

# MAHATMA GANDHI INSTITUTE OF TECHNOLOGY

(AUTONOMOUS)

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## MAJOR PROJECT SEMINAR ON

**“IOT BASED ADVANCED 4 FEET REAL TIME LED SCROLLING LED DISPLAY”**

BY

P MOURYA DEEPAK

V REEMA RANI

G AMARNATH

**MENTOR:** Mr. A. BALARAJU M.E., B.TECH, PH.D.\*

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

# AIM OF THE PROJECT

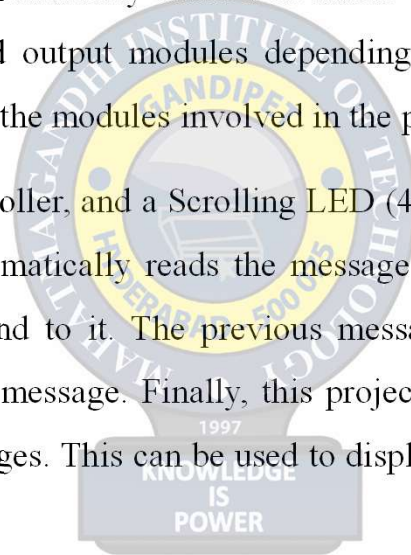
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- The aim of the project is to create an advanced LED scrolling display using IoT technology that can provide real-time information to users. The 4 feet dimension of the display is designed to enable it to be easily visible from a distance, making it an ideal tool for dissemination of information to a large audience. The project will incorporate features such as real-time connectivity and the ability to display a wide range of information, including different languages, time, and emojis. Through this project, users will have access to important and timely information that can aid decision-making and improve overall productivity.

# ABSTRACT

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- The project aims in designing a digital notice board with display on Scrolling LED display using a Wi-Fi technology. We can implement this technology in schools, colleges, banks etc.... After accessing every message, it automatically resets, and it displays the latest message on LED display. This project consists of an onboard computer, which consists of number of input and output ports. These onboard computers are commonly termed as micro controllers. The input and output port of the controller are interfaced with different input and output modules depending on the requirements. In other words, micro controller acts as a communication medium for all the modules involved in the project.
- In this project we make use of Wi-Fi, Micro Controller, and a Scrolling LED (4ft x ½ ft.) display. User can send the messages to the Wi-Fi controller. The Wi-fi controller automatically reads the message and displays on Scrolling LED display. This process continues for every new message we send to it. The previous message will be automatically overridden by new message and buzzer alert is given for every new message. Finally, this project displays the messages on the LED scrolling display with many features and in different languages. This can be used to display the message in HOD cabin and to make the information shared with others.



# INTRODUCTION

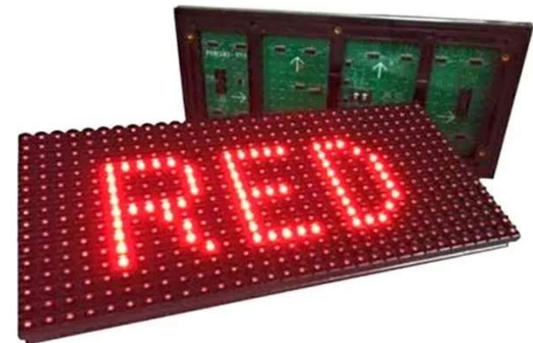
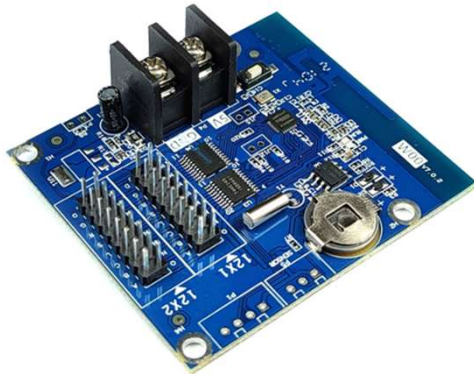
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- The project aims in designing a digital notice board with display on Scrolling LED display using a Wi-Fi technology. We can implement this technology in schools, colleges, banks etc.... After accessing every message, it automatically resets, and it displays the latest message on LED display.
- This project consists of an onboard computer, which consists of number of input and output ports. These onboard computers are commonly termed as micro controllers. The input and output port of the controller are interfaced with different input and output modules depending on the requirements. In other words, micro controller acts as a communication medium for all the modules involved in the project.
- In this project we make use of a Wi-Fi module, Micro Controller and a Scrolling LED (4 ft x ½ ft.) display. The microcontroller automatically reads the message and displays on Scrolling LED display. This process continues for every new message we send to it. The previous message will be automatically overridden by new message.

