Rayat Shikshan Sanstha's

Karmaveer Bhaurao Patil College of Engineering, Satara

Department: Computer Science & Engineering

Academic Year: 2023-24 Semester- I

Project Synopsis

On

"UG Dissertation Management System"

By

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Of

B. Tech. Computer Science & Engineering

Under the guidance of

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Academic Year 2023-24

Introduction:

A final year project is a specific task often engaged in by students as a means of applying the acquired knowledge gained in their course of study to achieve a set of objectives.Due to unavailability of a content management system or repository, duplicity of previously carried out final year projects is experienced. Over time, it has been shown that students are becoming very lazy and have no originality in projects carried out to qualify them for the degree awarded. Students are allocated to different supervisors, a project carried out by a student in a particular year with a certain supervisor could be picked up by another student in another year and replicated to another supervisor within the same department without the supervisor‟s knowledge. The reason for these is often characterized by a manual process which involves a paper-pen method of keeping past projects.

The final year project record is the process of collecting and storing the project done by different students over the years. It is a common existence in higher institutions of learning that final year students‟ projects are often managed in a paper and pen system and stored in a cabinet in offices. It requires a lot of paperwork and could sometimes be a huge and tiring task for the personnel in charge.This project will reduce repetition of projects carried out by students; encourage ingenuity from students since they are aware that all supervisors have access to all existing projects and it will also reduce the stress of storing, retrieving and searching for Students final year projects.

This system for managing student projects in the undergraduate department, which leads to inefficiencies, including topic replication, limited access to reference materials, poor communication, inadequate progress tracking, data management challenges, security concerns, and outdated user experience. The solution is to develop a modern project management portal to address these issues and create an efficient, user-friendly system for students and faculty.

Literature Review: (Books/research papers/websites referred)

1. STUDENTS' FINAL YEAR PROJECTS RECORD MANAGEMENT SYSTEM

International Conference of Sciences, Engineering & Environmental

Technology (ICONSEET), 6(5): 37 – 44 , 2021

ISSN 0794-9650

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Abstract:

Computers have contributed to a sequence of growth and advancement of human endeavors over the years. Education in Nigeria can be progressed even further by computer into the monitoring of final-year student projects. Final year student projects are often handled in a manual system in higher education institutions, which means it been kept inside a cabinet inside an office. The manual system will waste time and impede project work because the student carrying out the project work is unable to keep the lecturer up to date on the project's progress. Duplication of previously completed final year project is also a problem due to the lack of a content management system or archive Through manual records system provides accountability, It has its inherent challenges with difficulty of access and it is impossible to swiftly share between different office and maintain for a very long time without destruction of the record of the final year project. In this research, A students final year projects record management system software was developed to monitor and store projects that had been implemented before to enable supervisors detect repetitive projects and guide the student to have access to previously completed final year project so as to guide them during their own and to reduce the stress of storing, retrieving and searching of Students final year projects. The system was developed using Visual Basic.Net as the front- end while MS-Access was used as the back end.

Keywords: Project, Information, Records, Students, Supervisor

2. A WEB-BASED FINAL YEAR STUDENT PROJECT -DUPLICATION DETECTION SYSTEM

International Journal of Computer Application (2250-1797)

Volume 7– No.1, January– February 2017

Jumoke Soyemi#1, Folasade O. Isinkaye #2

Abstract:

Over the years, human endeavors have experienced a series of growth and development attributed to information technology. Nigeria technological education can further be advanced by engaging this information technology in monitoring the final year student project. It is a common phenomenon in higher institutions of learning that final year student's projects are often managed in a paper-pen system where most of these students lay their hands on already completed projects, and present the same to their supervisors without the knowledge of the same. This had caused so many duplications of projects word for word,year in, year out and laziness on the part of the students replicating work without originality.This trend contributed to the poor technological skills of graduates produced in many institutions today which invariably also impact on the society at large. In this research, a web-based student project duplication detection application software was developed to monitor projects that had been implemented before to enable supervisors detect repetitive projects and guide the student right to conduct original and unique projects that will advance the technological skill of the student as well as improve technological advancement of our great nation, Nigeria. The system was developed using HTML, JavaScript, Cascading Style Sheet (CSS) and PHP as the front-end while MySQL Structured Query Language was used as the back end.

Key words: Information Technology, paper-pen system, Students project, technological advancement.

