

Automated And Fully Flexible Hall Allotment System

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Abstract- : The Evolution of a college test Hall Seating Arrangement System enhanced the efficiency of test hall allocation and student seating arrangements. The System allows easy retrieval of examination information for a student who is in a particular class. These systems are intended to automate the manual procedures in order to make the examination administration processes more efficient. One of the reasons it was developed is that the system is Proficient of creating the report seating arrangement automatically during or after the session and at breaks during the examination. The project's scope is the system on which the program is installed. In other words, the project is intended to be a web application that is accessible to a particular organization. Most students at the college face numerous challenges with finding the examination room and their designated seats within. A new concept that has been implemented allows students to monitor controlled access to their examination sessions. This feature allows them to obtain advanced floor or directional guidance to the designated halls. In the Students' Information, we get records of all the candidates who sit for the examination. It contains the student's name, hall ticket number, branch, and hall number. Hall Details contains each hall name and their corresponding total number of halls available in the institution. The information of the examination schedules includes the total time allocated to the student and the hall among other things. The batch details incorporate department details like computer science, biology, chemistry, mathematics, etc. The project monitors several details in modules such as student information and exam timing information.

Keywords: Exam hall seating arrangement, Login page designing, student's details, and Reporting.

I. INTRODUCTION

Unlike other parts of the education system, exam coordination impacts the rest of the curriculum due to its large scale. The challenge at hand is to devise a management plan for every individual that eliminates cheating by managing student movement in and outside test halls, filling the overhead slots and desks, and performing other administrative tasks all at the same time. This challenge is not easy to Decipher, thus having an automated system could aid greatly. The automation of streaming processes in this system is focused only on the elimination of unnecessary seat allocations, paperwork, and many more. Unlike classroom types, matters that help optimize the area, the submission condition solves the preset spiral heuristics formed out of department, roll number, schedule, course, and even semester. Data of defined access parameters of the

course and semester from the school are provided to the students on a real-time basis, thus promoting fairness by allowing them to see their balances on a terminal prior. This system is aimed towards understanding and analyzing in depth the lack of solutions or algorithms available and how beneficial it could prove alongside the drawbacks of the manual process.

II. LITERATURE REVIEW

Employing appropriate methodologies for managing examinations is a persistent issue for educational institutions, particularly in regard to seating pupils on a large scale. Employing conventional techniques usually entails planning with tables and spreadsheets which is tedious, inaccurate, or difficult to execute within set limits. This has led to a quite a large body of literature and software solutions geared towards enhancing

automated tools and self-calculating grids within educational technology.

2.1 Purpose

The purpose of devising a computerized exam hall seating arrangement system is to automate the traditional exam scheduling process. Another aim of this software is to automatically generate seating arrangement reports during or post examinations.

2.2 Scope

The Exam Hall Seat Allocation System seeks to fully automate and integrate the web-based application for an easier process of arranging seats for learners. This particular project centers around effective hall management, auto seat assignments, and real-time seating for learners.

2.3 System Analysis

2.3.1 Existing System

The evaluated system is exceedingly ineffective and slow. In addition, if the report is created, all operations are done manually, which presents a problem of error occurrence. Due to one error, a page that is produced incorrectly, and a great deal of manual work is required in the current way. There is a critical problem pertaining to this system, when needs are not adequately and properly collected. This method is not only more energy inefficient when it comes to seating which increases physical work.

2.3.2 Issue with The Existing System

Since the system is manual, all records are kept manually. Therefore, if updating is not done, the seating plan of students cannot be established.

- Takes Too Much Time
- Less Effective
- Additional manual effort is needed
- Accuracy is not high
- Not Accessible to Everyone
- Problematic for hall ticket production

III. METHODOLOGY

3.1 HTML

HTML (HyperText Markup Language), a type of standardized markup language, is derived from SGML (Standard Generalized Markup Language) which was approved in the year 1986. SGML sought to define the structured format of documents, but the complexity of SGML architecture and its documentcentric nature made it unfriendly toward web development. The development of hypertext

features enabled the world wide web to flourish due to the simplicity it offered when interlinking pages. Unlike the more document-centric and inflexible SGML, HTML is adaptive, easy to work with, and was created specifically for the internet. Throughout the years, HTML has added new capabilities, adapting to advanced web development standards, proving to be a valuable asset.