# COMPONENTS

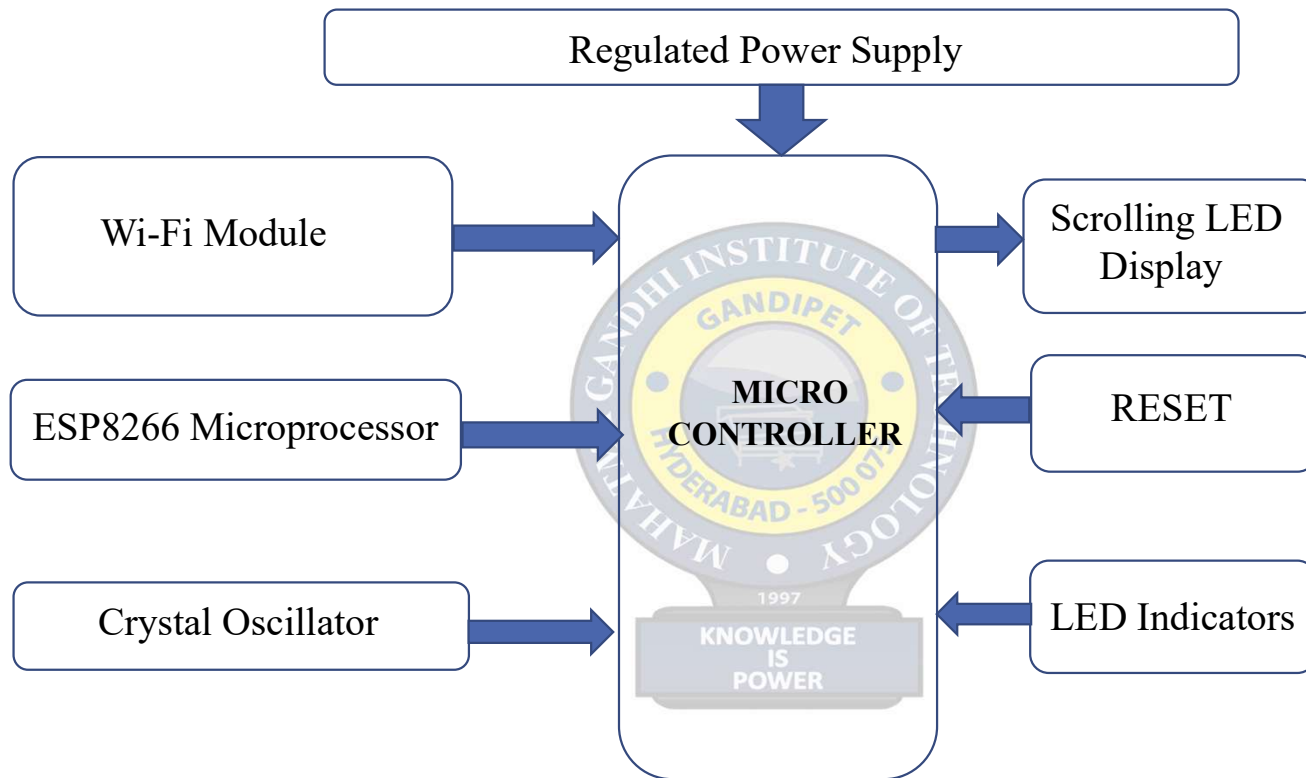
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- 5V Switch Mode Power Supply (SMPS)
- LED DISPLAY BOARD
- SINGLE COLOUR WI-FI CONTROL CARD
- Connecting Wires
- Mother Board with PIC16F877A MicroController
- Any device with LED ART App in it
- ESP8266 MicroProcessor



