Survey Paper on Exam Section Management System

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Abstract- Examinations are the most crucial section of any educational system. They are intended to measure student's knowledge, skills and aptitude. At any institute, a great deal of manual effort is required to plan and arrange examination. It includes making seating arrangement for students as well as supervision duty chart for invigilators. Many institutes performs this task manually using excel sheets. This results in excessive wastage of time and manpower. Automating the entire system can help solve the stated problem efficiently saving a lot of time. This paper presents the automatic exam seating allocation. It works in two modules First as, Students Seating Arrangement (SSA) and second as, Supervision Duties Allocation (SDA). It assigns the classrooms and the duties to the teachers in any institution. An input-output data is obtained from the real system which is found out manually by the organizers who set up the seating arrangement and chalk out the supervision duties. The results obtained using the real system and these two models are compared. The application shows that the modules are highly efficient, low-cost, and can be widely used in various colleges and universities.

Keywords-Allocation, Exam Duties, Supervision, Invigilators, Classrooms

INTRODUCTION

Exam Seating and Teacher Duty Allocation is a phrase that mostly refers to the assignment of the rooms, the placement of the students in the class. The administration of responsibility becomes more crucial as the number of students, subjects, departments, and rooms increases. But because this procedure must be completed by hand, it takes a long time and results in errors, inconsistencies, and time wasting.

At the moment, test committee members assign tasks to teachers with different restrictions, manually arrange classrooms, divide students into groups based on their needs, and distribute seats in a way that discourages complications.

This activity is laborious and time-consuming, and there is a high possibility of errors and inconsistencies. With the help of the suggested software, fewer classrooms will be used, tasks will be assigned in a methodical manner, and instances of cheating will be reduced. It will also cut down on the amount of time spent and the need for manual labor. The iEMS can handle various online examination settings and can be used as a complement to existing e-Leaming tools that lack test management features.

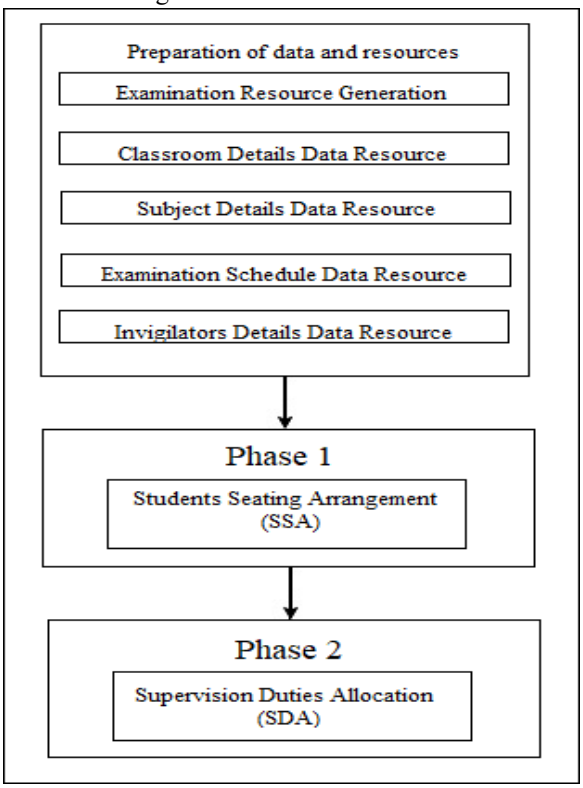

Figure 1 Flowchart for Automatic Exam Seating andteacher Duty Allocation System

LITERATURE SURVEY

A literature review is a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. Literature reviews use secondary sources, and do not report new or original experimental work

1.Paper name: Automatic Exam Seating & Teacher Duty Allocation System
Author Name: Apurva Inamdar, Anand Gangar, Arun Gupta, Varsha Shrivastava
The system inputs four entities: classroom, subjects, teachers, and exam time table. Each entity has unique details, such as room number, year, branch, division, and student number. The first module, SSA, outputs a color-coded seating plan for each classroom and a chart displaying teacher names, exam dates, and duties. Implemented in Java and stored in MySQL, the system is easy to use, reliable, accurate, and efficient, requiring only a few clicks.

2.Paper Name: Interactive Examination Management System
Author Name: Vasupongayya, T. Kamolphiwong, S. Kamolphiwong, S. Sae-Wong
The iEMS architecture, a web-service software, consists of eight components, simplifying tasks like question creation, examination management, search, player, results and analysis, and format file export/import.

3.Paper name: The Research and Design of Online Examination System
Author Name: Zhang Yong-sheng1, 2, Feng Xiu-mei1, 2, Bao Ai-qin3
The system uses Java modeling, IDEA, Tomcat, and JDK technology to support large test data reception, distribution, authentication, and online examination. It uses MySQL for storage and reading, with six stages for requirement analysis, concept structure design, logic structure design, physical structure design, implementation, operation, and maintenance.

4. Paper name: Algorithm For Efficient Seating Plan For Centralized Exam System
Author name: Prosanta Kumar Chaki, Shikha Anirban.
The research proposes an I shape seat allocation system for exam seating, requiring room and exam information. The system calculates the total number of seats and students, and if extra seats exceed capacity, it searches for empty rooms. It distributes columns based on column size and room identity.

5. Paper name: A Hybrid Genetic Algorithm for Make-up Examination Arrangement
Author name: Sun Xuecheng
The hybrid genetic algorithm for makeup examination arrangement minimizes conflict events by using a crossover and local search operator. It calculates the number of classrooms needed and performs a mutation operator to find new solutions. The algorithm uses a string-based encoding method and minimizes f(S) to 0 while decreasing N(S) and M(S) simultaneously.

PROPOSED SYSTEM

The exam schedule, subjects, teachers, and classroom are the four elements that the system receives input for. Exam Time Table elements include date, topic name, start and end times of the exam, semester. There is just one entry required for all the data.
The seating arrangements for each classroom are included in the output of the first module, or SSA, and are color coded according to branch. The output includes a print-ready version that may be sent to students or shown outside of classrooms. This can be edited in case there are any last-minute adjustments. The SDA output is a chart that lists each teacher's name, the date and time of the exam, and the total number of responsibilities. Both displaying and editing the chart are possible for any modifications

METHODOLOGY

The system after careful analysis has been identified to be presented with the following modules

- Exam Hall Details
  - Entry of Exam Hall details
  - Entry of Student details
- View Exam Hall details
- Modules Description:
- Entry of exam hall details

In this module, Admin 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. Admin 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 Details:

In this module, Admin can add the student details to the database. After saving the room details, it switch 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.

CONCLUSION

During an exam, the seating arrangements and tasks are distributed using the SSA and SDA methods that are covered in this project. Exam Coordinators can create a seating arrangement for students during exams and assign tasks to teachers with the use of this program. The project's goal is to assign the tasks considerably more effectively. The software's function is to reduce the amount of time and labor required for manual allocation.

The teacher's responsibilities will be assigned based on their availability, and the best use of the available resources will be made without wasting additional classrooms. The software is developed with many constraints taken into account to maximize its versatility.

FUTURE SCOPE

The Software automates the process of generating exam seating arrangement and teacher duties duty allocation task. Data entered once can be reused as well as it is easy to use. The Scope of the software can be improved by increasing its functionalities, this system can be used to allot seats and duties for national level exams like the JEE, NEET, etc. This can also be used by the various universities to allocate the seats during any exams that they conduct during the course of the semester.

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