Project Synopsis

on

ENTERPRISE RESOURCE PLANNING

Submitted as a part of the course curriculum for

Bachelor of Technology

in

Computer Science

Submitted by

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DECLARATION

I/We hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

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CERTIFICATE

We hereby declare that this submission is our work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgement has been made in the text.

Date:

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(Assistant Professor)

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It gives us a great sense of pleasure to present the synopsis of the B.Tech Major Project undertaken during B.Tech. Fourth Year. We owe a special debt of gratitude to Neha Shukla (Assistant Professor), Department of Computer Science, KIET Group of Institutions, Delhi-NCR, Ghaziabad, for his/her constant support and guidance throughout the course of our work. Her sincerity, thoroughness and perseverance have been a constant source of inspiration for us. It is only her cognizant efforts that our endeavours have seen the light of the day.

Last but not the least, we acknowledge our friends for their contribution to the completion of the project.

Signature:

ABSTRACT

ERP HRMS is a Web Application that provides an integrated real-time view of core business processes, using common databases maintained by a database management system. Human Resources Management System (HRMS) as a discipline and in particular basic HR activities and processes within the information technology field, the programming of data processing systems evolved into standardized routines and packages of enterprise resource planning (ERP) software. To reduce the manual workload of these administrative activities, organizations began to electronically automate many of these processes by introducing specialized human resource management systems.

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Chapter 1: Introduction

1.1 Introduction

A HRMS (Human Resource Management System) is a combination of systems and processes that connect human resource management and information technology through a Web Application which will be developed on front end Framework called AngularJS and back-end Framework Django a python Framework. These frameworks are one of the latest technologies which are used in the market to deal with large amounts of users and data at a time.
Main focus of this HRMS is its dynamism, this system can be easily adapted in any type of organization having different HR policies, rules and regulations with the help of its large dynamic setting panels. Main motive of making these setting panels is cost cutting at both developers and client side which incur in maintenance or client customization.
A HRMS will help to revolutionize a workplace/Organization. The automation of repetitive and time-consuming tasks associated with human resources management frees up some of the company's most valuable employees and allows the focus to shift to culture, retention, and other highly impactful areas. It provides analysis to all level officials of an organization through its Reports.

1.2 Problem Statement

Examination Cell was facing issue in the generation of Datesheet ,Seating Plan, Invigilation Duty Chart and Attendance . They had to do a lot of manual work before the conduction of every examination.They had to prepare different type reports for sending the information to student and faculty. They had to prepare list of attendance manually to send the respective HOD's and higher authority. The management of data was also a difficult task for them. So they provided us the idea to implement the process of examination. We gathered the complete information from them regarding the process of examination and analyzed the requirement before implementation.

1.3 Objective

1. To automate the Datesheet generation .
2. To automate the Seating Plan generation .
3. To automate the Attendance during the examination.
4. To automate the generation of invigilation Duty Chart.
5. Give a defined final report of the examination in the whole session.
6. Report of attendance of the students to respective HOD’s.

1.4 Scope

The Controller of Examination module typically refers to a component within an educational institution's management system. Its scope encompasses various tasks related to examination management, such as:

1.4.1 Datesheet: Managing the scheduling of exams, including setting dates, times, and venues for different exams.

1.4.2 Registration and Enrollment: Handling the registration of students for exams, ensuring they meet prerequisites and are enrolled in the correct courses.

1.4.3 Hall Ticket Generation: Generating hall tickets for students, containing essential details like exam date, time, venue and Qr for attendance.

1.4.4 Seating Arrangement: Organizing seating arrangements for exams, ensuring appropriate spacing and supervision.

1.4.5 Invigilation Duty Chart: Assigning invigilators to monitor exams, maintaining security and integrity during the examination process.

1.4.6 Attendance: Attendance of students present in the examination from mobile application.

1.4.7 Communication with Students and Faculty: Facilitating communication between students, faculty, and administration regarding exam-related matters, such as schedules, rules, seating plan and duty of faculty.

1.4.8 Continuous Improvement: Continuously reviewing and improving examination processes to enhance efficiency, fairness, and transparency.