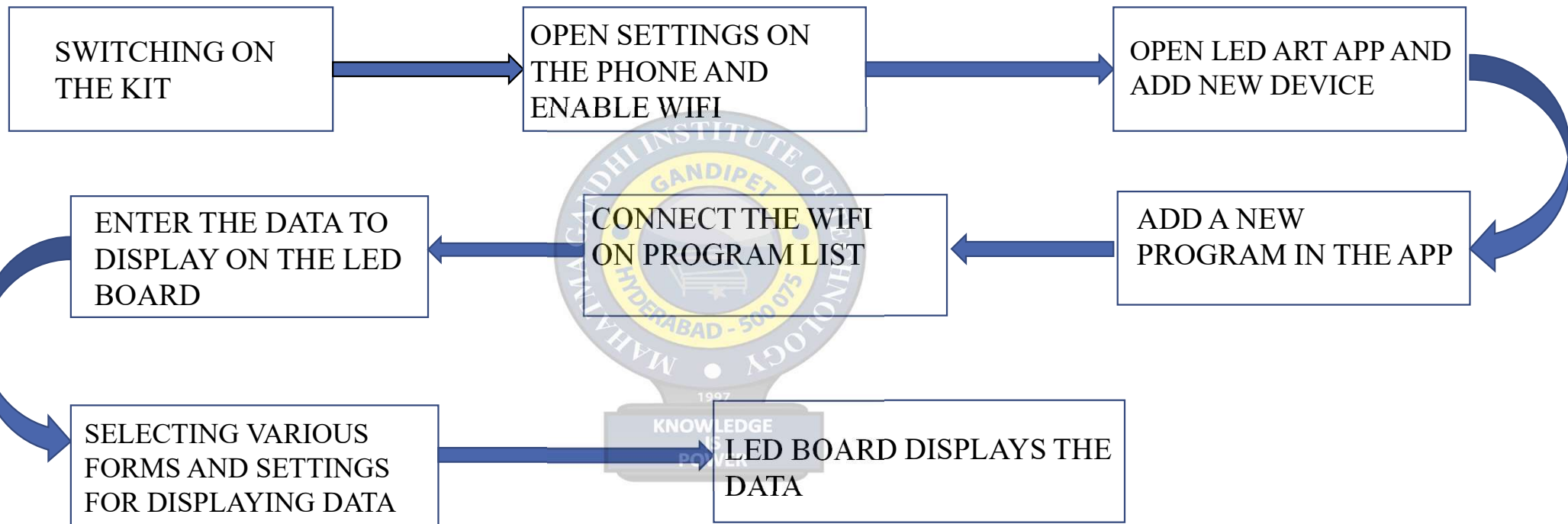
# BLOCK DIAGRAM

## WIFI BASED DIGITAL NOTICE BOARD WITH DISPLAY ON SCROLLING LED DISPLAY





# METHODOLOGY



# RESULTS

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**Fig 1 : SCROLLING LED DISPLAY BOARD**