3. DESIGN AND DEVELOPMENT OF UNIVERSITY PORTAL FOR THE MANAGEMENT OF FINAL YEAR UNDERGRADUATE PROJECTS

International Journal Of Engineering And Computer Science ISSN:2319-7242

Volume 2 Issue 10 October, 2013 Page No. 2911-2920A

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Abstract:

Processes associated with undergraduate final year projects have always been a manual process which requires a lot of paperwork and could sometimes be a cumbersome and tiring task for the personnel in charge. The manual process sometimes leads to time wasting, impeding project work because the student carrying out the project work is not able to update the lecturer on the level of execution of the project. Also due to unavailability of a content management system or repository, duplicity of previously carried out final year projects is experienced. It could be sensed by the project supervisors or the personnel in charge that this particular project has been done but where is the proof? Where is the system that rightly bounces the topic back when the student puts it forward or brings forth a list of projects that has keywords present in the chosen project topic? This project work therefore, eliminates or reduces the error of allowing a student to carry out a project that has been done before as well as cutting down on the cost and time required by the student to produce a quality technical report. It also helps to prevent the forgery of signatures usually experienced during the final clearance stage of the students after the conclusion of the project work. During the clearance stages, the completed stages will be noted by the computer until the final stage of the clearance stage is completed and the print button can be clicked upon by the student to bring forth the completed clearance form. In this work, we developed an intranet portal platform that can integrate all the processes above into one system.

Keywords: Final year project, intranet, platform, portal, Management system

Existing system: About Existing system :

Existing system of system of project management is manual. Project coordinator or guide gives tasks for students manually.Student completes the work which is given by coordinator or guide and submits manually, in this system all work is done manually so it can take more time to complete project related work. Project coordinator or guide requires remembering when a student completed the work so it is difficult for Project coordinator or guide which student completed the task and when. The existing system does not help users to get the right information at the right time and users cannot manage project development easily to achieve the main goal.

Limitations of existing system

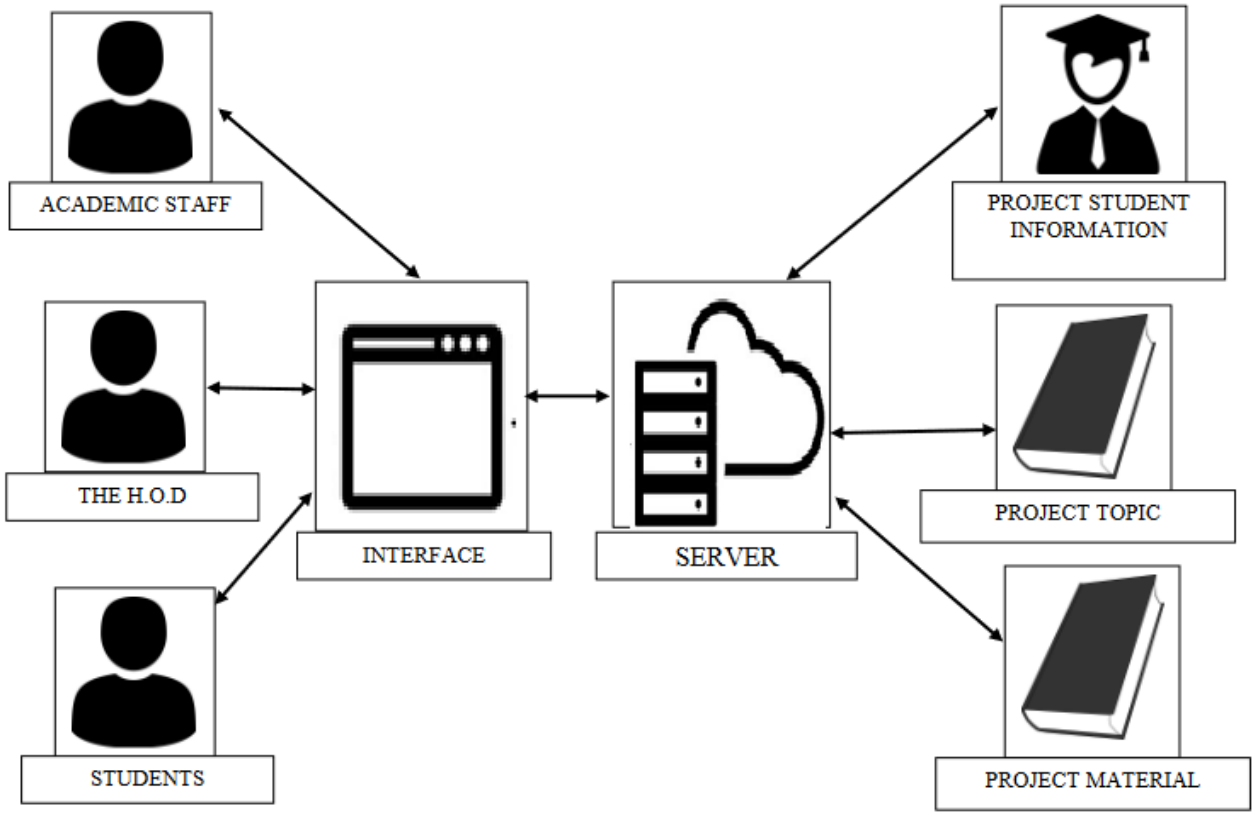
1. It is time consuming.
2. Right information is not retrieved at the right time.
3. Any updates to the data by team members or the Project coordinator or guide cannot see immediately by the rest of the team.
4. All work is done manually.