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Chapter 2: Literature Review

Sr. No.	Authors	Name of the paper	Description
1	Prof. S. S. Aravinth	Exam Hall Seating Arrangement System	The paper most important goal for developing this software program is to computerize the traditional way of carrying out exams
2	Prof . Gautami G. Shingan	Automated Supervision Allocation System	The paper introduces a gadget which used for college leave management. The faculty who are allocated the supervision but for any cause they're nownot present at that time then the to be had faculty is sent mails for the supervision
3	Dinesh Chandewar, Mainka Saha	Automatic Seating Arrangement of University	The paper is to lessenthe significant mission of manually allocating seats at some point of an exam. The device will provide an effective measure to dynamically allocate students in a lecture room

4	R.Gokila, Antony Rohan Das	Examination Hall andSeating Arrangement Application using PHP	The paper describes system is evolved to generate the examination corridorseating arrangement for students efficaciously. The advanced machine is helpful for each group of workers andcollege students
5	R.Chandrasekr	Automation of Hall Seating ArrangementSystem	This paper show off venture which offersa solution to examination seating arrangement problems by means ofexecuting the proposed chromatic polynomial set of rules.
6	Vamsi Krishna Yepur	Examination Management Automation System	This paper provides acomparative look at on various techniquesand device that exists and is being used broadly.
7	Shazia Anjum, Madhuri	Automation of ExamHall Allotment and Seating Arrangement	This challenge allowsin the technology of stories of seat preparations made and helps in producing random order of precise path or segment exams in every week.

Chapter-3: Proposed Methodology

Requirement Analysis: The first phase involves thorough analysis and understanding of the examination administration process. This includes identifying key stakeholders, understanding their requirements, and documenting the functional and non-functional requirements of the COE module.

System Design: Once requirements are gathered, the system design phase begins. This involves designing the architecture of the COE module, including the database schema, user interfaces, and integration points with existing systems such as the KIET Pariksha mobile app. Design decisions should prioritize scalability, flexibility, and usability.

Development: The development phase involves building the COE module according to the defined requirements and design specifications. Agile methodologies may be employed to ensure iterative development, allowing for frequent feedback and course corrections. The development process should adhere to coding standards, security best practices, and performance optimization techniques.

Testing and Quality Assurance: Comprehensive testing is conducted to ensure the reliability, functionality, and security of the COE module. This includes unit testing, integration testing, system testing, and user acceptance testing (UAT). Test cases are designed to validate both the expected behavior and edge cases of the system.

Deployment and Integration: Once testing is complete, the COE module is deployed into the production environment. This involves integrating the module with existing systems and conducting thorough compatibility and performance testing to ensure seamless operation. Deployment strategies such as phased rollout or canary releases may be employed to minimize disruption.

Training and User Adoption: Training sessions are conducted to familiarize stakeholders with the functionality and usage of the COE module. User manuals and documentation are provided to support ongoing use and troubleshooting. Continuous support and feedback mechanisms are established to address user concerns and facilitate smooth adoption of the new system.

Maintenance and Continuous Improvement: After deployment, the COE module undergoes ongoing maintenance to address bugs, security vulnerabilities, and performance issues. Additionally, feedback from users and stakeholders is collected to identify opportunities for enhancements and new features. Continuous improvement cycles ensure that the COE module remains aligned with evolving needs and technological advancements.

Chapter-4: Technology used

AngularJS:

AngularJS is a very powerful JavaScript Framework. It is used in Single Page Application (SPA) projects. It extends HTML DOM with additional attributes and makes it more responsive to user actions. AngularJS is open source, completely free, and used by thousands of developers around the world. It is licensed under the Apache license version 2.0. AngularJS is an open-source web application framework. It was originally developed in 2009 by Misko Hevery and Adam Abrons. It is now maintained by Google. Its latest version is 1.4.3.

