

# Automatic Seating Arrangement of University Exam

**Dinesh Chandewar**

*Department of Computer Science & Engineering  
Jhulelal Institute of Technology, Nagpur, India*

**Mainak Saha**

*Department of Computer Science & Engineering  
Jhulelal Institute of Technology, Nagpur, India*

**Pushpraj Deshkar**

*Department of Computer Science & Engineering  
Jhulelal Institute of Technology, Nagpur, India*

**Pankaj Wankhede**

*Department of Computer Science & Engineering  
Jhulelal Institute of Technology, Nagpur, India*

**Prof. Suwarna Hajare**

*Department of Computer Science & Engineering  
Jhulelal Institute of Technology, Nagpur, India*

## Abstract

The main agenda of the paper is to lessen the mammoth task of manually allocating seats during an examination. The tool provides an effective measure to dynamically allocate students in a classroom. This research can be further extended to seating planning in conferences, weddings, movie theaters etc. It is an organized system which enables us to automatically allocate students to their desired location. For people handling institutions, the work load is very high and the need for faster work is a need of an hour. There is a general complaint that government offices have surplus work load but the speed of efficiency is very low. It is a type of software which can decrease our work time. Those Institutions which uses this software can save an ample amount of time during the examination time. Some of the few benefits of this model are that it is very fast, reliable and robust. In today's world, it is the tool for event management which is extremely useful of various occasions. This much needed feature of user friendliness is present in this model and can be used for all types of user whether Agile, Naïve or expert.

**Keywords: Seating, Tool, arrangement, automatic**

## I. INTRODUCTION

Every institution has examinations held at particular intervals. Presently, the seating arrangement for the examinations is done manually. Initially the examination section has to collect all student details branch wise and year wise given by university. These details include name, roll no. , branch, year, list of subjects registered for exam. The administrator need to count the total number students registered. Then he needs to select the rooms and divide the students among those rooms. After dividing the rooms, he need to prepare students list for each based on the exam. He also needs to prepare the seating arrangement list for each room based upon the count. This is very tedious work and there are many chances for mistakes to occur due to manual work.

The Automatic seating arrangement system atomizes the existing system of assigning seating arrangement. When the data about student (name, roll no. , branch, year & semester, subjects) given by the university these data is directly imported in our seating arrangement Database. Using these data, system will asked the room no, limit of room, branch and no of rows, as an input. According to that information, systems wills allocates the room and generate seating arrangement .It also generate report of students list for each room and master report. It also generates invigilator shift-wise duty chart report.

## II. LITERATURE SURVEY

### A. Topic

Seating arrangement Tools for examinations, Author-Ashti Fatima Alam, link - <http://www.ijeast.com/papers/8-10,Tesma> [1]

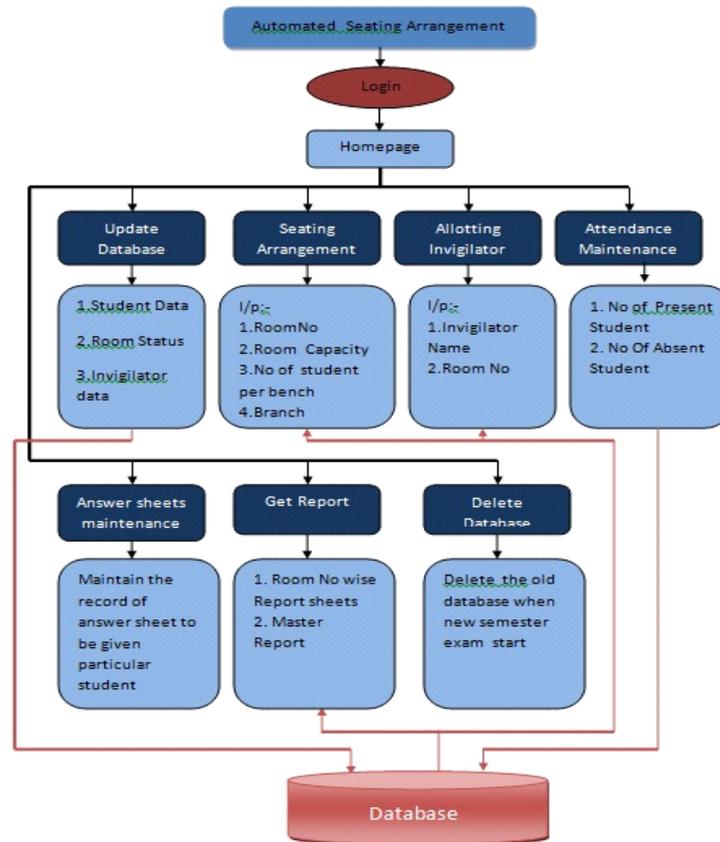
This project also provides the seating arrangement of student but this project developed in c/c++ so it does not provide user friendly interface and now a days it's not work efficiently.

