INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

ISSN
INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.488

Design of Strategic Resource Allocation System for College Management

Nayana G[1], Dr.Vishal C[2]

Student, Dept. of Master of Computer Applications, RV College of Engineering®, Bangalore, India[1]

Assistant Professor, Dept. of Master of Computer Applications, RV College of Engineering®, Bangalore, India [2]

ABSTRACT: Resource Allocation System is a web based application that works within a centralized network. When there is a limited resource, there will be difficult to alternate or add an extra class. At present managing the resources, allotting the rooms based on the timetable done manually. The allocation process involves coordination with the faculties and management. The procedure followed is lengthy, confusing, requires lot of time and effort. A better approach to schedule rooms using computer-assisted web based application that will manage all classrooms, seminar halls and labs with their details. This project "Resource allocation system" is a web application, which facilitates allotting of classrooms, seminar halls, labs based on timetable and based on faculty request.

KEYWORDS: HTML, CSS, Java Script, NetBeans.

I. INTRODUCTION

Technology has changed the running of institutional management and its approach. Applications covering from online courses, e-classes, and new learning based apps etc. vast development of information technology and internet technology has lot of impact on today's world. Enterprise resource planning (ERP) is integrated process management software that covers applications of all aspects of an organization. The advancement in technology and advent of new computerized revolutions has been a massive change in functioning of several organizations including educational institution.

Web application in our daily life are blooming and there is growing trend in the application of resource allocation and online room booking which help in reducing manual work. Not all teachers can follow a particular schedule each semester, so teachers often require an alternate schedule. If the teacher wants to take a special class. It can lead to a confrontation between teachers due to the use of the classroom by other teachers who do not have the right to change classrooms.

The current system allocates rooms according to the schedule and replacement schedule done through time-consuming paperwork to obtain a replacement schedule, the faculty inquires about the availability of classrooms by the administrator. The administrator will then search for the empty classroom to schedule by collecting the information and registering. The replacement schedule done on paperwork, which is time consuming.

The objective of this study is to facilitate the administration of the information required of a department in the monitoring and management of the classrooms through a resource allocation system. In the department, different faculties in different rooms, laboratories and seminar rooms will deal with different courses. Most departments handle this allocation process through a manual procedure, which includes coordinating with all departmental representatives and staff from the registry. Usually a manual procedure like this leads to various challenges and is prone to mistakes. , a web-based tool created, which provides a better user experience and reduces the time it takes for the manual process, and eliminates the possibility of error.

The outcome of the proposed project will help us reduce manual work. In addition, in this system, the administrator will be able to add a seminar room, view students, view faculty, approve the request, then the faculty can submit the request for a seminar room or a lecture hall and view the previously assigned conference room, the student will be able to view assigned conference rooms.

II. LITERATURE SURVEY

Tanmay Nandanwar et.al, [1] an online interface has planned utilizing HTML and CSS. Understudies made apparent to see the inn room portion dependent on positioning, understudy room inclinations gathered on the web, information isolated dependent on inclinations, and put away in a data set. This resolves the issues looked by understudies in the colleges or universities during the room allocation measure this assignment interaction is for those understudies who will remain in inns.

Gowtham et.al, [2] Online "seminar hall booking system" is an electronic application that works inside a concentrated organization. This venture presents a survey on the product program "Seminar Hall Booking System" has to be utilized in a Hall Booking framework, an office that is utilized to hold Halls. undoing of reservation and various kinds of course enquiries utilized on getting fast reservations.(MYSQL) is worked for overseeing and modernizing the customary data set, Structured Systems Investigation and Design Methodology (SSADM),Data Analytics was received. Furthermore, HTML, CSS, PHP (Hypertext Preprocessor) language was utilized for the front-finish of the product while the back end was planned utilizing MySQL, JavaScript.