Features:

- AngularJS is a powerful JavaScript based development framework to create RICH Internet Application(RIA).
- AngularJS provides developers options to write client side applications (using JavaScript) in a clean MVC(Model View Controller) way.
- Application written in AngularJS is cross-browser compliant. AngularJS automatically handles JavaScript code suitable for each browser.
- AngularJS is open source, completely free, and used by thousands of developers around the world. It is licensed under the Apache License version 2.0.

Django:

Django is a web development framework that assists in building and maintaining quality web applications. Django helps eliminate repetitive tasks making the development process an easy and time saving experience. Like most modern frameworks, Django supports the MVT pattern. It is a python framework which is considered to be comparatively fast from other technologies here some stats which verify this.

Advantages Of Django:

Object-Relational Mapping (ORM) Support – Django provides a bridge between the data model and the database engine, and supports a large set of database systems including MySQL, Oracle, Postgres, etc. Django also supports NoSQL databases through Django-nonrelational framework. For now, the only NoSQL databases supported are MongoDB and google app engine. Multilingual Support − Django supports multilingual websites through its built-in internationalization system. So you can develop your website, which would support multiple languages.

Framework Support − Django has built-in support for Ajax, RSS, Caching and various other frameworks.

Chapter-5: Screenshots

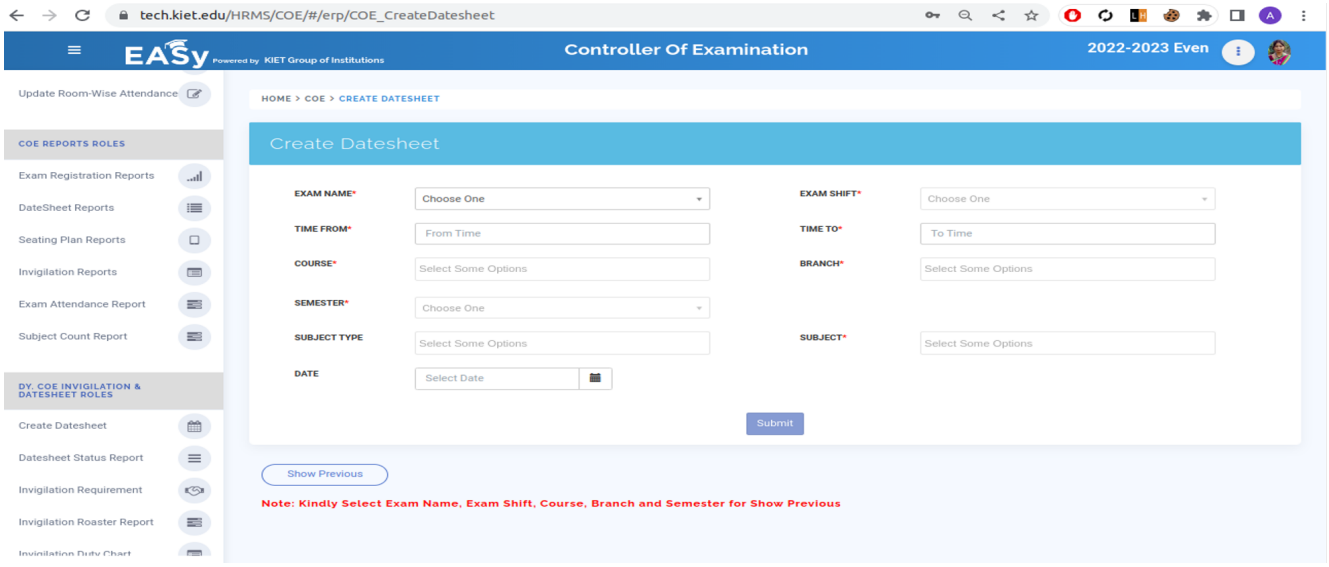

Figure 5.1: Create Datesheet

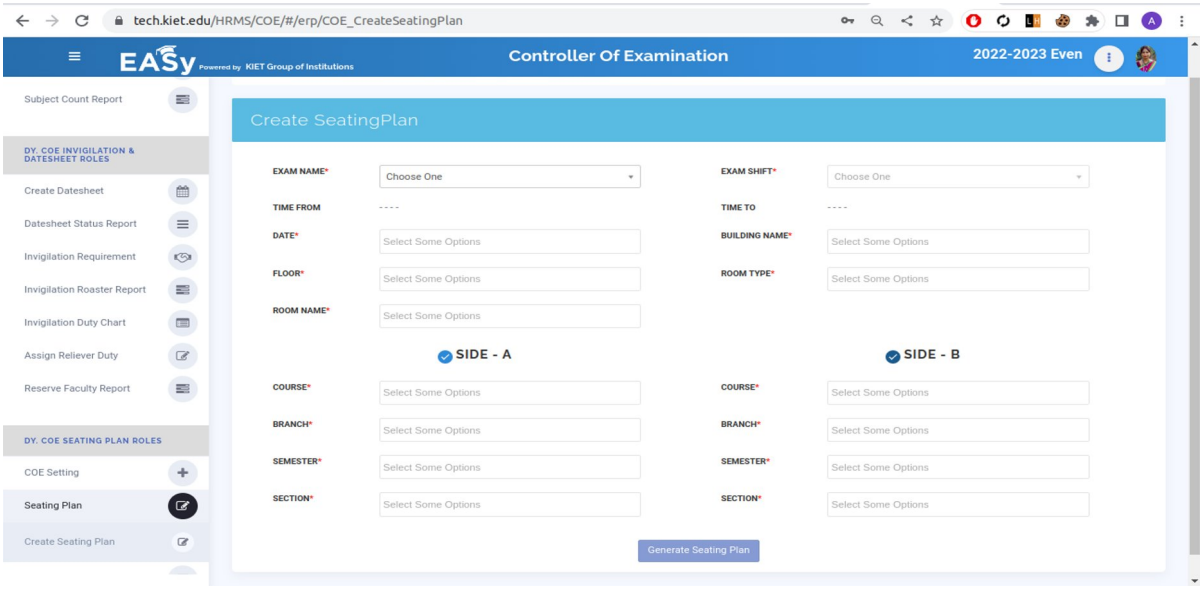

Figure 5.2: Create Seating Plan

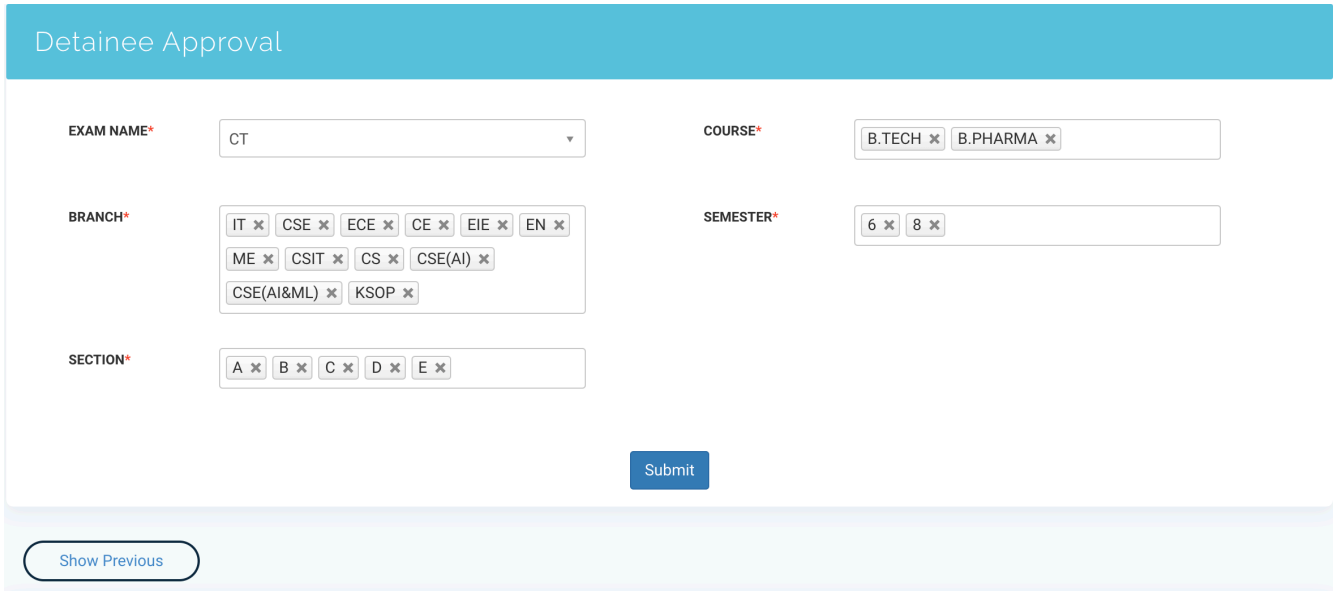

Figure 5.3: Detainee Approval

