

Automatic Timetable Generator

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Abstract— Nowadays Educational institutions are concerned about regularity of student attendance. Hence, there is a requirement of computer-based automatic time table generator system which will assist the faculty for making timetable automatically. We have projected our ideas to implement “Automatic time table System”, in which it imbibes large applications. The application includes generation of time table, which saves time. The teachers record and class room availability is maintained in an excel sheet which is updated automatically in the system This is going to be a welcome system for our 21st century students.

Index Terms—Automatic Generation of Timetable, Android.

I. INTRODUCTION

Presently, there is a lot of issue about the timetable management as it is done on paper and excel sheets. There are many disadvantages to this approach such as it is a very old way of maintaining timetable which reduces the life of the data. Also data is available for management of timetable because paper based work is not uploaded to a centralized system. Time taken for data collection reduces the effective time.

Most of the college work is computer based. Everything is done manually. This system imbibes the quality of time required for making the time table. This system finds the solution for every problem as it is user-friendly. Notification is given whenever an update is needed.

1.1 Motivation

Educational institutions still use traditional way i.e. timetable registers for managing timetable record and classrooms. The teacher has to make timetable for increased number of staff causes wastage of important time from the valuable lecture time.

This system provides a systematic and effective solution for lecturer to manage the record. Eliminates the time consuming by generating timetable automatically.

1.2 Need of the project

- Timetable generating system can be used in colleges and universities for generating timetable.
- It can also be used for managing time.

- No time clashes for the faculty.
- Faculty does not need to make time table on excel sheets
- Faculty can concentrate on other things rather than wasting their time on preparing Time-Table.
- It becomes easy for the teachers to keep and update about the timings and to see if the classrooms are available or not.

1.3 Outcomes

- Faculty details in department tells the details of the respective faculty.
- Subject details and classroom details are stored
- It will also manage the time when the faculty is

absent.

- It saves the effort.
- There is no need for teachers to worry about Timings.
- It is a user-friendly Timetable Management System solution for teachers which helps in institutions.

1.4 Future Scope

We can propose this project to election commission if found that it is working perfectly without any problem and institute is benefiting from it.

II. PREVIOUS TECHNOLOGIES FOR AUTOMATIC TIME TABLE GENERATOR

[1] Li-Fi Module

Li-Fi module stands for light fidelity. It provides transmission of data through LED lights. This transmission is fast than a human eye can see or follow. Data is transmitted through illumination. This system is used to develop a Li-Fi based product. It focuses on that product. LEDs is the heart of this technology. The product includes a transmitter and a receiver. The transmitter sends the message and the receiver receives the message. This system can be used in industries. A biomedical sensor is also attached with this system.

Advantages

- We can find it anywhere easily.
- It is used in offices and vehicles.
- The speed of it is 100 times faster.
- It is efficient in terms of cost and energy.

Disadvantages

- Net cannot be used without light source.
- In case of system failure, a whole new infrastructure is constructed.

[2] MATLAB

This is a language which is developed by Math Works. This language provides various functions such as matrix manipulations, plotting of functions and data written in different languages.

Advantages

- Implement and test your algorithms.
- Develops code easily.
- Debug easily.
- Use a large database.

Disadvantages

- Its cost of License.
- User has to buy each and every module.
- Mat lab knowledge to deal with all errors.

[3] Genetic Algorithm

It is an search that is propelled by Charles Darwin hypothesis of natural development. The calculation shows the procedure of natural selection. The procedure begins with choosing

individuals. It relies upon guardians. Procedure continues going. Toward the end the fittest individual will be found.

Advantages

- Multiple local optima.
- Works properly in noisy environment.
- Always an answer, answer gets better with time.

Disadvantages

- Large number of parameters.
- Not smooth.
- Function is stochastic.

III. PROPOSED WORK

A)- First Page is comprised of login and sign up Page, where the teacher is going to fill some basic information about themselves, designation, and department to create an account for teacher on the application.

- After login is completed, username and password of that teacher is allocated. Here teacher is asked to choose among

1. The course, teacher and classroom
2. Semester and the subject Selection

-In the login Page the teacher fill the login details like username and password are compared to the registration details and if the username and password match from the database authentication is granted to the teacher.

-Then after logging in you will be sent to the home page where it would consist of different Departments and it would consist of a menu bar in which there would be different options from which you will be delivered to the selected page like Home, Record of Students Then Login Details, Settings and finally the Log out page.

-When you click on the department you want it will redirect you to the page where there will. It will redirect you to the Page where there will be rows for First year, second year, third year then you can select the particular from which you will be redirected to the page which would have a column which would have names of the Faculty and a button which will display the time table on one click

-When you will click on ‘Add Faculty, Class Room and Timings’ there will be various information of the teachers to be inserted like Teacher’s Name, Phone No., and button to display the time table. After your work is done you can log out from the application.

B) App to database connectivity

In this application we are going to use the SQL lite database which is only used in android applications. With this we can store all the fields which will be useful to store all the details of the time table or can store teacher names of the different classes or branches. With this database we can create, insert, update or also can delete the teacher details as per your concern.

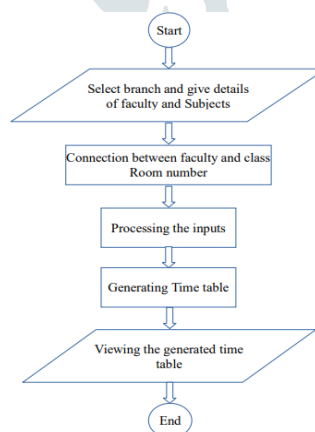
We can use the database to store the information of the teacher and by that we will be able to generate the time table automatically. Hence SQLite is very useful in our project.

IV. SYSTEM ARCHITECTURE



For studying the working in timetable production, we are able to show the data flow diagram which shows how the system works and what is implemented in the system. It shows the elements of the system. It also shows the interactions between these elements. The models govern the composition and the constraint of these models. When the system faces a complex problem, the system breaks it down into parts that become easier to solve with simple solutions. Then, by combining all these small solutions, we can find the solution to our complex problem.

A flowchart is a type of diagram that represents an algorithm, workflow or process, showing the steps as boxes of various kinds, and their order by connecting them with arrows. This diagrammatic representation illustrates a solution model to the problem of the system.



V. ADVANTAGES

- It saves Time and Effort.
- It reduces errors and paper work.
- This system is User-Friendly.

VI. DISADVANTAGES

- It requires large amount of memory.
- We can only use on mobile
- It requires internet.

VII. CONCLUSION

It is complicated task to handle many Faculty's at the same time. Allocating subjects, classroom and teachers also becomes difficult. Our proposed system will help to overcome problems and difficulties. Hence, we can make timetable for institutions without any hesitations. This system

can be used by multiple departments. In this system we can create dynamic pages by using different tools which are widely available for free.

VIII. REFERENCES

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