I-O-T FOUNDED ALPHANUMERIC ANNOUNCEMENT PANEL CONSUMING WI-FI

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ABSTRACT: The project consists of a 32-bit ARM based microcontroller LPC2148, WiFi module, an LCD, and an android application for user interface with the hardware.

INTRODUCTION

As technology improves, efficient, financially affordable and highly productive output becomes an absolute necessity, and this leads us to be more inclined towards using automated control systems. Human intervention, although it offers variety, adaptability and interactivity, could lead to errors, as it is a natural and inevitable result of this variability.

Applying this to the situation under scrutiny now, the traditional methods of writing typing the notice on paper, and having a man/woman deliver the notice to the respective groups, or having him her paste the notice on the notice board, is prone to errors. Our project, Multi Electronic Notice Board, aims at eliminating the use of paper in offices, schools & colleges, and other institutions also minimizing the risk of errors, by replacing paper with LCD displays.

In order to display notices, a user can use the android application to type a notice and click on the send button to get it displayed. The hardware consists of an ARM based microcontroller LPC2148 that communicates to the application through a WiFi module to receive messages.

BLOCK DIAGRAM
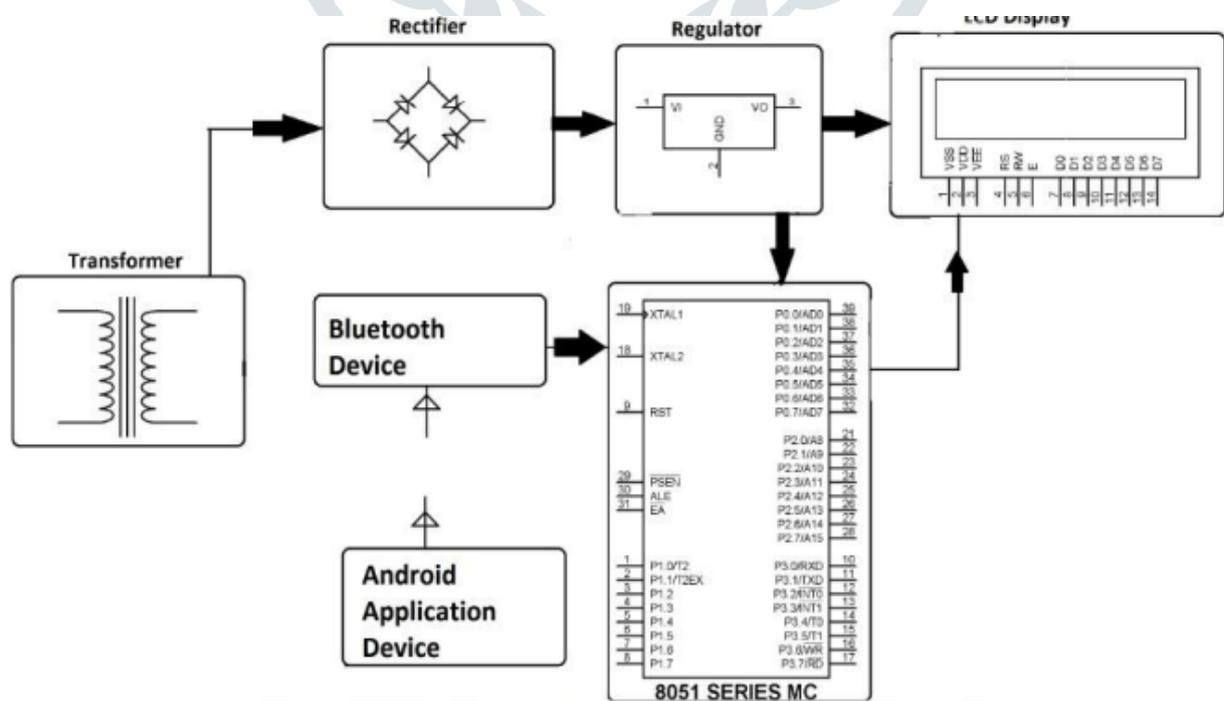
TITLE: IOT BASED DIGITAL NOTICE BOARD USING WI-FI

Literature survey is mainly carried out in order to analyze the background of the current project which helps to find out flaws in the existing system and guides on which unsolved problems.GSM network is widely used today whether it is for calling or SMS. Also some of the places needs urgent notices like in college, railway stations, share markets , and this notice should be in real-time , so we need a real-time notice.