Figure 5.4: Generate Hall Ticket

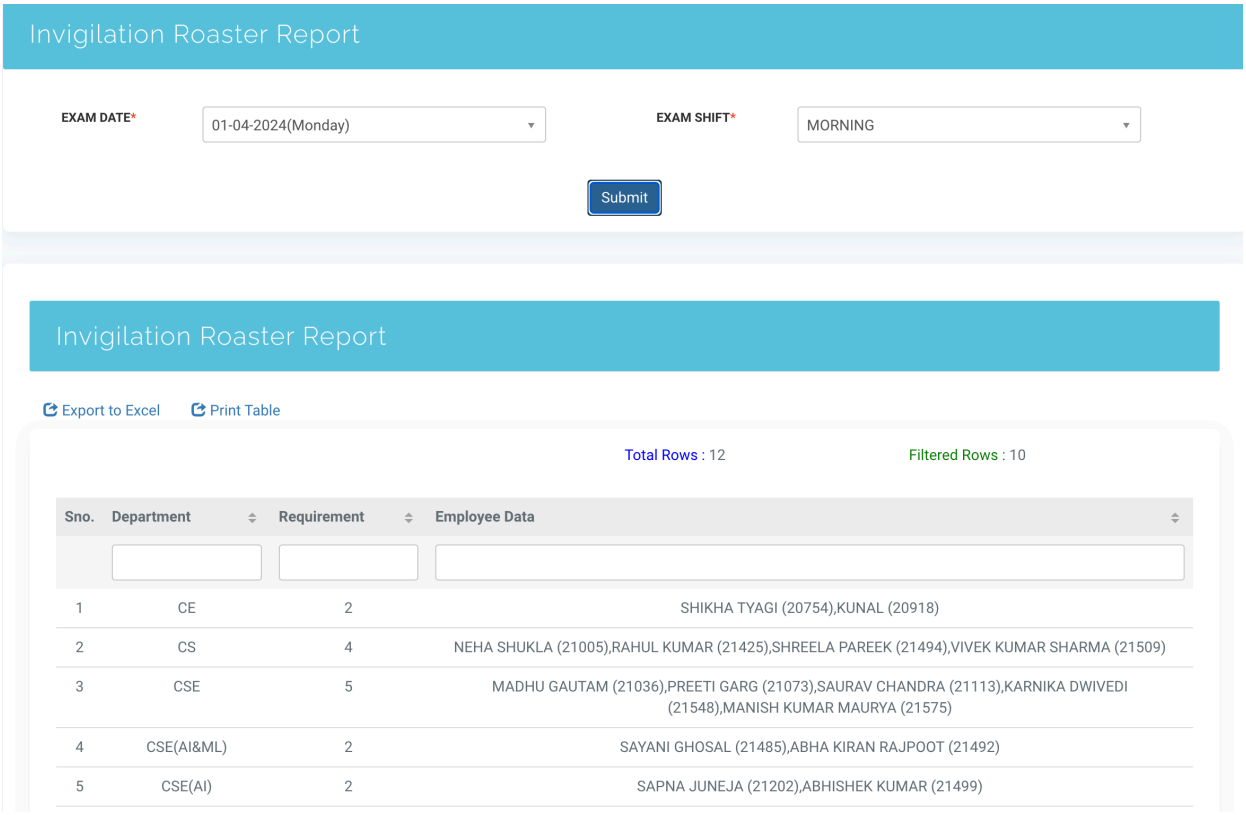

Figure 5.5: Invigilation Roaster Report

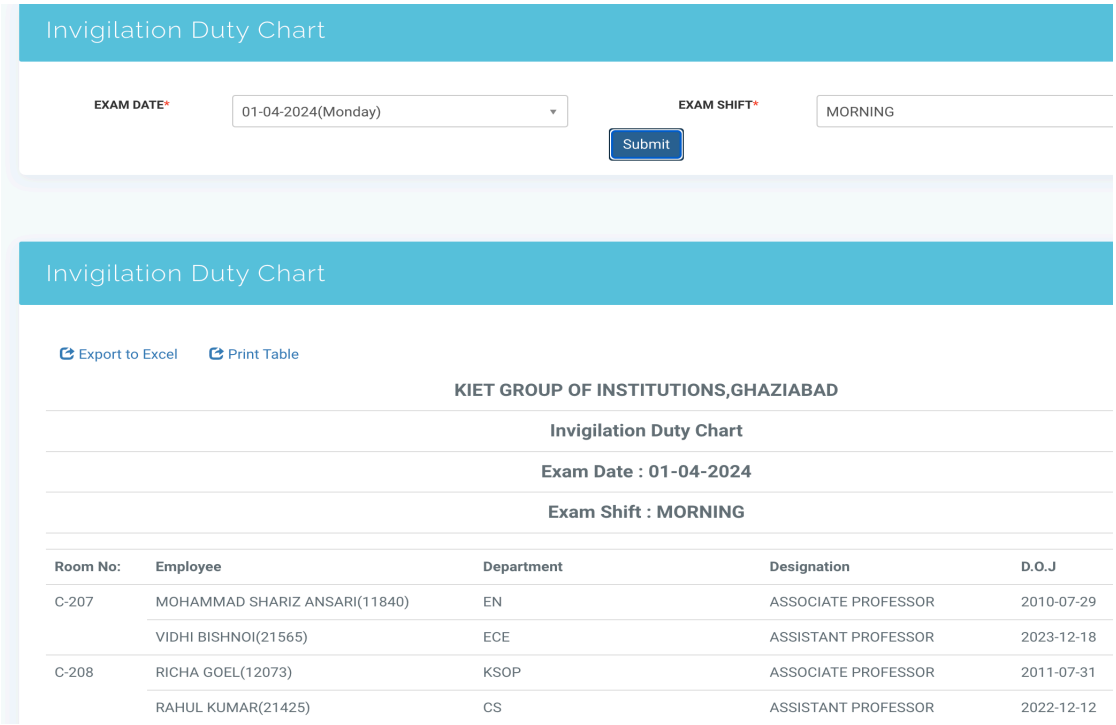

Figure 5.6: Invigilation Duty Chart

CHAPTER-6: CONCLUSION

In conclusion, the implementation of the COE (Controller of Examination) project represents a significant milestone in modernizing and streamlining the examination administration process within the academic institution. Through the development and deployment of a comprehensive digital platform, the COE module has successfully automated critical tasks such as generating Datesheets, Seating Plans, and Invigilator Roasters, thereby enhancing efficiency and reducing the administrative burden on examination coordinators.

Furthermore, the COE module has introduced robust attendance tracking mechanisms and communication functionalities, promoting transparency, fairness, and accountability in the examination process. By centralizing examination-related data and integrating seamlessly with the existing KIET Pariksha mobile app, the COE project has improved accessibility and convenience for all stakeholders, including administrators, faculty members, and students.

As we move forward, ongoing maintenance and continuous improvement efforts will be essential to ensure that the COE module remains aligned with evolving needs and technological advancements. Regular feedback from users and stakeholders will guide future enhancements and optimizations, ensuring that the COE project continues to deliver value and contribute to the overall excellence of the academic institution.

In summary, the COE project represents a transformative initiative that has not only enhanced the efficiency and transparency of examination administration but also enriched the academic experience for all stakeholders involved.

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