Digital Notice Board

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ABSTRACT

Digital Notice Board is principal element in any organization or public utility for the locations like bus stop, railway stations, schools, colleges, malls, etc. But sticking multiple notices each day is a hectic process. An individual character is wanted to take care of these notices. This mission is about advanced mobile board. The venture is built around raspberry-pi. Display is obtained on LCD. A wi-fi constantly used for Data transmission. we can add or erase or vary the textual content in accordance to our need. At transmitter, authorized PC is used for sending notices. At receiving quit wi-fi fidelity is linked to raspberry pi. When a licensed consumer sends a message that is to be displayed from his system, it is familiar by way of receiver. Wireless is a popular technology known- that how to approve digital device to alternate information over a computer network, together with high velocity wireless connections. The statistics is acquired from authenticated user, then it sends the records to raspberry pi.

I. INTRODUCTION:

Now a days, human beings are turning into accustomed for easy access to information. Whether it's via the internet or television, human beings choose themselves to be up to date with the modern-day occasions going on around the world. In today's world human beings choose wi-fi connection due to the fact they can have interaction with humans easily and it require much less time. Design and Implementation of Digital notice board with the aid of the usage of raspberry pi board. The GUI which will be used via users which has been established and equipped to use on the pc, an internet server and a raspberry pi card to display textual content on show device. The primary objective of this gadget is to strengthen a wi-fi digital word board that show message sent from the consumer and to sketch a simple, easy to install, consumer pleasant system, which can obtain and display word in a unique order with appreciate to date and time which will assist the user to without problems preserve the track of note board each day and every time he/she makes use of the system. The Digital Notice Board is a modern way to launch your statistics to your customers, site visitors or students Target your audience: You pick out how to send your information, ensuring that your message is getting across to the proper people, in the proper place, at the proper time. The versatility of the Digital Notice Board platform permits you to use all the present day Power point displays except making any adjustments or alterations.

Objectives: Observing the present day science trend, need of digital board that is smart enough to get essential information. The fundamental objective of the gadget will be;
1. To improve a wireless technology for user.
2. To graph simple uncomplicated system.
3. To preserve data of notice board by way of the user which he/she will recognize according to the date and time.
4. To advance a dynamic wireless structure/model.

II. METHODOLOGY

The important feature of the proposed machine is to boost a Digital wireless board that show message dispatched from the consumer through net and to layout a simple, consumer pleasant system, which can obtain and show messages in a particular manner with accordance to date and time which will assist the user to maintain the notice of the board each day and each time he makes the use of the system without any difficulty.
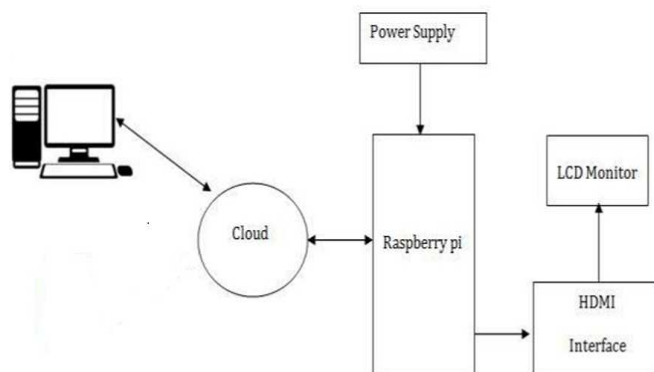

Figure 1: Proposed Methodology of IOT and Raspberry System

The gadget consists of two sections known as sender and receiver, which is shown in figure1. The sender is

accountable for sending valuable statistics through the wireless network. In order to get right of entry to digital board, the sender need to enter into the corresponding google drive link. For stopping unauthorized access to MQTT sever, security authentications like username and password are provided. If the username and password entered are invalid then the consumer can't get entry to the digital observe board. When the user enters the right password and user name, the MQTT server will open and space for the information transmission will be acquired. The person can get admission to this server either by the usage of a personal laptop or cell phone.

The sender can add a text message, photo file and the pdf file to the cloud. In the easiest terms, cloud capacity storing and getting access to facts and programs over the Internet as an alternative of our computer is a tough drive.

In the receiver section, Raspberry Pi is linked with the Wi-Fi for gaining access to the internet. The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer or TV, and uses a fashionable keyboard and mouse. It is a capable little system that enables human beings over a wide range to explore computing and to study how to program in languages like Scratch and Python. It's capable of doing the whole thing that you would expect a computer pc to perform, from looking the web and playing high-definition video, to making spreadsheets, word-processing etc. Raspberry Pi is activated with the aid of furnished electricity of around 5v.

