ease.

## 8. Timeline

| Activity | Duration |  
|----------------------------|------------------|  
| Requirement Analysis | 2 weeks |  
| System Design | 3 weeks |  
| Development Phase 1 (Admin)| 4 weeks |  
| Development Phase 2 (User) | 4 weeks |  
| Testing and Evaluation | 3 weeks |  
| Final Report Preparation | 2 weeks |

## 9. Budget

| Item | Cost (USD) |  
|------------------------------|------------|  
| Development Tools (Software) | 200 |  
| Hosting and Deployment | 150 |  
| Miscellaneous | 100 |  
| \*\*Total\*\* | \*\*450\*\* |

## 10. References

- Smith, J., Brown, T., & Lee, K. (2023). The Role of ERP Systems in Organizational Productivity. \*Journal of Information Systems\*, 45(2), 123-135.  
- Johnson, R. (2022). Enhancing Team Collaboration through Technology. \*International Journal of Project Management\*, 34(5), 89-102.