CONTROLLER OF EXAMINATION MODULE

PROJECT SYNOPSIS

OF MAJOR PROJECT

BACHELOR OF TECHNOLOGY
in
CSE(AI) & CSE(AI&ML)

SUBMITTED BY
Akash Nehra (2100291520013)
Shashwat (2100291530049)

GUIDED BY
Ms. Bhawna
Assistant Professor

Project Group: __

KIET Group of Institutions, Delhi-NCR, Ghaziabad (UP)

Department of CSE(AI) & CSE(AI&ML)

2023-24

TABLE OF CONTENTS

INTRODUCTION

Controller of Examination module is especially designed for automation of various processes involved in Examination Cell such as Preparation of Exam Datesheet, Seating Arrangement, Invigilation Duty Chart, Attendance and UFM. This system deals with these processes of exam online instead of manually. This application will be used for the automatic seating arrangement of seats on the basis of number of students, number of classes and number of benches in a class, along with the preparation of invigilation duty chart based on the number of faculty available and number of rooms required as per seating plan. While an extensive body of research exists regarding the delivery of course knowledge and material, much less attention has been paid to the performance effect of seating location within a classroom. This study examines the effects of seating location and seating type on student performance. In existing way of arranging seating for examination, a dedicated person is required. At first this person has to collect the information about students such as names, which students would be appearing for exam. This person should also have knowledge about all buildings, rooms, room type and number of benches in the room. Someone should have to write seat no. on all the benches. Then a person should allot each seat to each student manually and this process is indeed very lengthy and tame taking also he would have to stick to paperwork to notice board where students can see. Students have to come before about an hour of examination to see their seats. This is also time consuming as well as lengthy. To overcome this, the COE module is designed which will update the details and display location of seat, where a dedicated person is required to fill in information, upload the data to the server where a real-time server updates all the data and students can know their location automatically as it will be reflected on their ERP portal.
The motive of growing an examination hall block allocation system is to computerize the conventional way of undertaking checks and assist workforce in allocating examination halls effortlessly without any burden. This challenge also allocates a selected invigilator for a particular corridor. it's also very beneficial for the college in which the software can also generate the corridor separation and concerning reviews. hence guide Excel sheets and office work are computerized based totally on their departments and registration numbers. The examination hall allocation system is a web-based totally application that can be utilized in any school and college.

Technology Used

- Django
- Angular JS
- MySQL Database

RATIONALE

This Controller of Examination module has been advanced for the college, to simplify the manual paintings. It helps get admission to the examination facts of a selected pupil in a particular magnificence. The reason of developing this exam block allocation gadget is to provide a way to allocate exam halls for every scholar with none conflict. maximum students are dealing with many problems locating the examination corridor, so a newly invented idea enables the schools to generate their exam hall arrangement without difficulty. This challenge also allocates a selected invigilator for a particular corridor. it's also very beneficial for the college in which the software can also generate the corridor separation and concerning reviews. hence guide Excel sheets and office work are computerized based totally on their departments and registration numbers. The examination hall allocation system is a web-based totally application that can be utilized in any college and college. The exam corridor allocation is mostly a time- eating procedure. The exam controller has to select the blocks based on a particular scholar's branch and the electricity of every block. sooner or later, this selection allows college students to discover the exam halls with none confusion. also, the exam controller can save all the facts of the hall allocation technique for future reference the use of this software.

OBJECTIVES

- The proposed system is a web-based application that is designed to manage and handle the operations in an educational institute during the time of examinations. It is an application that can be used by all the students and staff in an educational institute in order to facilitate the communication among them. The application is easily adaptable as it is used on desktop systems and laptops
- To minimize manpower required.
- The Automation Controller of Examination System was developed for the educational institute to simplify the allocation of halls, seating arrangement of students and allocating staff to the examination halls. Allocation of faculty to correlated with rooms will be done by the exam cell coordinator in the form of word documents and excel sheets and also allocation of students to their accordant rooms is a frantic work which will be done manually and it takes lot of time and requires man power.
- To make of Substitute Invigilation easier to manage.
- To reduce redundancy in allocation of invigilation rooms.
- Since the developed application is used on computer systems, it improves connectivity between the students and systems, thus helping the institution to provide a more transparent system altogether.
- To generate analytical reports based on data stored.