3.2 Backend MongoDB

A MongoDB server is an advanced database that only needs a few other programs when functioning as a backend server. It also supports GUI, meaning more programs can be propelled because of it. The database is unified in form of collection of tables which are the holders of data. Even a novice can access their very own database just by clicking the homepage.

3.3 JSON and Excel Format

JSON is a lightweight data storage and interchange format used for communication between a server and a web application. Its design gives JSON the likeness of containing keys and values which makes it easy to be parsed and manipulated programmatically. Because of its flexibility, JSON is frequently employed in APIs, web applications, and even within configuration documents.

3.4 Proposed System

3.4.1 User Friendly

The current system's handling of data retrieval and storage is intuitive. Data can be stored expeditiously. It is sustained systematically. The proposed system takes into consideration the graphical user interface design. Efficiency compared to the existing system is more than satisfactory.

3.4.2 Reports Are Easily Generated

As has been proposed in this system, reports such as seating arrangements can be generated by the user, user can generate the report for the wish and per their requirement for the month or day, but never during mid-session.

3.4.3 Very Less Paperwork

The proposed system will significantly reduce paperwork, as most information can be entered

directly into the computer. It also helps in automatically generating reports, which makes the overall process much simpler and more efficient by minimizing the need for manual data entry.

3.4.4 Computer Operator Control

With the use of a computer operator, the error rate decreases. Information can be stored and retrieved with ease. Tasks can be achieved in a timely manner while demonstrating great speed.

IV. MODULES DESCRIPTION

4.1 Admin Login Form

To gain access, the admin must input their designated username and password. An admin holds exclusive permission to view this module, therefore other users do not have the privileges to see this module.

4.2 View Detail

In this module, a student may access their information by entering the student registration number, department, year, class, section, and semester.

4.3 Seating Arrangements for Students

In this module, the administrator schedules seats per student's department, year, section, semester and class, along with their subjects both with and without arrears. Staff members also confirm that students from the same department do not sit together, and that the class is not arranged in a combined manner.

4.4 Students Registration

The student needs to input their information such as registration number, department, year, class, section, semester, arrears status and username along with password. Such username registration will prevent anonymous users from accessing the system. Once the registration steps have been completed, students will be able to access the login page.

V. DATA FLOW DIAGRAM (DFD)

The very first stage is constructing a Data Flow Diagram (DFD). In simple terms, a DFD is Larry Constantine's invention in which he illustrated system needs in the form of a diagram.

A DFD, also referred to as the 'bubble chart', is used to depict processes, objectives, and all system requirements in detail. This is the initial session of the planning stage, which thoroughly dissects the demands specification into its constituent parts. A DFD includes a number of bubbles that depict functions, all of which are connected together by data flows within the system. The intention of data flow diagrams is to serve as a bridge between system users and developers.

- Graphical; this omits the need for a lot explanation.
- Hierarchical; showing the system features and functionalities at varying levels of detail.
- Jargon less; like simple languages to represent understanding easier on the user.

With the aid of other composed techniques of structured system analysis such as data structure diagrams, procedure representing techniques, data dictionaries, and others, data flow diagrams can

stand out. A comprise and complete data flow diagram will therefore achieve one concern of representing a comprehensively understood system, unlike the literal descriptions explaining it. In other words, the idea and concept of the system are captured with a diagrammatic flow chart representation in a detailed levels.

VI. CONCLUSION

A web-based interface for showing hall names for students is developed, which allows students to see their seats in their respective halls easily. A webbased interface for analyzing the student academic details is developed. A username and password are created for the unique user by registering their details in the register module. And they can change it with the permission of admin only.

VII. FUTURE ENHANCEMENT

The current system is able to be improved by storing the hall ticket in a database rather than in a file so that the statistics regarding the hall ticket obtained can be easily analyzed. Using Python, the timetable can be inserted by inputting the date and time for each individual paper followed by creating the seating plan. Moreover, a database of the exam timetable is also available which can be accessed by students to check their respective halls along with the timings for each exam. The timetable should automatically update through the internet onto the database, and

seating should be arranged according to the specific day and session.

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