After switching on Raspberry Pi, it will gather statistics from the cloud hence the MQTT server is used for collecting statistics from the cloud. By receiving messages, it will pop up into the respective monitor.

Raspberry Pi has no VGA port. So, in order to interface the LCD screen with Raspberry Pi, HDMI interface is used. The acquired data will be displayed on the screen. For displaying Pdf files, firstly it will be transformed into an picture file by the software written in the Raspberry Pi. After changing all the pdf pages into images then it will get displayed. Every two pages in the obtained pdf file will be displayed at a time.

The processor keeps checking if new information is uploaded to the cloud service. Once new information is uploaded in the cloud it is reflected in the LCD display.
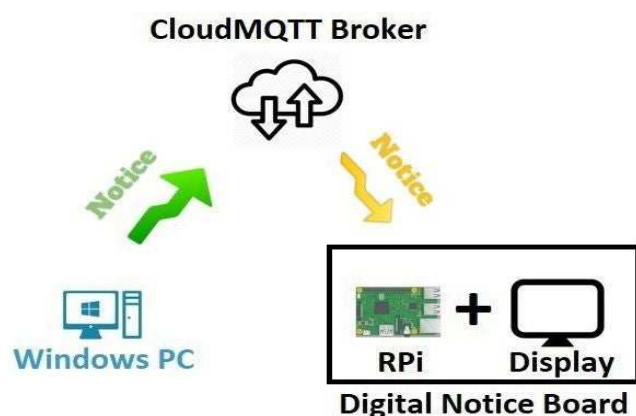

Figure2: Digital notice board working

A Raspberry Pi connected to HDMI Display which is our electronic notice board. A Windows PC is used to Publish the notice on the Digital Notice Board via the internet. The word published by using the Windows PC is received by means of the Digital Notice Board by Cloud MQTT broker. The conversation between the Windows PC and the Digital Notice Board is completed via the MQTT protocol.

The GUI format depends upon the location where you are going to area the Digital Notice Board. For example, let me format a GUI for Instructables, Office to show impending events and conferences so that the employees can be updated with the latest information.

It is easy to sketch a GUI in a Windows PC, so let us sketch the Digital Notice Board GUI in the Windows PC and replica the code to the Raspberry Pi

Figure3: **Design of GUI in a windows pc**

Figure4: Format of displaying notices on windows pc

ALGORITHM
➢ Start

➢ Select the image to be displayed and upload it to google drive

➢ Generate a sharable hyperlink of pix on google drive

➢ Paste the link in the application of windows computer

➢ Add the text which is to be displayed

➢ Click on post to send information to R-pi

➢ R-pi checks for updates of notices

➢ The received notices are displayed in accordance to the structure of data

➢ Above two steps are repeated till electricity furnish is maintained
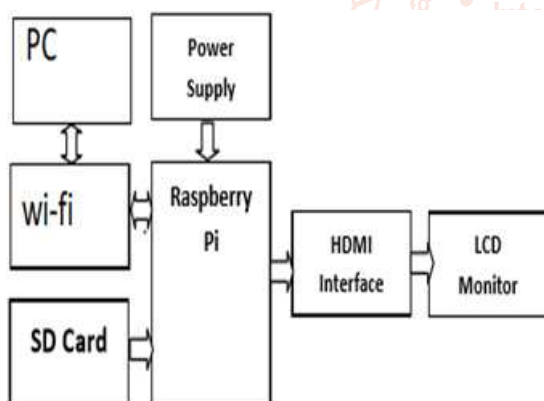
➢ Stop

FLOWCHART:

Figure5: system Diagram of Proposed System

ADVANTAGES

A. Low energy consumption
B. Environment friendly, helps to conserve herbal resources.
C. Notices can be uploaded by means of cloud.
D. Broadcasting identical be aware on a couple of displays.
E. Simple to diagram and consumer friendly.

DISADVANTAGES

A. This technology can be used only for shorter distances.
B. Display limited characters only.
C. Failed to display the messages on their priority.

III. CONCLUSION

The digital note board is wireless and consequently wires for showing the facts on the LCD display are not required. It is very effortless to function and consumes much less power. The circuit of the wireless digital observe board is portable.

IV. REFERENCES

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