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 now not 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 lessen the 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 and Seating Arrangement Application using PHP	The paper describes system is evolved to generate the examination corridor seating arrangement for students efficaciously. The advanced machine is helpful for each group of workers and college students
5	R.Chandrasekhar	Automation of Hall Seating Arrangement System	This paper show off venture which offers a solution to examination seating arrangement problems by means of executing the proposed chromatic polynomial set of rules.
6	Vamsi Krishna Yepur	Examination Management Automation System	This paper provides a comparative look at on various techniques and device that exists and is being used broadly.
7	Shazia Anjum, Madhuri	Automation of Exam Hall Allotment and Seating Arrangement	This challenge allows in the technology of stories of seat preparations made and helps in producing random order of precise path or segment exams in every week.

FEASIBILITY STUDY

Feasibility study is made to see if the project on completion will serve the purpose of the organization for the amount of work, effort and the time that spend on it. Feasibility study lets the developer foresee the future of the project and the usefulness. A feasibility study of a system proposal is according to its workability, which is the impact on the organization, ability to meet their user needs and effective use of resources. Thus, when a new application is proposed it normally goes through a feasibility study. The document provides the feasibility of the project that is being designed and lists various areas that were considered very carefully during the feasibility study of this project such as Technical, Economic and Operational feasibilities. The following are its features:

TECHNICAL FEASIBILITY

The system must be evaluated from the technical point of view first. The assessment of this feasibility must be based on an outline design of the system requirement in the terms of input, output, programs and procedures. Having identified an outline system, the investigation must go on to suggest the type of equipment, required method developing the system, of running the system once it has been designed.
Technical issues raised during the investigation are:

- Does the existing technology sufficient for the suggested one?
- Can the system expand if developed?

The project should be developed such that the necessary functions and performance are achieved within the constraints. The project is developed within latest technology. Through the technology may become obsolete after some period of time, due to the fact that never version of same software supports older versions, the system may still be used. So there are minimal constraints involved with this project.

ECONOMIC FEASIBILITY

The developing system must be justified by cost and benefit. Criteria to ensure that effort is concentrated on project, which will give best, return at the earliest. One of the factors, which affect the development of a new system, is the cost it would require.
The following are some of the important financial questions asked during preliminary investigation:

- The costs conduct a full system investigation.
- The cost of the hardware and software.
- The benefits in the form of reduced costs or fewer costly errors.

Since the system is developed as part of project work, there is no manual cost to spend for the proposed system. Also, all the resources are already available, it give an indication of the system is economically possible for development.

METHODOLOGY/ PLANNING OF WORK

Exam Cell Automation System application would be developed to simplify the allocation of halls to students during exams. It facilitates to access the examination information of a particular student in a particular department. The information is sorted information alphabetically, which will be provided by the teacher for a respective department. Provide a simpler method to store and access information related to exam hall and students. Reduce paperwork and make all related information accessible easily. Provide a simple interface which will be easily used without much training.

Entry of exam hall details

In this module, Deputy COE will enter the details of a room to allocate the exam hall for students in a computerized way. Admin can select the Course, Year, Room number, Date, Invigilator to allocate exam hall for particular course students. They can add the room details, invigilator details, course details of the students to easily retrieve data from the database. Now all the details are saved to database to easily crosscheck the vacancy of exam hall, which hall is empty and which one is full. In this module we can easily add, edit and update exam hall details for a student.

