AUTOMATED TIMETABLE GENERATOR SYSTEM

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ABSTRACT

Professional colleges have different courses of courses, and each has its structure of syllabus that contains diverse subjects. In these colleges, faculty are teaching different subjects in different semesters, and also within the same semester, faculty are handling two different subjects. The major challenge is that the Timetable is required to schedule according to the faculty provided time slots where timetables are prepared, so that faculty timings do not overlap. The Timetable does not overlap with their other Report: IRJMETST Farzana Report was generated on Saturday, May 29, 2021, 07:52 PM Page 4 of 11 schedules and these timetables are efficiently utilized by faculty. In this work, we develop the timetable application, which can automatically generate timetables according to faculty available time slots. This system benefits the faculty need not worry about time clashes; a human does not need to perform permutation and combination. They can concentrate on other activities rather than wasting time by generating Time-Table. This system gives an efficient timetable generated according to professional college requirements.

Keywords: subject, Timetable, faculty, schedule, time.

I. INTRODUCTION

The schedule allows all appropriate people to be in the right location, at the right time and doing their jobs. The schedule shows precisely what is to be done at a specific moment. It, thus, directs the attention of both the pupil and the teacher to one thing at a time. Existing system: Each task is carried out manually in the existing system, and processing is a tedious job. The organization cannot achieve its need in time, and the results too may not be accurate. Due to all the manual maintenance, many difficulties and drawbacks exist in this system. Drawbacks of the Existing System: Increased transaction leads to the increased source document, and hence maintenance becomes difficult.

II. METHODOLOGY

To develop software that helps to generate Timetable for an Institution automatically. By looking at the existing system · If any student or staff entry is wrongly made, maintenance becomes very difficult. During analysis of this problem, we can remark that an automatic creation of timetables has two aspects. The rest problem is in the complexity of the solution and searching algorithm for the solution. This is a combinatorial problem with a large number of variables. An only a small per cent of them are feasible timetables, and some of them can be considered as good ones. The problem is partially solvable using various heuristic and optimization methods, integer linear programming, taboo search, genetic algorithms, etc. A much less explored problem is in dining the requirements of the Timetable. This question is connected to the automatic timetabling problem. However, it is also relevant to the employment of software that verifies constraints or Changed Words Structural Changes Longest Unchanged Words Sometimes it is enough to enter a matrix with the names of teachers and classes in the matrix header, led with the weekly number of hours that the teacher teaches in the particular class.

2.1 PROJECT STATEMENT

Normally timetable generation is done manually. As we know, all institutions\organizations have their Timetable, managing and maintaining these will not be difficult. Considering workload with this scheduling will make it more complex. Generally, while generating a timetable, consideration should be given to the maximum and least workload that a college is exposed to. Timetable generation gets more complicated in certain instances. Also, it is a time-consuming process.

2.3 WHAT IS TO BE DEVELOPED?

Automatic Timetable is a Java-based application used to produce schedules automatically. It would allow you to track all of your periods while also being advantageous for professors, who will receive their schedule as a notification on their phone. In addition, it'll track the instructor's arrival and departure times to make sure that the teacher doesn't arrive or leave late. That new system will be capable of generating it as well as saving time. Faculty need not concern themselves with menstruation issues and maximum workload.4By using this software, user can apply for leave required time, reason, and substitute faculty. When selecting a faculty as a

substitute allows viewing the Timetable of that faculty to ensure that the faculty is free at that particular period. Substitutes can be approved or reject the request. The principal is also capable of looking at the request that professors submitted and the replacement response. In the creative process, the principal can approved\reject the request. It is comprehensive Manual timetable creation makes sense since we can comprehend how it is done. Adjusting the Timetable manually when any of the faculty is missing is the biggest issue of the Automatic Timetable Generator. Institutions and organizations all have their schedules, so it will not be difficult to manage and keep. Because of the increased workload, using these scheduling methods will make it more difficult. Because Timetable Generation considers the maximum and lowest workload in colleges, timetabling courses should be used. Timetable Generation will get increasingly involved in certain situations. Also, it takes a lot of time...

2.4Existing and Proposed System:

Normally timetable generation is done manually. As we know, all Institutions or organizations have their Timetable, managing and maintaining these will not be difficult when dealing with the additional workload. This scheduling strategy will be more difficult. When the amount of work is considered, Timetable creation should accommodate both the maximum and minimal workload. Those cases, timetable generation, will become more complex. Also, it is a time-consuming process. Automatic Timetable manager is a Java-based software used to generate timetables automatically. It will help you to manage all the periods automatically. That new system will be capable of generating it as well as saving time. Faculty need not concern themselves with the finer points of their menstrual cycle and maximal workload. Stumbling blocks of higher education institutions

Current System.

III. MODELING AND ANALYSIS

3.1 Hardware/Software Requirements
Hardware:-
 Computer System
 8 GB RAM
32-bit Operating System
I7 processor
 Software:-
1) Java

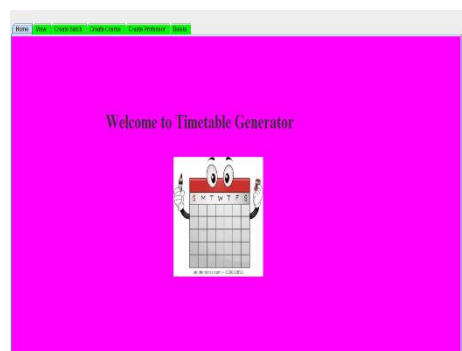**3.2Module**

3.2.1   Opening Module Page

Fig 1.1

After opening the system, it welcomes the user with a timetable symbol, and the contents are Welcome to Timetable Generator.

3.2.2 User Module for Putting the Data of Batches

Fig 1.2

In this module, we can create several batches as per our university require

3.2.3 User Module For Create Course

Fig 1.3

In this module, we can put the data regarding courses, rest put the name of the course the select credits and then submit.

3.2.4 User module to create professor names

Fig 1.4

3.2.5 User module to delete data

Fig 1.5

In this module, the user can delete data of course details, professor details, batch details.

IV.   RESULTS AND DISCUSSION
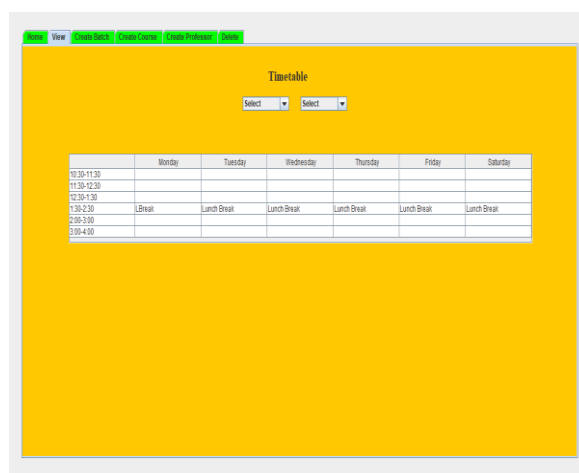
4.1 User module to view Timetable

Fig 1.6

This module represents that we will view our Timetable through this module after ling all required data in the system.

V.   CONCLUSION

Our approach of developing an a successful 9automated schedule system is in place. Solving colleges "lecture-course timetabling problem. This system is provided with necessary details of faculty and subjects by making use of the available data. It generates the lecture-course Timetable with minimum time when compared to the manual generation of Timetable and involves in satisfying all the constraints –

• No overlapping of time slots for any subject.
• No repetition of time slots per faculty.

VI.   REFERENCES

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