This paper is designed using ARM-LPC2148 interfaced with Graphical Display.

At present, when information has to be updated in a notice board, it has to be done manually. Also in present electronic systems, no matter how many displays are present, only a single notice can be sent to all of the notice boards irrespective of their places. In order to overcome this disadvantage, multiple displays along with a decoder are used to select a particular display and the corresponding information is sent through an ARM controller by using GSM technology.

Summary

which helps to find out flaws in the existing system and guides on which unsolved problems we can work out.

SYSTEM DESIGN

OVERVIEW

System development methodology

Reason for choosing Waterfall Model as development method

1. Clear project objectives.

2. Stable project requirements.

3. Progress of system is measurable.

4. Strict sign-off requirements.

5. Helps you to be perfect.

6. Logic of software development is clearly understood.

7.Production of a formal specification.

8. Better resource allocation.

9. Improves quality.
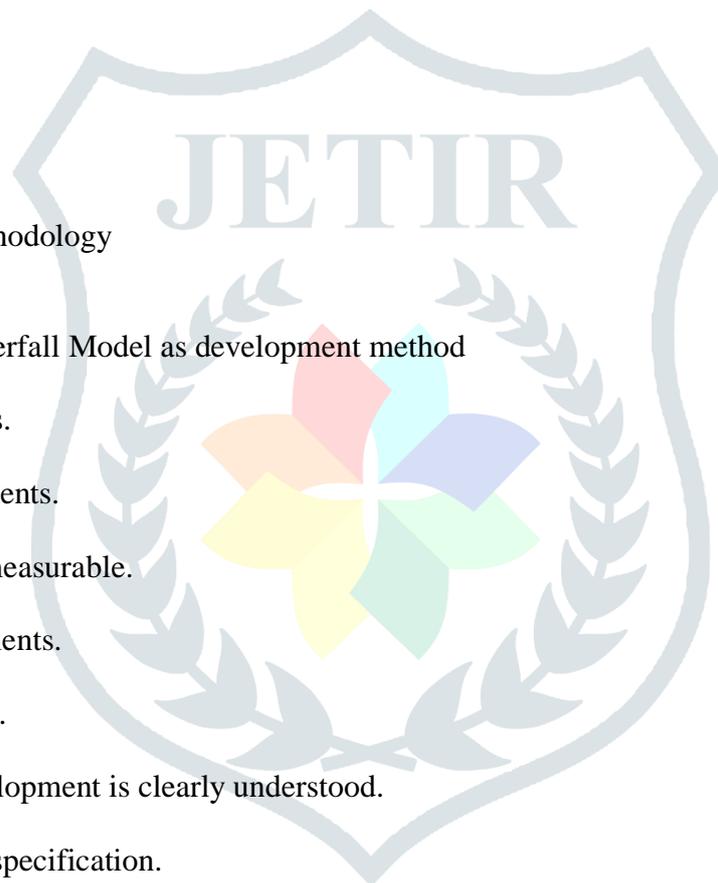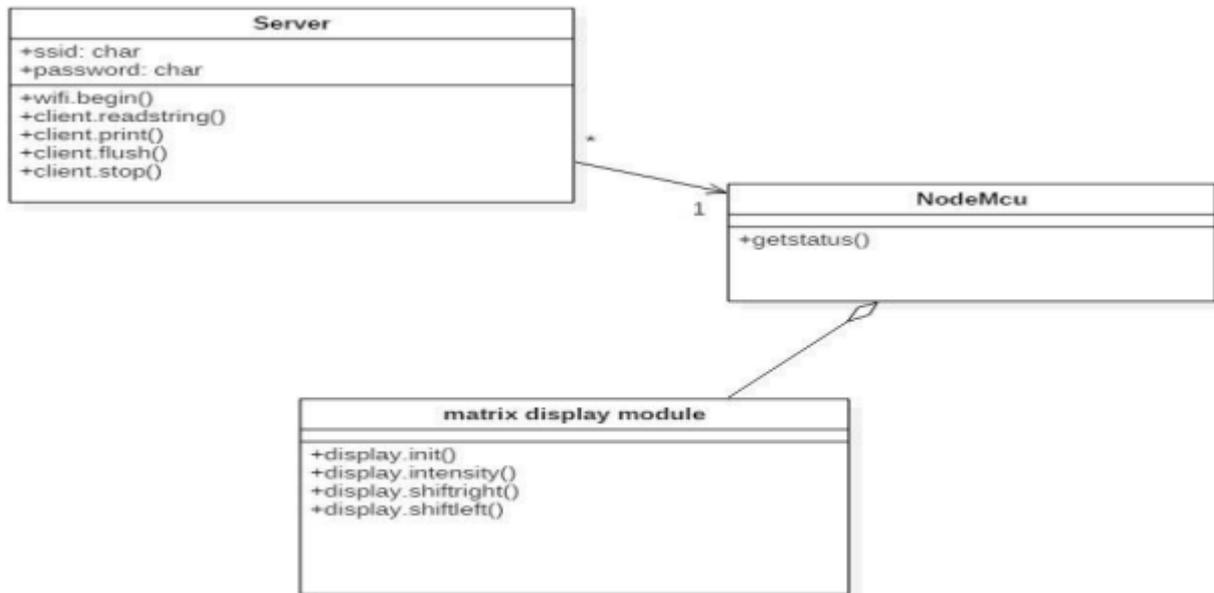
The class matrix display is used for fecthing the user input from the user and displaying it on display. Whereas server class is used for storing the local host user name and password .It was also used for connecting of the device to local host.

