Revolutionizing Classroom Instruction with Smart Board Technology

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The emerging interest of brains in the world of mobile technology opens the window to the android app. Days are changing and our technologies are improving so it's the time to change from conventional websites and other things to apps, which has become the part of our daily routine.We are introducing "VoiceTotext.apk" the android application software which would convert the voice to text. It works on all android platforms, but also it can work with a working internet. Our multipurpose program is considering the user as an Albertanor non-Albertan, student or parent, faculties or office staffs individually. This paper gives a solution that would provide more comfort and a better user interface. The android app will automatically update the new events and notification on the smart board. The main objective of this paper is to develop an android based voice controlled electronic notice board that will be used by the faculty inorder to display the latest notice and announcements and also this paper could also be a great boon to society. This paper put forwards a smart board developed as user-friendly notice board with wireless concept that offers the flexibility to control the notice board. The notice are displayed with help of android application and a webpage. This smart notice board is made to overcome the messy wiring of earlier electronic wired mode and for time management .Its one objective is to increase the speed of communication and saving time and resources.

KEYWORDS: Notice board, android-application information, messages, smart -phones, Arduino

1. INTRODUCTION

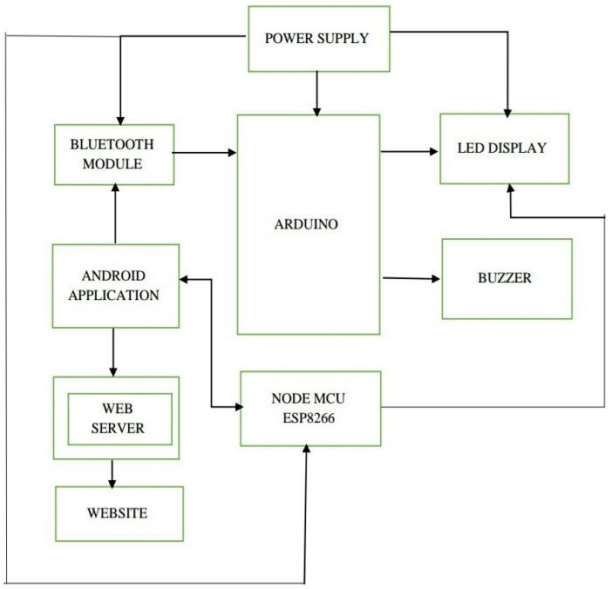
The need of notice board in public places are of realm importance. But changing notices day-to-day or stick it daily is a difficult task. This becomes tedious and requires daily maintenance. This paper has a very wide scope rather than just a simple notice board. The message can be displayed from anywhere by using the features of mobile handset. The user need not have to type in every announcement message manually on the screen. Also the conventional means of notices have the disadvantage that sometimes people leave it without noticing. But the use of bright LED array catches the attraction of public that helps in the widespread reach of the notices. This paper offer an innovative Android based notice display system which allows the user to display the notice without typing manually .The concept of this paper is to design an Internet driven or bluetooth enabled automatic display board.

In this paper, the development of simple and low cost Smart Board is presented. The proposed system uses WEB either Bluetooth or Wi-Fi based wireless serial data communication module. For this purpose, Android based application programs for Bluetooth and Wi-Fi communication between android based personal digital assistant devices and remote wireless display board are used. At receiver end, a low cost microcontroller board (Arduino Uno) is programmed to receive and display messages in any of the above communication mode. Using the developed system, two different applications for displaying messages on a remote digital notice board and wireless person calling has been implemented. The developed system will therefore aim in wirelessly sharing the information with intended users and also helps in saving the time and the cost for paper and printing hardware.

