



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 6 Issue: V Month of publication: May 2018

DOI: <http://doi.org/10.22214/ijraset.2018.5116>

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Efficient Seat Allocation Process in College Exam System

Muhammad Ramees C. K¹, Sherin Eliyas²

¹MCA, ²Assistant Professor Hindustan Institute of Technology and Science, Chennai

Abstract: *This research is dedicated to simplify the work of manual seating arrangements for the examination hall. The exam seat arrangement is one of the difficult and complex jobs for universities/collages. Due to the large number of students, subjects and rooms, the exam seat management becomes a complex one. This paper offers solution for the exam seating arrangement difficulties. The proposed system provides the seating arrangement for large number of students and helps in preventing exam hall fraudulent activities. It also provides an easy way for the students to find the examination hall through e-mails. This proposed system is developed in Java language. Further it can be extended to seating arrangement in movie theatres, conference hall etc*

Keywords: Exam; seat allocation; examination hall; seating arrangement;

I. INTRODUCTION

This paper work is for developing efficient seat allocation process in university/college examination system. It reduces the work of manual seating arrangements for the examination hall. It also helps the students to easily find the examination hall. This application is overall controlled by exam coordinator/Admin. In every universities/collages, the exam seats are manually distributed based on some basic rules. In most of the cases, it is complex and more time and resources consuming when there are large number of students, subjects and grades. In some cases there are possibilities for the students from same grades\same subjects to get the seating arrangement closer. As a result, it becomes very tough for the invigilators to control the hall and to monitor the students. In the existing system another difficulty is that the students cannot easily find out their examination hall due to the last minute notification and rush in the exam centres. This research is to design an application program for the efficient seat allocation process in universities/colleges. The purposed application would automatically generate the exam seat arrangement for every student in the college and it also helps the students to know about the exam hall, and seating arrangement before the exam through mail. This system works much better and is efficient than the existing system.

II. LITERATURE REVIEW

Many solutions for the exam tasks are in the literature. Prince Capstone Superior, Sonklala University [1] Thailand offers a solution, but this function is inefficient. Mr. NMM Kahar and Mr. Kendall [2] gave the decision to set up the room and believed that the only contest to be held in one room at a time, but could give the opportunity to cheat in the gallery as a duplicate. Ayvob M. and Malik [3] also did the same thing as the duties of the room, but felt some special exams. This type of examination is easy to maintain but does not guarantee the quality of the exam environment. To address this issue, the study provides a system for creating a pilot plan for students from various disciplines. The system mainly focuses on the minimum use of the chair, staying away from students to prevent fraud (copy from others) in the exam by avoiding the overlap of the chair and finally the seat. This is easy for students and experiments. The system aims to help students learn about labs and seating before the exam. Most students face many problems finding their own venues and venues. An innovative idea can help students check their exams. This can help them set up floors or navigate to their meeting rooms without delay. Student profile contains information about all students taking the exam. Student's name, student branch number and number of school. Hall Details The total number of hall rooms available in the institution and hall name. Details include details of each section, such as science, computer, biology, mathematics, mathematics, and mathematics. Etc. And the details of the contest timetable are distributed to the students and the class. Etc. This project follows the details of the module, such as the detailed timetable of inspection details and room details with the correct description. A separate department, PA is sorted alphabetically, which will be provided by the teacher to the ministry. This system also helps to find qualifying criteria for student tests from the department. This research offers to solution of this problem and generate seat allocation for large number of students from different types of subject. It focused on I methodology that means column based seating arrangement; that must keep at least one column distance while seating the students of the same subjects. This system also helps the students to know about the examination hall and seating arrangement before the exam through the email.

III. EXISTING SYSTEM

In existing system, most commonly every universities /collages, the exam seats are manually distributed based on some basic rules. Most of the cases, operational cost and more time needed for optimum solution when there are large numbers of students from different grades. It becomes complex for the exam authority to make the arrangements. Students are also facing problems in finding the exam hall and seats.

A. Disadvantages of Existing System

- 1) Manual system is time consuming
- 2) Need to maintain paper works.
- 3) Difficulties in finding the exam hall for students.
- 4) Possibilities of malpractices in the exam hall.
- 5) In some cases it may causes time delay for the students to find the exam hall, as a result they may loss the exam time.

IV. PROPOSED SYSTEM

The proposed system would automatically generate the exam seat arrangement for the students and also aim to help the students to know about the exam hall and seating arrangement before the exam begins through email. This system works much better and is efficient than the existing system. The system mainly focuses on the minimum use of the chair, staying away from students to prevent fraud (copy from others) in the exam by avoiding the overlap of the chair and finally the seat. This is easy for students and experiments. The system aims to help students learn about labs and seating before the exam. Most students face many problems finding their own venues and venues. An innovative idea can help students check their exams. This can help them set up floors or navigate to their meeting rooms without delay. Student profile contains information about all students taking the exam. Student's name, student branch number and number of school. Hall Details the total number of ballrooms available in the institution and hall name. Details include details of each section, such as science, computer, biology, mathematics, mathematics, and mathematics. Etc. And the details of the contest timetable are distributed to the students and the class. Etc. This project follows the details of the module, such as the detailed timetable of inspection details and room details with the correct description. A separate department, PA is sorted alphabetically, which will be provided by the teacher to the ministry. This system also helps to find qualifying criteria for a student test in the department.

