DESIGN AND IMPLEMENTATION OF TIME TABLE GENERATOR

[1]Varsha S, [2]Deekshitha S, [3]Bhargav Gupta L S, [4]Samith V, [5]Vignesh S,[6]Bhavana Gowda

[1,2,3,4,5]UG Student,[6] Assistant Professor
[1,2,3,4,5,6]School of CS and IT,,
[1,2,3,4,5,6]Jain (Deemed-to-be University), Bengaluru, India

Abstract: This research paper is focused on the development of a Time Table Generator for Colleges. Timetable technology is a well-known issue that affects every academic institution. The problem arises as a result of disagreements, with some of the options provided by the staff. Colleges are expected to create timetables for each semester that change as quickly as a fully new semester. A time-consuming and painful staking job, the student will be able to see his schedule as soon as it is confirmed. For a specific semester Staff can also examine their schedules as soon as they are finalized for the day ,given semester and allotment of classes The reason for any branch venture's Time Table Allotment being changed as fast as possible to beautify a software program application that permits allotment troubles to border of personnel similarly to commands for students. Administrators added the important factors for adding the Student, add Staff, add Subject, Time Table Entry, Time Table Update.

Keywords: **Colleges, HOD, Students, Staff, Time Table, Department**

I. INTRODUCTION

Automatic Timetable Generator is a Java based completely without a doubt software program application utility software program application used to generate timetable mechanically [1]. Currently the timetable is managed manually. It will help to govern all the periods mechanically and also will be useful for colleges to get timetables in their tele cell smartphone with the beneficial aid of the usage of using utility [2]. It also can moreover even manage timetables at the identical time as any instructor is absent, late coming or early going [8]. Maximum and minimum artwork load for a faculty for a day, week and month can be positive for the inexperienced generation of timetable. By using this software program application utility software program application clients can exercise for depart with the beneficial aid of the usage of providing depart required date, cause and moreover with opportunity college. When selecting a college as an opportunity it allows us to view the timetable of that college to make sure that the college is unfastened at that specific period. Substitutes can approve or reject requests. Principal can also view the request delivered with the beneficial aid of the usage of college and can also view the opportunity response. Principal can approve / reject the request. It is a whole timetable to manage solutions for colleges which help to conquer the worrying conditions in manually putting the timetable. By using this software program application utility software program application, it is going to be very smooth for colleges to get timetables on their phones.

II. Literature Survey

The previous technique formulated a class or teacher scheduling problem by assuming that each lecture included one group of students, one teacher, and any number of students [4].A number of times that could be chosen voluntarily Ever since time, the subject is being researched on a regular basis utilizing various methods. Conditions. Initially, it was mostly used in schools. Because of their nature, the problem in schools is quite simple [3].Classic approaches, such as linear or arithmetic, and simple class structures and integer programming techniques could be easily adapted. The incremental consideration of higher-level instances, on either side, secondary schools and universities, which have a variety of students, The number of different sorts of complex class structures is growing the problem's complexity[7].

III. PROPOSED APPROACH IMPLEMENTATION

The code of this is loaded in NetBeans IDE. We used NetBeans for Design and coding of project [9]. Created and maintained all databases into XAMPP (MYSQL), in that we create tables, write questions to save information or file of project [10]. Implementation consists of all the activities that take a region to transform from the accidental gadget to the brand new.