Proposed Work:

Problem Statement:

The problem is the existing manual and fragmented system for managing student projects in the undergraduate department, which leads to inefficiencies, including topic replication, limited access to reference materials, poor communication, inadequate progress tracking, data management challenges, security concerns, and outdated user experience. The solution is to develop a modern project management portal to address these issues and create an efficient, user-friendly system for students and faculty.

Architecture(Block Diagram) :



Modules :

Project Coordinator Module :

1) Login: - Using username and password Project coordinator login into system. If authentication fails, the Project coordinator cannot login into the system.

2) Upload updates: - Project coordinator uploads and updates the project related work.

3) Upload file:- Project coordinator upload file for student information.

4) View Files: - Project coordinator View all files uploaded by students.

5) View Gantt Chart: - Project coordinator view Gant chart of student working.

6) View Feedback :- Project coordinator views the feedback of students.

Project Guide Module :

1) Login: - Using username and password Guide login into system. If authentication fails, the guide cannot login into the system.

2) View Groups :- Guide will be able to see the groups which are guided by him/her.

3) Upload file:- Guide upload file for student information.

4) View Files: - Guide View all files uploaded by students.

5) Assign Task :- Guide assign task to students.

5) View Gantt Chart: - Guide view Gantt chart of student working.

Student Module :

1) Student Login: - Using username and password student login into system. If authentication fails, students cannot login into the system.

2) Add Project Topic

3) View updates: - Students view all updates of the work which are uploaded by Project coordinator or guide.

4) Complete Tasks :- Students complete tasks assigned by guide.

5) View Previous year projects for references

6) Give Feedback :- Students give feedback to guide.

7) Upload file:- Student upload file and submit the completed work.

8) View Gantt Chart: - Student view Gantt chart of student working.

Project Objectives :

1. Streamlined Project Selection Process:

The portal aims to provide a streamlined project selection process, making it easier for students to find suitable project topics based on their interests and skills.The objective is to eliminate topic replication and ensure that each student is assigned a unique project topic.

2. Access to Reference Materials:

The portal will provide access to a repository of previous year batch projects, project reports, presentations, and code.The objective is to offer a valuable resource for students to reference and learn from prior projects.

3. Improved Communication and Collaboration:

The portal will facilitate real-time communication and collaboration between students and faculty members.The objective is to enhance the quality and efficiency of communication by providing real-time chat, notifications, and discussion forums.

4. Progress Tracking and Reporting:

The portal will enable students to track and report their project progress, milestones, and achievements.The objective is to provide a clear and structured way for faculty members to monitor student progress and provide timely feedback.

5. Data Analytics and Insights:

The portal will collect and analyze project-related data to provide insights into project selection trends, student performance, and potential areas of improvement.The objective is to make data-driven decisions to enhance the overall project management process.

6. Secure User Access and Data Protection:

The portal will prioritize security with robust user authentication and authorization mechanisms.The objective is to protect user data, project information, and ensure secure access to the portal.

7. Enhanced User Experience:

The portal will feature a modern and responsive user interface to improve the overall user experience. The objective is to make the portal accessible on various devices, including mobile phones and tablets.

8. Efficient Project Management:

The portal aims to create a more efficient project management system, reducing administrative tasks, and automating routine processes. The objective is to save time for students and faculty members while improving the quality of project management.