A. Advantages of Proposed System

- 1) Operational cost is very less.
- 2) Allocation process is very fast.
- 3) Systematic record keeping.
- 4) User friendly in entering and updating the data.
- 5) Easy to find examination hall.
- 6) Time saving for the students

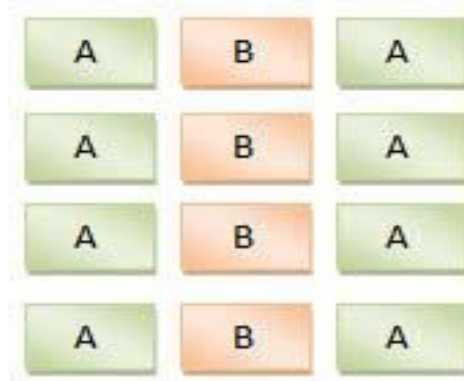
V. PROPOSED METHODOLOGY

Mostly two types of methods are used to seating arrangement process. This methodology looks like as the English letter X and I.

A. Consider A and B Are the two Question sets.



X methodology



I methodology

VI.SYSTEM DESCRIPTION

The efficient seat allocation process in college exam system is developed in Java language. The research is focused on I methodology seat allocation system. I methodology seat allocation process is one where the allocation are made on column basis to prevent cheating (copy from another) that must keep at least one column distance while seating the students of the same subjects. These are the some steps to solve the seating arrangement.

Step 1: Two data sets are required to take the exam. One is the room information with the column and the row size. Check out other information with student identification numbers and numbers. By completing the room and exam information, the total number of places and students will be calculated. In the end you will calculate the number of additional seats after sitting.

Step 2: When the size of the extra seat is larger than the room size, you can have one or more additional rooms. In this step, you will search in those rooms that will remain empty during the exam.

Step 3: Our basic idea is to distribute a column to an object, so first you have to calculate the number of columns and capacity or row number for each row. To prevent duplication from others, it attempts to prevent at least one row from the column among students with the same question. So it calculates the maximum possible column and its capacity for each object.

Step 4: Then it will divide the column of subjects. Using a combination of columns (rows), we can define the set of columns that will be given to the theme. It will then provide a column set for each item. It is best not to have extra space, but in the worst case, it may be necessary to compose additional space to prepare the column set for the exam.

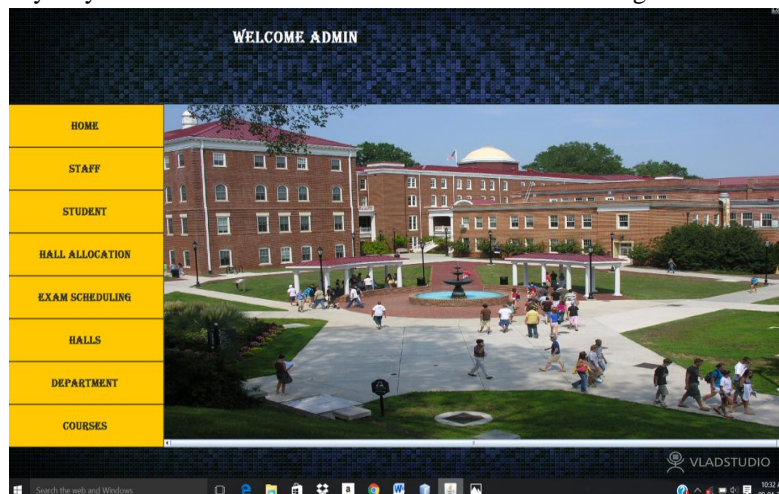
Step 5: We have different objects, sizes and columns. We also have room identifiers that are represented as columns and columns and row numbers. So the total attribute is the size of the column. Using it, it assigns a room and column number to a paragraph keeping object, with a distance between columns of the same shape. At the end of the column and distribution of the perimeter, it will provide a complete seating solution for the exam.