Desdemona Isabela et.al, [3] the online framework for booking and buying tickets reacts to the current requirements, the motivation behind this application is to make a web application, which helps whatever number clients as would be prudent. They can along these lines plan their outing, including booking a ticket online by various methods for transport. It is important to show the interaction, utilizing for example the UML language, to make the web application. Yunpeng Li et.al, [4] Room allocation is an as often as possible experienced issue practically speaking, e.g., assigning dormitories among understudies and allotting rooms among occupants. This paper show to find a flat mate stable allotment with a social government assistance ensure, in which no pair of specialists who live in various rooms can increment both their utilities by trading while at the same time guaranteeing that no specialist's utility reductions. Also, this paper explores the computational intricacy of finding a room sans envy distribution with a social government assistance ensure, in which each pair of flat mates might not want to switch rooms with some other pair of flat mates. Wei Wei et.al, [5] The lodging the board framework dependent on Swing is a little data the executives stage with Java Swing +MYSQL + C/S mode. Clients can login the lodging the executive's framework, and afterward work the capacities under their authority. The interface of the framework is straightforward, wonderful and simple to work. The framework embraces measured programming technique, and partitions the administration stage into various modules as indicated by the requirements of clients, which works with the extension and upkeep of the program.

Richard Johnson, [6] it includes the information regarding the structure of java with MYSQL, with the different components included and the information regarding MYSQL and it shows how to use interface of java along with working along with different java components and basic programming using java and MySQL information base. Roseline Ogundokun et.al, [7] the framework will naturally apportion Halls, rooms, and flat mates by thinking about specific standards and furthermore keeps appropriate records of the multitude of empty hotels and its occupants. This programmed allotment strategy was created utilizing instruments like HTML, JScript, CSS, PHP, and MySQL.

Renuka Nagpure, et.al [8] Although the open source worker often allows download and use, open source licenses occasionally shift responsibility for programming to the end customer or designer. Open source is not restricted to workers or programming. Open source ways of thinking can applied to everything on the internet.

Marcel Kleine-Boyman et.al, [9] the issue of enhancing room portion designs or improving plans is a notable issue of the class of NP-complete issues. In this article, we portray the utilization of another transformative calculation to this issue, specifically the Regulatory Algorithm (RGA). Considering from college Duisburg-Essen the total information for one semester, for example number of talks, number of speakers, subjects of the talks, etc, and applied the RGA to build an ideal room distribution plan.

Sandeep Saharan et.al, [10]. In examination planning, while at the same time thinking about No Room Splitting as a hard imperative. room distribution to tests can be treated as N changed subset total issue where N is the quantity of accessible rooms, given set is comprising of all accessible tests for booking and required whole is the seating limit of the space for which booking is being completing in the ebb and flow emphasis. As traditional subset entirety issue, it is a NP-Complete Problem. In the paper the issue addressed by utilizing mUlti-target hereditary calculation with chart shading and henceforth room assignment should be possible in room booking.

III. PROPOSED SYSTEM

The proposed methodology is to develop web application for Resource allocation system. Fig1 shows the architecture diagram of the entire application. The methodology includes three modules
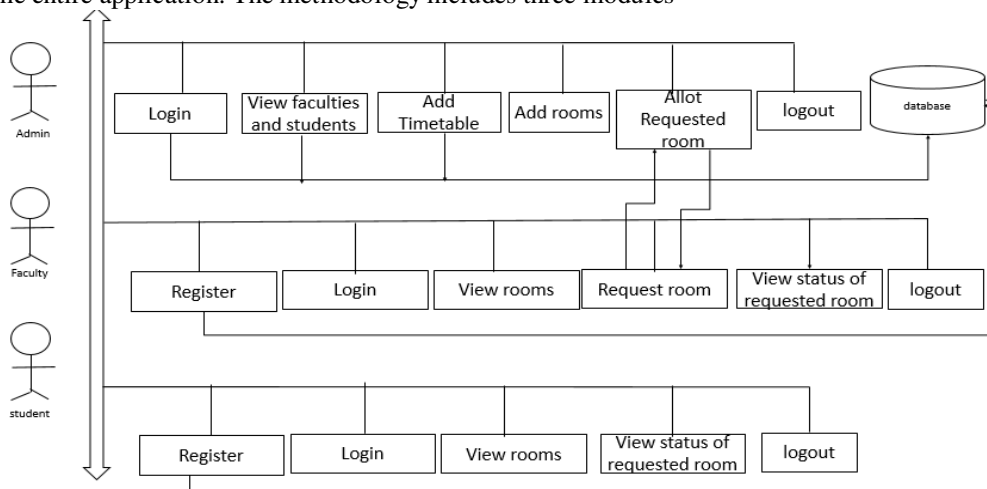

Fig 1: Architecture diagram of the proposed system

Module1: Admin
In this module, the administrator will be able to log into the system using valid credentials, after logging into the system. The administrator can see the faculties and students registered in the system, add the rooms, add the timetable, and assign the room requested by the faculty.

