Smart Digital Timetable

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Abstract*: Classroom usually has a timetable plate embedded on the wall near the front door. However, the only purpose for displaying classroom's timetable cannot fulfill the future digital classroom requirement. They need more automatic. integrated, and intelligent functionality in the classroom environment. Besides, the vision of future smart classroom is to select sustainable technology solutions that have the possibilities of dramatically improving the instructional delivery process and to engage the student in their learning experience. Therefore, the aspiration for providing more intelligent capability will go back to the improvement of classroom environment itself. Within the classroom, how to create a smart space is our goal. By means of introducing smart timetable plate, we can create a new use case for the application of smart classroom. The creative model not only bring the new style school living but also encourage the reform of traditional classroom environment. Digital timetable displays are used to communicate timetable information these days, facilitating our need for accurate and on-demand information. Digital displays have become a powerful tool for reaching a moving students.*

Keywords: Arduino application

I. INTRODUCTION

Digital timetable is a large outdoor advertising/displaying structure, typically found in school, high-traffic areas such as alongside busy roads. Digital timetable present large information to passing pedestrians and drivers.

Typically showing large figures and letters, and distinctive visuals, billboards are highly visible in the top designated market areas. Digital timetables are used to deliver advertising and informational messages to students people who are passing by the displays. Unlike LCD monitors used on laptops and smartphones, Digital timetables use clusters of highly efficient, very bright light emitting diodes (LEDs) to display full-color display of information.Depending on regulatory and technical considerations, this content may be a series of static slides, a broadcast-quality video or animation sequence, or a combination of both.

II. LITERATURE SURVEY

A time table is an organized list usually in a tabular form providing information about a series of arranged events in a particular time. The most commonly reported implementation involves the use of hybrid algorithms. It is demonstrated that the literature is currently converging on the use of constraint-based solution algorithms and implementations. faculty. Planning time table is one of the most complex and error-prone applications. There are still serious problems like generation of high cost time table that are occurring while scheduling and these problems are repeating frequently. Therefore, there is great requirement for an application, distributing the course evenly and without collisions. This project is meant for generating time table schedule in an educational institution which could minimize the human work and maximize the efficiency. Even at the optimal stage of manual time table system, there exists a chance of clash and redundancy. So, our software is intended to serve the purpose of minimizing redundancy. The aim here is to develop a simple, easily understandable, efficient and portable application, which could automatically generate good quality time table in less time.

There are certain problems prevailing due to lack of automated time table management system:

- Various classes clashing either at same room or with same faculty having more than one class at a time.
- Redundant information is a major problem.
- Difficult to maintain time table due to vast quantity of records.

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- Time consuming and resource taking process.
- It became very difficult to modify the conventional time table system. The product name is "Automated Time Table Management System", which is a simple graphical user interface that will allow users to easily generate the required time table which is an alternate for manual system

III. PROBLEM DEFINITION

Nowadays there are not proper timetable scheduled there are many problems in this timetables and they can be changed once and if any one mistake occurs in a timetable after printing it we cant change it we have to change the timetable and print it again. And if there is any sudden change in the timetable it cant be displayed or can be told by this time table there are so much disadvantages of the regular timetable so to prevent this we have made this smart timetable which is way more better then the regular timetable it can be changed edited as per user input and requirement we have made it easy to use and it can be operated from anywhere and it will be more accurate and perfect then the other timetables it will announce the lecture display the next timetable and give the anouncment if there is any change in the schedule in day timetable and one can also display a notice or any anouncment using the display.

IV. BLOCK DIAGRAM
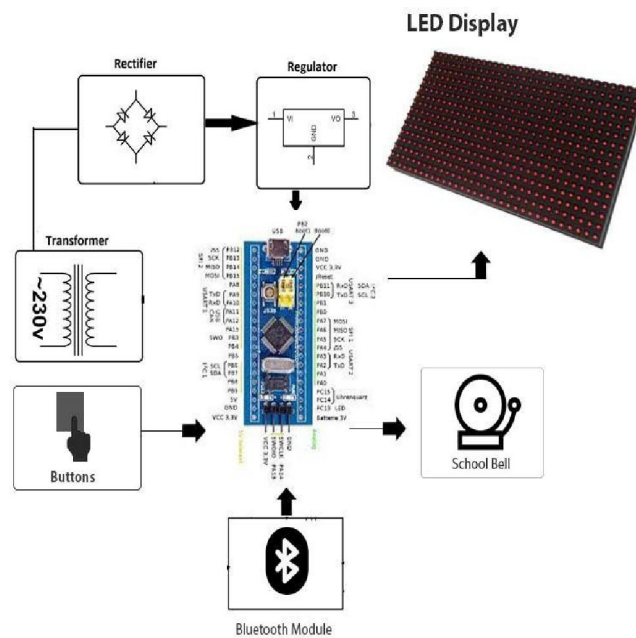
Proposed Methodology of solving Identified Problem

So to prevent this we have made this smart timetable which is way more better then the regular timetable it can be changed edited as per user input and requirement we have made it easy to use and it can be operated from anywhere and it will be more accurate and perfect then the other timetables it will announce the lecture display the next timetable and give the anouncment if there is any change in the schedule in day timetable and one can also display a notice or any anouncment using the display. We will build the timetable in such way that it will easy to install on a wall or in places it is used on a large scale we will give it features which will be helpfull for the teachers and lecturers and it will more helpful then the regular timetables and can be used at hospitals, school, collages and offices and also in industries . it prevents every errors and faults and timedelay we face in the regular timetables. Its also cost friendly and easy to use and control.

STM32 Controller :

From hardware tools and embedded software to training resources and documentation, the STM32 ecosystem offers many tools to ease the development of motor control applications. STM32 MCUs are particularly suitable to develop Permanent Magnet Synchronous Motors (PMSM),

Bluetooth Module :

Bluetooth module can be used in short-distance wireless communication, which can be divided into the Bluetooth module and Bluetooth voice module according to its usage. Bluetooth module is a basic circuit set of chip which integrated Bluetooth functions and which can be used in wireless network transmission.

LED Display :

A LED display is a flat panel display that uses an array of light- emitting diodes as pixels for a video display. Their brightness allows them to be used outdoors where they are visible in the sun for store signs and billboards.

School Bell Buzzer :

The bell system is used throughout the day to signal class changes. Many schools have the bell sound so that the student can switch to a different room to learn and engage in a new subject. They might be in English in the first period and then Math in second period and the Math class is in a ***different.***

Benefits:
- Reduces driver distraction and increases safety
- Automatic wiper operation
- Automatic air conditioning to compensate

Advantages
- Low cost system, providing maximum automation
- Low maintenance and low power consumption
- The system is more compact compared to the existing ones, hence is easily portable.
- Provides a user-friendly interface hence will have a greater acceptance by the technologically unskilled workers.

Disadvantages
- The rain sensor based system functions when water falls on the sensor directly
- The cost of overall system increases as additional components are needed along with rain sensor.
- In order to avoid false detection of rain, it requires rain sensors to take decision after few minutes

V. CONCLUSION

An automatic wiper control system will be the modified version of the intermittent wiper system. This system will improve the driver's level of comfort. Its need is more especially for the drivers who have to work night shifts and drive in the areas prone to traffic where drivers have to give maximum concentration on the brakes and clutches. The wiper controlling task during the rainfall is eliminated with this implementation. This system contains high precision, high accuracy.

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