The new gadget may additionally be absolutely new, changing a present guide or it could additionally be a vital alternative to a gift gadget. In both cases, right implementation also can now no longer guarantee development within the business enterprise using the brand-new gadget, but incorrect installation will prevent it[5]. The tool evolved has been examined on the internet web website online of the end-user [6]. The system did now no longer come beneath any errors during its checking out and it gladly met all requirements of the end-user.
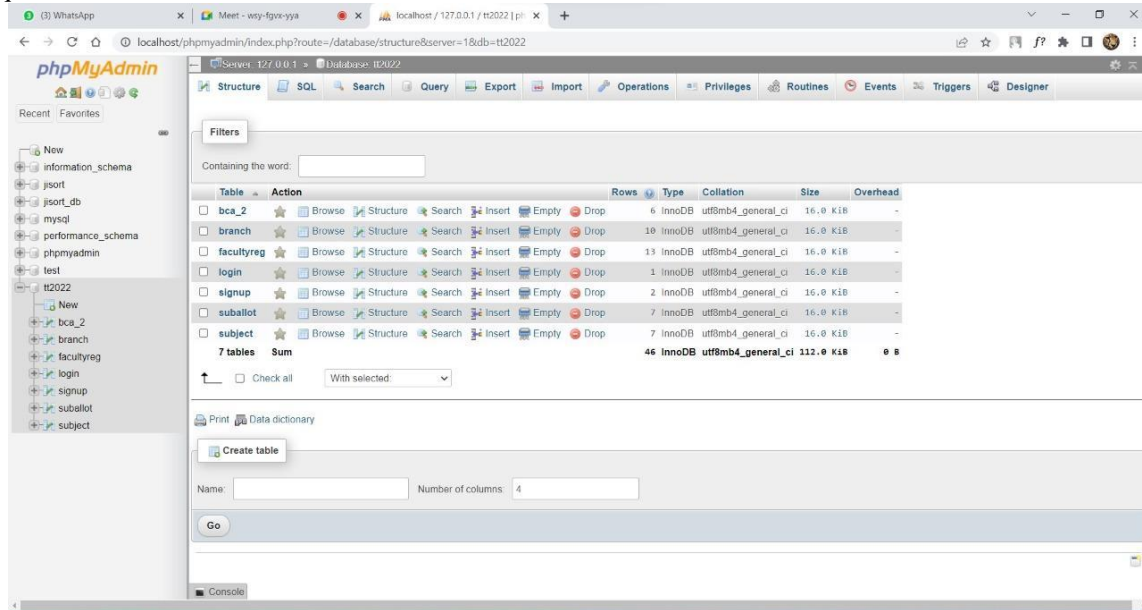

Fig.1: SQL table

ER DIAGRAM

Entity Relationship Diagram (ERD) or ER Diagram (ERD) is a diagram that depicts the relationship between entity units in a database. ER diagrams are a resource in their own right. in the description of the logical structure of a database. The three major components are entities, characteristics, and relationships.(Fig 2) notions that ER diagrams are constructed on. The entity framework shape is represented through the ER Diagram. Below (Fig 2) layout suggests the Entity Relationship diagram of our internet application project. We used a lucid chart device to create this Entity Relationship diagram.
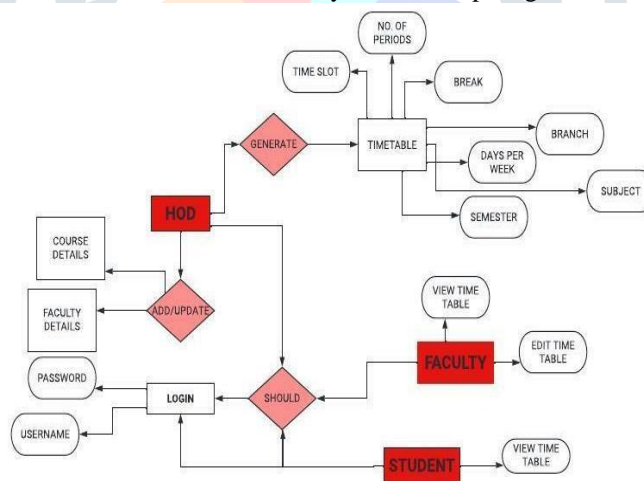

Fig 2: ER Diagram

IV.   Mind Map

Mind mapping is a beneficial and effective approach that allows to visualize minds and communicate them to others and allows learning, improves records recording, suggests how unique records and thoughts are related, and complements revolutionary problem solving. Mind Mapping can also be used to break down complex obligations or topics into digestible parts, permitting you to plot effectively barring being crushed or forgetting crucial details. We used mindmeister for our task to create concept map to set up the product list.