Academic Objectives(Which new technologies need to be learnt for this project work) :

1. Full-Stack Development:

- Objective: Gain proficiency in full-stack web development by learning both frontend and backend technologies.
- New Technologies: Depending on your existing skills, team members may need to learn technologies like React, Angular, or Vue.js for frontend development and Node.js, Django, or Ruby on Rails for backend development.

2. UI/UX Design:

- Objective: Acquire skills in user interface (UI) and user experience (UX) design for creating a visually appealing and user-friendly portal.
- New Technologies: Familiarize with design tools like Figma, Sketch, or Adobe XD for creating UI mockups and wireframes.

3. Database Management:

- Objective: Learn about database management systems for efficient data storage and retrieval.
- New Technologies: Explore databases such as PostgreSQL, MySQL, and MongoDB, and learn how to design and manage database structures.

4. Data Analytics:

- Objective: Develop skills in data analytics and insights for making data-driven decisions.
- New Technologies: Learn data analysis tools like Google Analytics, Mixpanel, and data visualization libraries for generating insights.

5. Security Measures:

- Objective: Master security practices and technologies to protect user data and the portal from threats.
- New Technologies: Explore authentication methods (e.g., JWT, OAuth) and security protocols for safeguarding user information.

6. Cloud Computing:

- Objective: Gain knowledge of cloud hosting platforms for scalable and reliable hosting.
- New Technologies: Learn how to deploy and manage applications on platforms like AWS, Azure, or Google Cloud.

Requirement analysis :

Software requirements

- Coding Language : PHP , JavaScript
- IDE :Visual Studio Code
- Data Base : MYSQL
- Frontend : HTML,CSS
- Responsive Design Framework: Bootstrap
- Backend Framework: Node.js

Hardware Requirements:

- System : Intel Core I3 Processor
- Hard Disk : 520 GB.
- Floppy Drive : 1.44 Mb.
- Mouse : Logitech.
- Ram : 4 GB.

Operating System Requirement

- Windows 7/8/10/11.

Advantages of the Proposed System :

1. Improved Efficiency:

A well-implemented UG project management system can streamline processes, making project execution more efficient. It helps in planning, organizing, and managing resources effectively.

2. Better Communication:

These systems often include communication tools, enhancing collaboration among team members, group leaders , and guides.

3. Real-time Visibility:

These systems provide real-time insights into project progress, allowing for quick decision-making and issue resolution.

4. Resource Allocation:

Efficient allocation of resources, including time and budget, helps in optimizing project performance and minimizing waste.

5. Documentation and History:

Projects generate a lot of documentation. Project management systems centralize and store project-related documents, creating a historical record that can be valuable for future reference.

6. Scalability:

A good project management system can scale to accommodate projects of different sizes and complexities.

Limitations of the Proposed System :

1. Learning Curve:

Students and faculty who are not familiar with modern web technologies may face a learning curve in using the portal effectively. Training and support will be necessary to ensure all users can utilize the portal efficiently.

2. Limited Internet Access:

Users with limited or unreliable internet access may struggle to access and use the portal effectively, impacting their ability to participate in the project management process.

3. Resource Requirements:

Developing, hosting, and maintaining the portal may require significant resources, including financial, technical, and human resources. Smaller institutions or departments with limited budgets may face challenges in this regard.

Future Scope :

1. Expansion to Other Departments:

The portal can be expanded to serve not only the undergraduate department but also other departments within the institution. This can create a unified project management system that benefits the entire campus.

2. Integration with Learning Management Systems (LMS):

The portal can integrate with the institution's LMS, allowing for a seamless exchange of information between course content and project management. This integration can further enhance the learning experience.

3. Alumni Network and Mentorship:

The portal can create a platform for alumni to engage with current students, offering mentorship, project guidance, and opportunities for collaboration.

4. Mobile Application:

Develop a dedicated mobile application for the portal to enhance accessibility and user engagement. This app can provide on-the-go access to project resources, notifications, and updates.

5. Machine Learning and AI Integration:

Implement machine learning and AI algorithms to provide advanced features such as automatic topic recommendations, predictive analytics for project success, and intelligent chatbots for user assistance.

6. Continuous Improvement and User Feedback:

Maintain a strong feedback loop with users to continually enhance the portal's features and usability. This user-centric approach ensures that the portal remains aligned with the evolving needs of students and faculty.

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