Module2: Faculty
In this module, the faculties should register in the system. After successful registration, they can log into the system by entering their name and password. After logging in, they can see assigned rooms, room status, timetable, and can request a room if they need it.

Module3: Student
In this module, the students should register in the system. After successful registration, they can log into the system by entering their name and password. After logging in, they can see assigned rooms, room status, and timetable.

IV. CONCLUSION

To help the staff of the registration office overcome this problem of manual classroom allocation. A web-based tool created that provides a better user experience and reduces the time it takes for the manual process.This application now allows the admin,to allot classrooms for most of the courses. To change a schedule based on dynamic situations. To view the empty classrooms, to view the faculties registered. To view the students registered. To view the status of the room.

REFERENCES

[1] Tanmay Nandanwar, Priyanka Bahutule, Raviteja Buddala, "A Study on Shift towards Digitization of Hostel Room Allotment for a University", Intenational Conference on Emerging trends in Information Technology and Engineering, Jan 2020.
[2] Gowtham, Ranjith, Mr. Udhaya Moorthi, "Online Seminar Hall Booking System", International Research Journal of Engineering and Technology (IRJET), Volume 07, issue: 03, p-ISSN: 2395-0072, Mar 2020.
[3] Desdemona Isabela 6FăUL.RUHDQX,"Configuring an application which allows online booking and purchase of travel tickets for railway and road transport - Unified Modeling Language", 2020 International Conference on Mathematics and Computers in Science and Engineering (MACISE), 978-1-7281-7177-7/20/$31.00 ©2020 IEEE, Nov 2020.

[4] Yunpeng Li, Yichuan Jiang, Weiwei Wu, Jiuchuan JiangH, ui Fan, "Room Allocation With Capacity Diversity and Budget Constraints", IEEE Access (Volume: 7), Page(s): 42968 – 42986, 27 March 2019.

[5] Wei Wei, Zhengwei Lou, "Design and Implementation of Hotel Room Management System", 2019 IEEE Symposium Series on Computational Intelligence (SSCI), 6-9 Dec. 2019.

[6] Roseline Ogundokun, Adekanmi Adegun, "An Automatic Hostel Space Allocation System In A Private University, North Central Nigeria", Anale. Seria Informatică. Vol. 17, fasc. 2 – 2019.

[6] Richard Johnson, "Java Database Connectivity Using MySQL: A Tutorial", International Journal of Advanced Engineering and Science, Vol. 7, No.1, 2018.

[7] Renuka Nagpure, K Tejaswi, Sumita Chandak,, Reena Mahe,"A Study on Open Source Server Technologies", International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181 Published by, www.ijert.org ICIATE - 2017 Conference Proceedings,2017.

[8] Marcel Kleine-Boyman, Christina Klüver, Jürgen Klüver, "Optimization of room allocation plans at the university Duisburg-Essen with a regulatory algorithm" 2016 IEEE Congress on Evolutionary Computation (CEC), 24-29 July 2016.

[9] Sandeep Saharan, Kamna Kadian, "A Multi-Objective Genetic Room Allocation in Examination Scheduling Using Graph Coloring", International Conference on Signal Propagation and Computer Technology (ICSPCT, 978-1-4799-3140-8/14/$31.00 ©2014 IEEE.

[10] A. Ronzhin, A. Ronzhin, and V. Budkov, "Audiovisual speaker localization in medium smart meeting room," in Information, Communications and Signal Processing (ICICS) 2011 8th International Conference on, pp. 1-5,2011.

INNO SPACE
SJIF Scientific Journal Impact Factor
Impact Factor:
7.488

ISSN
INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

निस्केयर
NISCAIR

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

📱 9940 572 462 🟢 6381 907 438 ✉ ijircce@gmail.com

www.ijircce.com

Scan to save the contact details