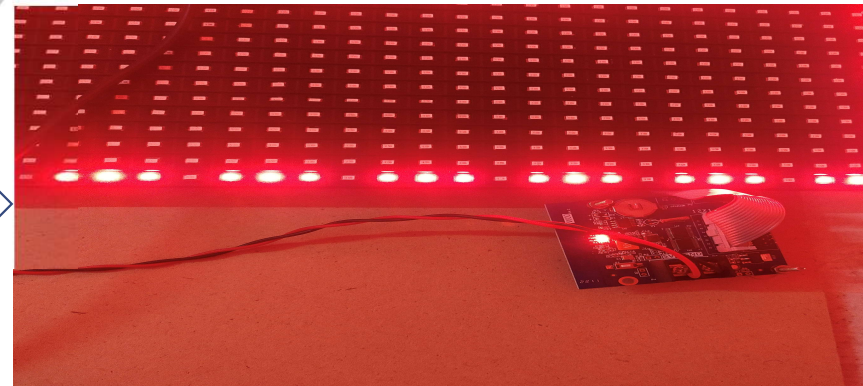


# RESULTS



**Fig 2 :Data received from the LED ART app and displayed on the Board using wi-fi module**

**Fig 3 :Wi-fi MODULE**



# APPLICATIONS

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- Information Display of Airport Flight Dynamic State.
- Information Display of the Guidance for Guests at Ports and Stations
- Information Display of Sports Venues.
- Information Display of Road Traffic
- Bars
- Building Curtain Wall
- Exhibition
- Performance and Assembly
- Using LED Display to Promote Business
- Community Media



# CONCLUSION

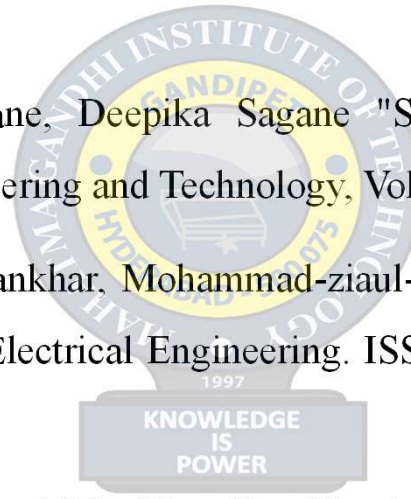
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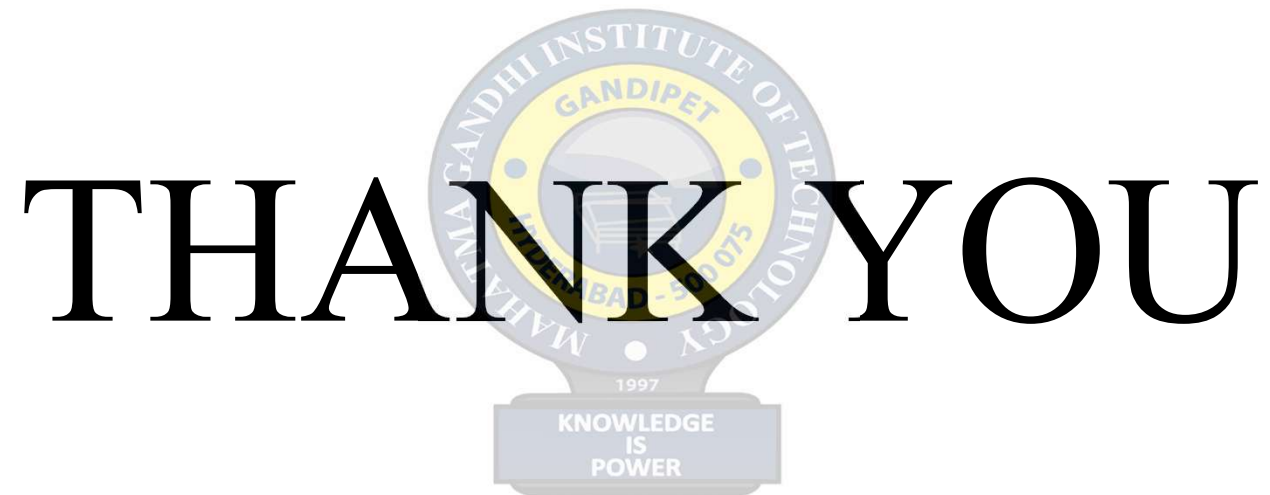
In conclusion, the IOT based advanced 4 feet real-time LED scrolling display is an innovative and highly functional project that utilizes the power of the internet of things to create an interactive and eye-catching LED display. With its impressive 4\*1/2 feet dimension, the display is large enough to attract attention from a distance and provide real-time updates on various types of information. This project has the potential to be used in various settings such as transportation hubs, shopping malls, and educational institutions to inform and engage audiences in new and exciting ways.

# REFERENCES

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THANK YOU