Actors 1.app 2.Lcd Use Cases 1. Connect to network 2. Display IP 3. Enter text 4. Receive text 5. Display text

IMPLEMENTATION

→ Careful planning.

→ Investigation of system and constraints.

→ Correct decisions regarding selection of the platform.

→ Appropriate selection of the language for application development.
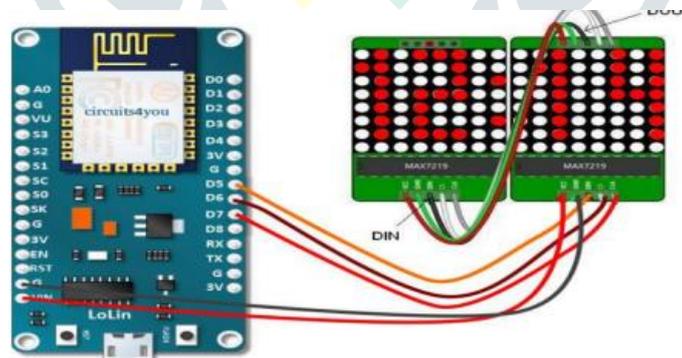
Hardware wiring from Arduino to dot matrix display data pin D5 from arduino is connected to the display pin Din.

data pin D7 from arduino is connected to the display pin CLK.

V.TESTING

→ To affirm the quality of the project.

→ To find and eliminate any residual errors from previous stages.

→ To validate the software as a solution to the original problem.

RESULTS & EXECUTION

The above screenshot shows the front end ofthe android application.

It consist of two text boxes. One for entering the IP address of the local host to get connected and other box is used to type text which text user like to display on matrix display.

This screenshot shows us how a simple word was displayed in dot matrix from left to right. Here both mobile and hardware device.

CONCLUSION

The prototype of the proposed WI-FI based electronic notice board was successfully designed.

The system accepts the message from app to be displayed in the form of Short Message Service (SMS) stores it, checks for its validation and then displays it on the display unit if it meant for that particular display unit, it decided based on IP address.

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