Entry of Student Subject Details:

In this module, Admin can add the student details to the database. After saving the room details, it switches to next module, with all the information that admin has given to the exam hall details. It adds the details of student id which is a primary key, to uniquely join hall details and student details database. By adding student ID, student name, table number we can allocate the exam hall for a particular student in the course. We can change the hall details of a student by using edit/ update option. We can change the details of invigilator name, date of exam, course etc. Once Room number is added we cannot edit/ update for a particular student. Table number is added for the student to know in which table he/she has to be seated.

View Exam Hall details:

In this module we can view all the exam hall details such as room number, invigilator name, student id, student name, course name etc. we can view which student of which course is allocated to which room etc. we can easily view all the details saved in database in exam hall allocation details. This module will give admin the clear view of exam hall allocation. This module will give all the details of all students who are allocated in which room number, table number etc. This will avoid confusion about room allocation, also give the clear-cut view of what are the room are allocated, which exam hall are still left etc.

Preparation of Invigilation Duty Chart:

It can generate invigilation duty chart based on dynamic combinations in rules set by the Deputy COE which can be based on gender, experience, department, subject, expertise etc.

It can give the details about the assigned faculty for invigilation. It can view the available and required faculty for the exam to invigilate. It can give a summary of the invigilator about invigilation along with check-in and checkout.

FACILITIES REQUIRED FOR PROPOSED WORK

SOFTWARE REQUIREMENTS:

- Operating system: Windows, Linux
- Coding Language: Python, HTML, CSS, JavaScript
- Frameworks: Django, Angular JS, React JS
- Database: MySQL

EXPECTED OUTCOMES

Existing system is very slow and inefficient. Report generation is also not an easy task in the current situation. Also, if the report is generated then calculations are done manually that leads to more errors. There is a lot of manual work involved in current system and mistake in one detail can lead to wrong generation of page. No proper collection of requirements leads a huge problem for this system. This system is to enhance manual work and also more energy is wasted to allocate the seating arrangement.

The existing invigilator allotment system in the universities and colleges under consideration have few problems like time and manpower needed for checking the availability of invigilator and generating the report. Besides, it is always impossible to reach the optimum assignment by solving the problem manually. This module assists in automating the existing manual system. This is a paperless work. It can be monitored and controlled remotely. It reduces the manpower required. It always provides accurate information. Malpractice can be reduced. The data which is stored in the repository helps in taking intelligent decisions by the exam department and principal. The proposed system can be extended making use of containerization technology to increase scalability and reliability. The proposed system can be improved and modified to support the automated seating allotment. With the help of cloud computing, the proposed system may be extended to improve portability thus handling multiple organizations at once.

REFERENCES

[1] S. Priya Dharshini," M. Selva Sudha, Mrs.V.Anithalakshmi, "Exam Cell Automation System, International Journal of Engineering Science and Computing (2017), Volume 7, Issue no3.

[2] Dayanand" G Savakar, Ravi Hosur, "Automation of Examination System, International Journal of Science and Research, Volume 4 Issue 11 November 2015.

[3] Bondre Rutuja Avinash, "Durgi Varsha Vijaykumar, Mohite Pradnesh" Rajeev, Parkar Vishal V, Automated Examination Support System International Journal of Current Engineering and Technology.

[4] S. S. Aravinth," G."Pavithra, M. Myvizhimalar, D. Divya, M.Rathinakrithika, EXAM HALL SEATING ARRANGEMENT SYSTEM USING PHP, International Journal of Innovative Research and Technology, 2014

[5] Ashti Fatima Alam, "Seating arrangement Tools for examinations", International Journal of Engineering Applied Science and Technology VOL:1 2016.

[6] S.Vasupongayya, W.Noodam, and P.Kongyong, "Developing Examination Management System: Senior Capstone Project, a Case Study," World Academy of Science, Engineering and Technology, Vol:7 2013.

[7] M.N.M. Kahar and G. Kendall, "The examination timetabling problem atUniversitiMalaysiaPahang:Comparison of a constructive heuristic with an existing software solution," MIT Press and McGraw-Hill, ISBN 0-262-03141-8.