Fig.3: Student Registration

Fig.4: Time Table Generation

The outcomes of Time Table Generator are depicted in the two figures above. Fig.3 shows the Student Registration Form, whereas Fig.4 shows the student's timetable.

V. Conclusion

Our approach of developing automated timetable generators is worthwhile in solving college's "lecture-direction timetabling problem. We have moreover proven how we will suit our timetabling device as a Rich Desktop Application. The graphical consumer interface (Windows Form Application) used on this software gives a clean manner in know-how how software works and additionally makes it easy to present the input. This software is supplied with critical info of university and subjects which can be stored in database (MY SQL) after which via means of using the to be had facts it generates the lecture direction timetable with minimum time whilst in comparison to guide generation of timetable and includes in desirable all of the constraints. No overlapping of time slots for any subject. There has to be a minimum gap of 1 hour for each college consistent with the subject. No repetition of time slots consistent with college.

VI. Future Enhancements

This application is an answer for the time desk technology hassle manually. Its fundamental scope is to save the time and efforts for the time table generation process. The statistics of the university with inside the facts based can similarly be used to keep a file of faculty's adventure for specific subject attribute correctness of undertaking will deliver a greater corrective method towards technology of this timetable. This assignment will generate maximum corrective output and not using an errors. The destiny enhancement that may be developed from the undertaking is to generate the master timetable for the departments and to the entire university. This enhancement may be carried out by making similar modifications maintaining the method and techniques used on this project.

VII.   **References**

1. Shraddha Shinde, Saraswati Gurav, Sneha karme."Automatic Timetable Generation using Genetic Algorithm" International Journal of Scientific & Engineering Research Volume 9, Issue 4, April-2018 19 ISSN 2229-5518.
2. Ansari Aamir, Ansari Ahmed, Ansari Zaeem, Er. Shabina Sayed" Automated Timetable Generator". (IJIRST/ Volume 1 / Issue 11 / 020).
3. Pallavi Utkarsh Nehete,Saiem Pathan,Kunal Malusare, Sharmad Gondkar, Mayur Bhise". Automatic Time Table Generator". ISSN: 2349-5162 | ESTD Year: 2014 Call for Paper Volume 9 | Issue 4.
4. R. Priyadharshini, R. Aishwarya, M.Nandhini "Automatic timetable generation". Issn No: 0090- 5674 Vol 12 Issue 1 2019.
5. Shweta Gajbhiye, Nisha Shende, Usha Sahu and Yogeshwar Behar "Automated timetable generator for educational institutions using graph colouring technology". ISSN Print: 2394-7500, ISSN Online: 2394-5869.
6. Mrs.G.Maneesha,T.Deepika,S.BhanuSri,N.RaviKumar,P.SivaNagamani.,"AUTOMATICTIMETABLEGENERATION USINGGENETICALGOR ITHM" https://www.jetir.org/papers/JETIR21072 65f.
7. D Dipti Srinivasan Tian Hou Seow Jian Xin Xu, "Automated Time Table Generation Using Multiple Context Reasoning for University Modules" DOI:10.1109/ CEC.2002.1004507.
8. Parkavi A, A STUDY ON AUTOMATIC TIMETABLE GENERATOR, Using Data Mining Techniques for OBE improvement.
9. Swapnil Markal, Surekha Ghorpade, Diksha Chalke "Timetable Generator", IOSR Journal of Computer Engineering (IOSR-JCE).
10. Ms.R.Priyadharshini,Ms.R.AishwaryaandMs.M.Nandhini,"AUTOMATICTIMETABLEGENERATION",https://paideu majournal.com/gallery/3 -2019.