### B. Topic

Exam hall seating arrangement System using PHP, Author- Prof S.S.Aravinth, G.Pavithra,  
Link- [http://www.ijirt.org/vol1/paperpublished/IJIRT101629\\_Paper.pdf](http://www.ijirt.org/vol1/paperpublished/IJIRT101629_Paper.pdf) [2]

This is the online system to provide seating arrangement in which student need to online registration first .It means each student having a registration first individually.

### III. PROPOSED WORK



### IV. METHODOLOGY

The paper is focused on the following parts. Based on these features we are able to design a model for a seating-wise plan.

#### A. Availability of Vacant Rooms:

The room is considered as a multi-dimensional array or matrix with rows and columns. When the user is asked to enter the number of vacant rooms available for seating, it also takes into account the seating capacity of the room which is calculated by the number of rows and columns.

#### B. Number of students appearing:

The total number of students appearing for the examination must be stated by the user. Each student has an allotted enrollment number through which it can be placed serially one after the other. The students who are debarred or absent are skipped in the number of appearing students. The enrollment need not necessary be one after the other due to withdrawal of admissions or any other case.

#### C. Allocating students in seats:

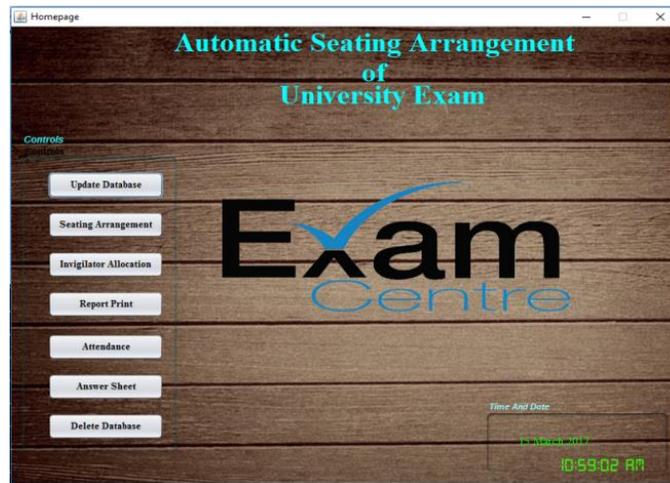
The students are seated one behind the other by dynamic allocation in an array. It has to be placed in such a way that no two adjacent columns have the same course students seated next to each other. The students are placed serially according to their enrollment numbers. Once the room is completely occupied, the students start filling up the next room. The voids between two columns are filled by students from another course in similar fashion.

#### D. The Main function:

The main function is the crux of the program where all the other features are called and combined with each other. It takes user input for number of vacant rooms and number of appearing students. The third function is then declared and the main returns a value. Once debugged, the program performs its functions.

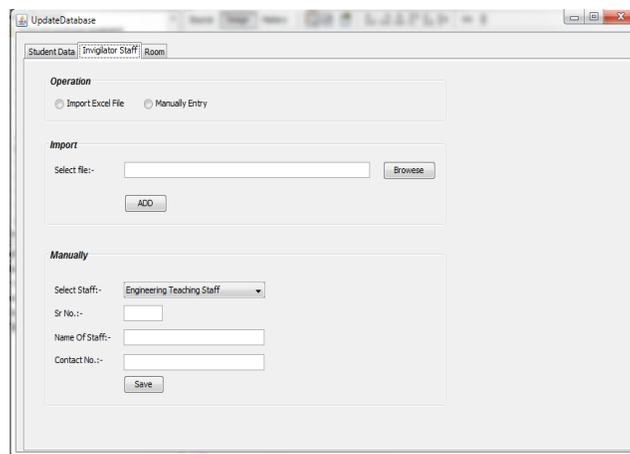
## V. IMPLEMENTATION DETAILS

### A. Screenshot of Homepage:



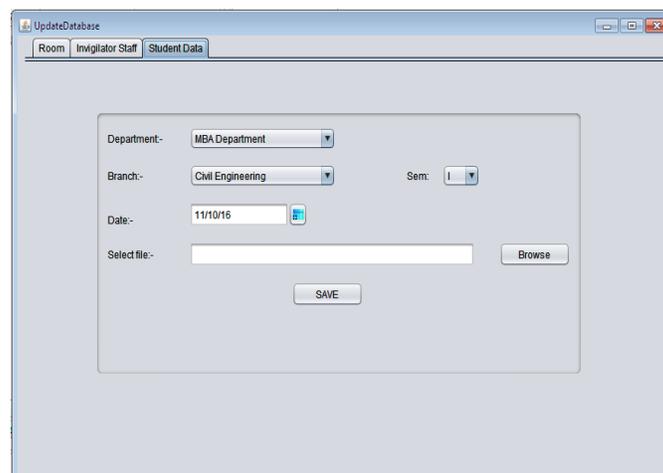
This is a home Page in which there are seven buttons. In that, Update database, Seating Arrangement, Invigilator Allocation, Report Print, Attendance, Answer Sheet, Delete Database are there.