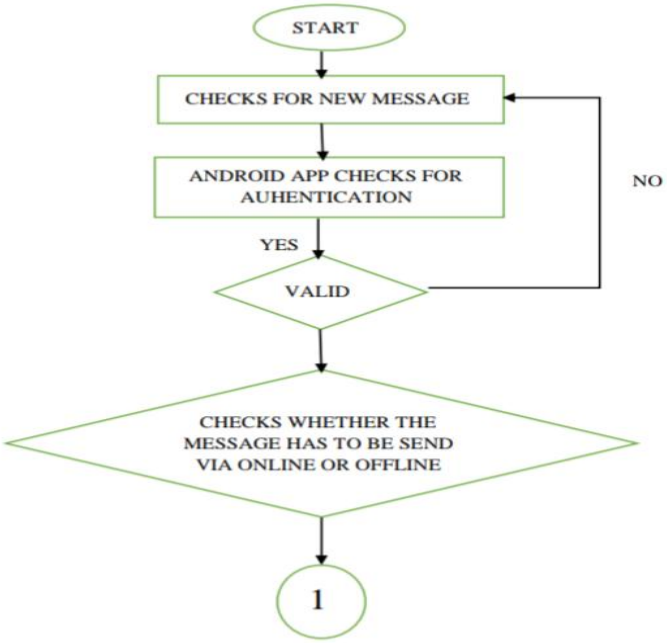
2. SYSTEM DESCRIPTION

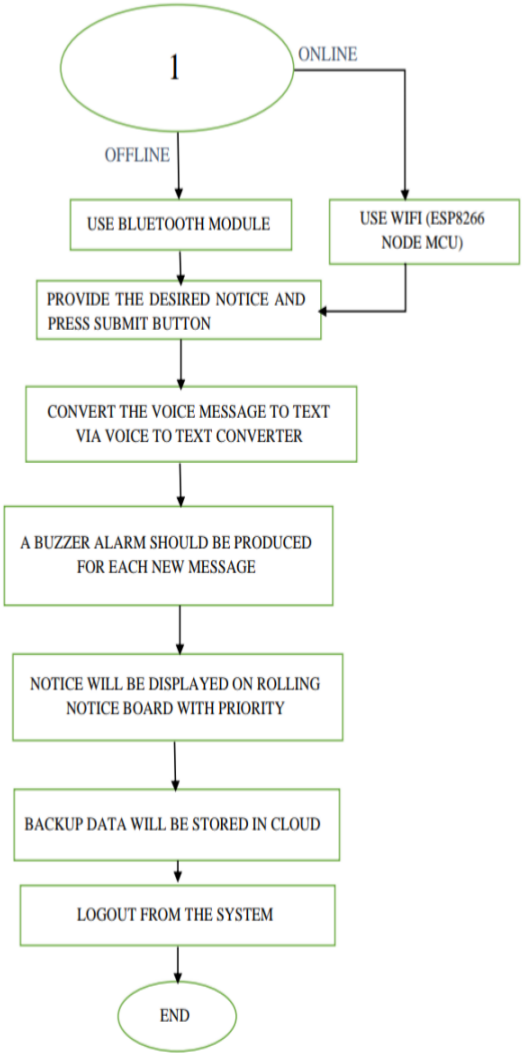
The system is low-cost wireless Android and Website based notice board system which is developed to send the desired information instantly to the intended user by using Wi-Fi transceiver module interfaced with a low cost Arduino UNO microcontroller board. The communication mode i.e.Wi-Fi module is selected for data communication using the corresponding transceiver module with microcontroller a client using Arduino software to receive the message from the remote user in Wi-Fi based wireless communication technology. The Web Application can be accessed remotely by URL and authorised person can log in and check the notices Displayed.The system is powered by Arduino with an AC power supply. Arduino is further connected with the ESP8266 WiFi module which enables the wireless connectivity of the smartboard. The LCD display is connected with the WiFi module which carries out serial communication with mobile devices and transfers the data through over the network. The user needs to go through authentication via the Smartboard android application to get access and then connect to the smartboard using the WiFi. After the connection is established, the authorized user can send a notice in the form of message or through speech to the smartboard which will be displayed on the Smartboard in the display. Once the user sends the notice to the smartboard, the same notice

will be saved on the server side of the website, which can be accessed for checking and maintaining the records of the notices being displayed.



3. FLOW CHART

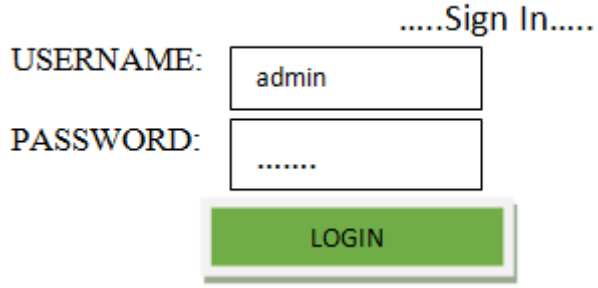




4. PROPOSED THEORETICAL RESULTS:

4.1 User loginmodule

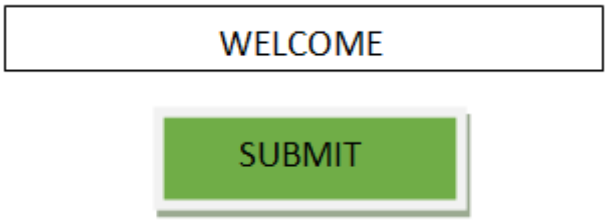
The input screen in which system will ask authenticated user to enter login ID and password. After login the next screen displays the options of connectivity to the smart board like bluetooth or via WiFi. This screen also shows the connectivity status.



4.2 Text screen

The next screen will open for user to enter desired text. After accepting a connectivity the user can either use the typing or speech option available there to input the message. When the input message is given the screen shows the message to be displayed. Click on the send button to transmit the messages to the board.

ENTER THE TEXT TO DISPLAY ON LED MATRIX:



4.3 Rolling display

Now the array of LED matrix display the notices continuously. The messages will be scrolled over a period selected by the user.

5. CONCLUSION

This paper concludes that, by introducing the concept of wireless technology in the field of communication we can make our communication mor efficient and faster, with greater efficiency we can display the messages with less errors and maintenance. The proposed system in this paper accepts the message through the android app, stores it, validates and displays it on the LED board. LED boards are used to display messages in public utility places, Educational institution and organizations, Railway stations, shopping malls for displaying advertisement, managing traffic in smart cities and other. Conventional methods of displaying notices that include the cost of printing and photo copying is also reduced because the paper put forward the utilisation of electronic medium. This system also has the advantage that information can be delivered to a large number of people in a very short time. It provides faster and easy transfer of information and are easy to install and maintain. In all aspects this paper provides an efficient way of displaying messages on Notice Board and also get auto notifications using Wireless Technology. By using the features of wireless technology, it also provides user to easily receive the important information or message.

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