A. Number of modules

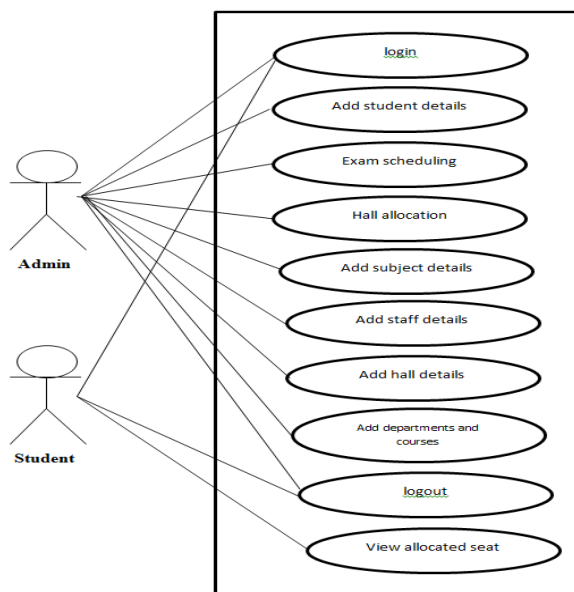
- 1) ADMIN
- 2) STUDENT

B. Admin module has the following details.

- 1) *Add staff details:* Admin can add staff details (invigilator)
- 2) *Add student details :* Student details including register number, email, course, department and semester
- 3) *Hall details:* Including room number and block
- 4) *Add courses:* Adding the type of courses and duration
- 5) *Add department:* Adding department details, subject details and allotted syllabus details
- 6) *Exam scheduling:* Setting the time table for exams
- 7) *Hall allocation:* Selecting scheduled date and time and allocate In Student module the students are able to view allocated seats for exam
- 8) *View :* It also provides an easy way for the students to find the examination hall through e-mails.



C. Use case Diagram



D. Final Report

Exam Date	Session	Block	Room No	Seat No	Register No	Subject	Invigilator
2018-04-30	Morning	A	1	1	t1011	ASE205	AJL
2018-04-30	Morning	A	1	2	u1001	BCA106	AJL
2018-04-30	Morning	A	1	3	t1012	ASE205	AJL
2018-04-30	Morning	A	1	4	u1002	BCA106	AJL
2018-04-30	Morning	A	1	5	t1013	ASE205	AJL
2018-04-30	Morning	A	1	6	u1003	BCA106	AJL
2018-04-30	Morning	A	1	7	t1014	ASE205	AJL
2018-04-30	Morning	A	1	8	t1015	ASE205	AJL
2018-04-30	Morning	A	1	9	u1004	BCA106	AJL
2018-04-30	Morning	A	1	10	t1016	ASE205	AJL
2018-04-30	Morning	A	1	11	u1005	BCA106	AJL
2018-04-30	Morning	A	1	12	w1001	CYB105	AJL
2018-04-30	Morning	A	1	14	w1002	CYB105	AJL
2018-04-30	Morning	A	1	15	w1003	CYB105	AJL
2018-04-30	Morning	A	1	17	w1004	CYB105	AJL

VII. CONCLUSION

This research is dedicated to simplify the work of manual seating arrangement for examination hall. Manual arrangements for the large number of students from different grades makes seating allocation complex. This research addresses one of the major issues of seat arrangement for large numbers of students are from different grades\subjects. This will reduce a huge number of workload than the existing seat arrangement system. This will also reduce the risk of mismanagement during exam like not having proper distance between students with same question sets, overlapping of multiple students in the same seat etc. This research is very effective way of arranging large number of students with different subjects. It will also help the students to know about exam hall, seating arrangement before the exam through email. This purposed system is efficient than the existing system. Further it can be extended to seating arrangement in movie theatres, conference hall, wedding hall etc.



REFERENCES

- [1] M. Ayob and A. Malik, " A new model for an examination room assignment problem" IJCSNS International journal of computer science and network security, VOL,11.NO,10,2011.
- [2] M.N.M Kahar and G Kendall , " The examination timetabling problem at university Malaysia Pahang: Comparison of a constructive heuristic with an existing
- [3] TS.Vaupongaya,TW.NoodamTandTP.Kongyong,T"DevelopingTexaminationTmanagementTsystem:TSeniorTCapstoneTproject,Ta caseTstudy"TWorlTacademyTofTScience,TEngineeringTandTtechnology,vol:7T2013
- [4] TProf.SantaTkumarTchakiTatTellT"AlgorithmTforTEfficientTseatTplanTforTcentralizedTexamTsystemT" TICCTICT-2016
- [5] TT.PrabnarogTandTS.Vasupongaya,T"TExaminationTmanagementTsystem:TroomTassignmentTandTseatingTlayout",TproceedingTofTtheTofficeTofTacademicTresourcesTInternationalTConferenceT,Phuket,TThailandT,pp.T25-27,2011.
- [6] TE.KTBurke,B.McCollum,TandTP.McTMullan,T"ExaminationTtimetabling:TATnewTformulation,"TInternationalTconferenceTontheTPracticeTandTtheory TofTAutomatedTtimetablingT(PATATT2006)TBrno,CzechTRepublic,ISBNNT80-210-376-1,2007.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)