### B. Invigilator Staff:



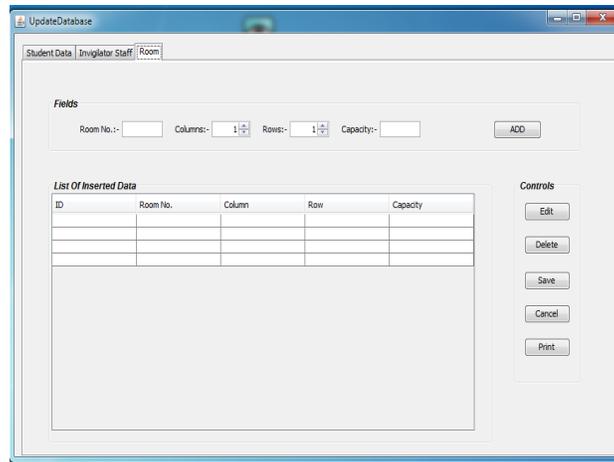
This is an Invigilator Staff module in which we can import the data of Invigilator into our database. There are two options given, it can be done either by manually or automatically by browsing the desired file.

### C. Student Module:



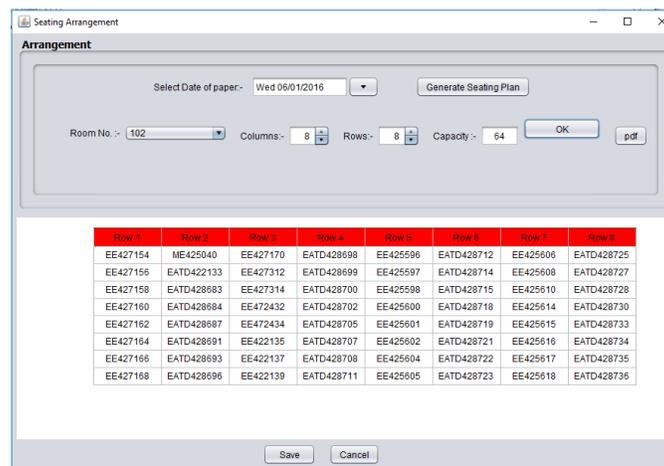
In this module, we are directly importing the students data which are given by university in excel sheet format into our database.

#### D. Allotment of Room:



In this module, we are storing the information about the rooms with their respected number of rows and number of columns by calculating the room capacity.

#### E. Final Output:



In this Seating arrangement module, it generate the arrangement report by retrieving the student data from the database as per the room capacity.

### VI. BENEFITS

This software is particularly useful in today's time with the increasing number of people appearing for various examinations. Manually handling data is not only tedious and time consuming but prone to errors as well. This software enables the user to be accurate, fast and produce reliable results. It manages the system very efficiently and secures our work. Once the work has been executed, we can make changes manually as well. It is a multi-user environment and can be easily shifted from one OS terminal to another.

The importance of this software is to make our tasks faster and more reliable. In today's day and age work-reducing applications are much required because of the increasing demands of new trends.

It is an organized system which enables us to automatically allocate students to their desired location. For people handling institutions, the work load is very high and the need for faster work is a need of the hour. There is a general complaint that government offices have surplus work load but the speed of efficiency is very low. It is software such as these which can decrease our work time.

Institutions who use the software can save an ample amount of time during the examination time. Some of the few benefits of this model is that it is very fast, reliable and robust. In today's world, it is the tool for event management which is extremely useful of various occasions. This much needed feature of user friendliness is present in this model and can be used for all types of user whether Agile, Nave or expert.

## VII. FUTURE WORK

We can further extend our project for creating android application for filling data of absent and present student by invigilator from their room.

As now, our software can be used in colleges. But, in future it can be used as a centralized medium in universities so that it can map all the colleges affiliated to it.

Our software can be further extended to Web Based Application.

## VIII. CONCLUSION

This Software will be very useful because not only is it efficient but a great method to reduce work. It eases our work load and gives us an accurate measure to resolve seating arrangements. Most institutes should install this software and it can be a great help to them. Apart from that, it can be extended to creating android application for filling data of absent and present student by invigilator from their room. It gives us an organized graphical structure of our work. Some of the few benefits of this model is that it is very fast, reliable and robust. The importance of this software is to make our tasks faster and more reliable. In today's day and age work-reducing applications are much required because of the increasing demands of new trends.

## REFERENCES

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