



SEWAGE MONITORING SYSTEM

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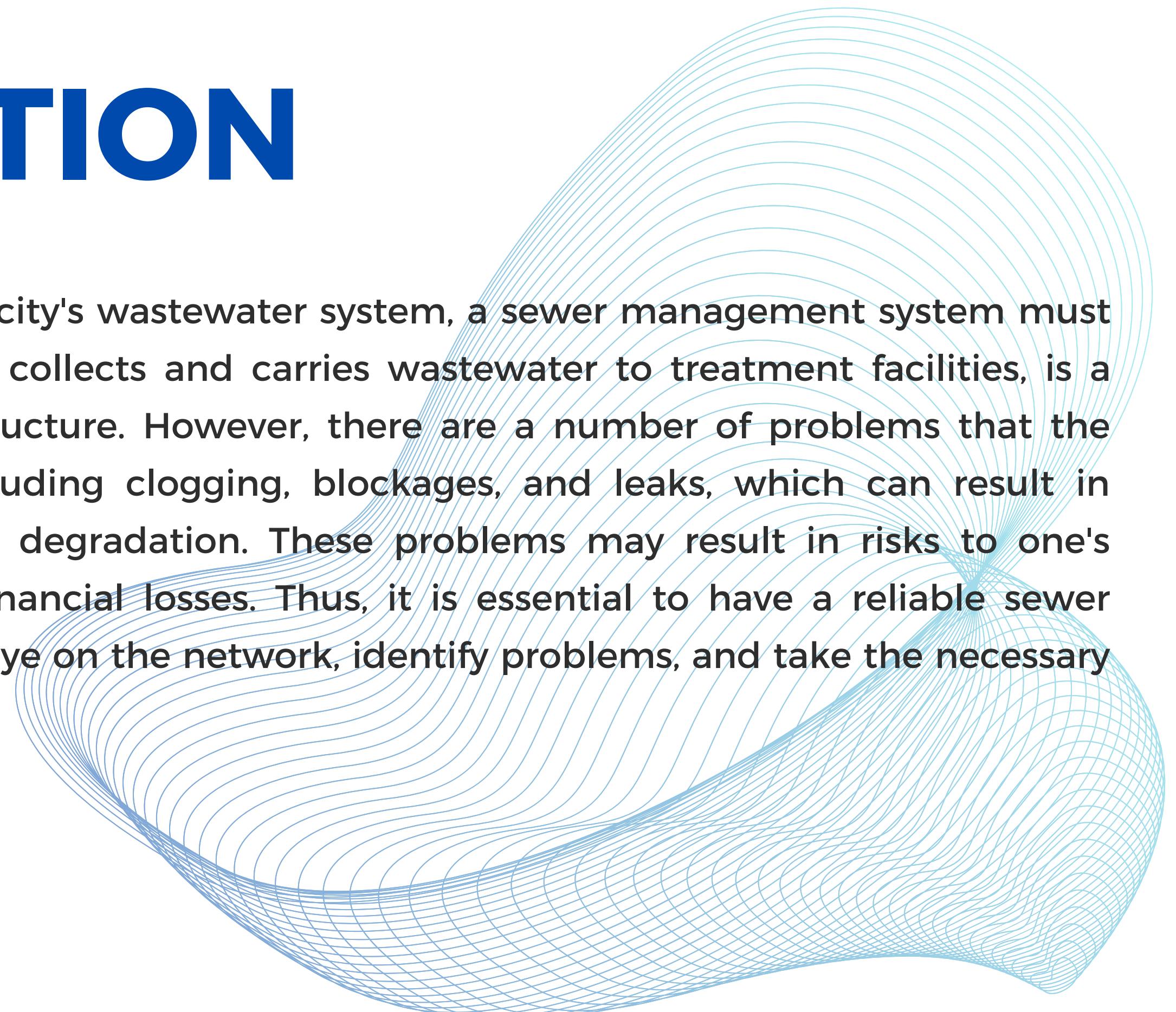
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INTRODUCTION

To monitor, administer, and maintain a city's wastewater system, a sewer management system must be created. The sewage system, which collects and carries wastewater to treatment facilities, is a crucial component of any city's infrastructure. However, there are a number of problems that the sewage network is susceptible to, including clogging, blockages, and leaks, which can result in overflows, backups, and environmental degradation. These problems may result in risks to one's health, damage to property, or even financial losses. Thus, it is essential to have a reliable sewer management system that can keep an eye on the network, identify problems, and take the necessary action.



PROBLEM STATEMENT

The problem is how to manage drainage systems effectively and efficiently to minimize the risk of blockages, overflows and backups, reducing the environmental impact and costs of managing these systems. This requires the deployment of advanced technologies such as sensors and data analytics to monitor sewer conditions, identify potential problems before they occur, and optimize the use of resources to improve the efficiency of sewer systems.



SIGNIFICANCE OF PROBLEM STATEMENT

Environmental Protection

Public Health

Economic Impacts

SOLUTION

The use of IoT sensors in sewer monitoring systems has the potential to greatly improve the efficiency and effectiveness of these systems. By leveraging data analysis, sewer management can become more proactive and responsive to potential issues.

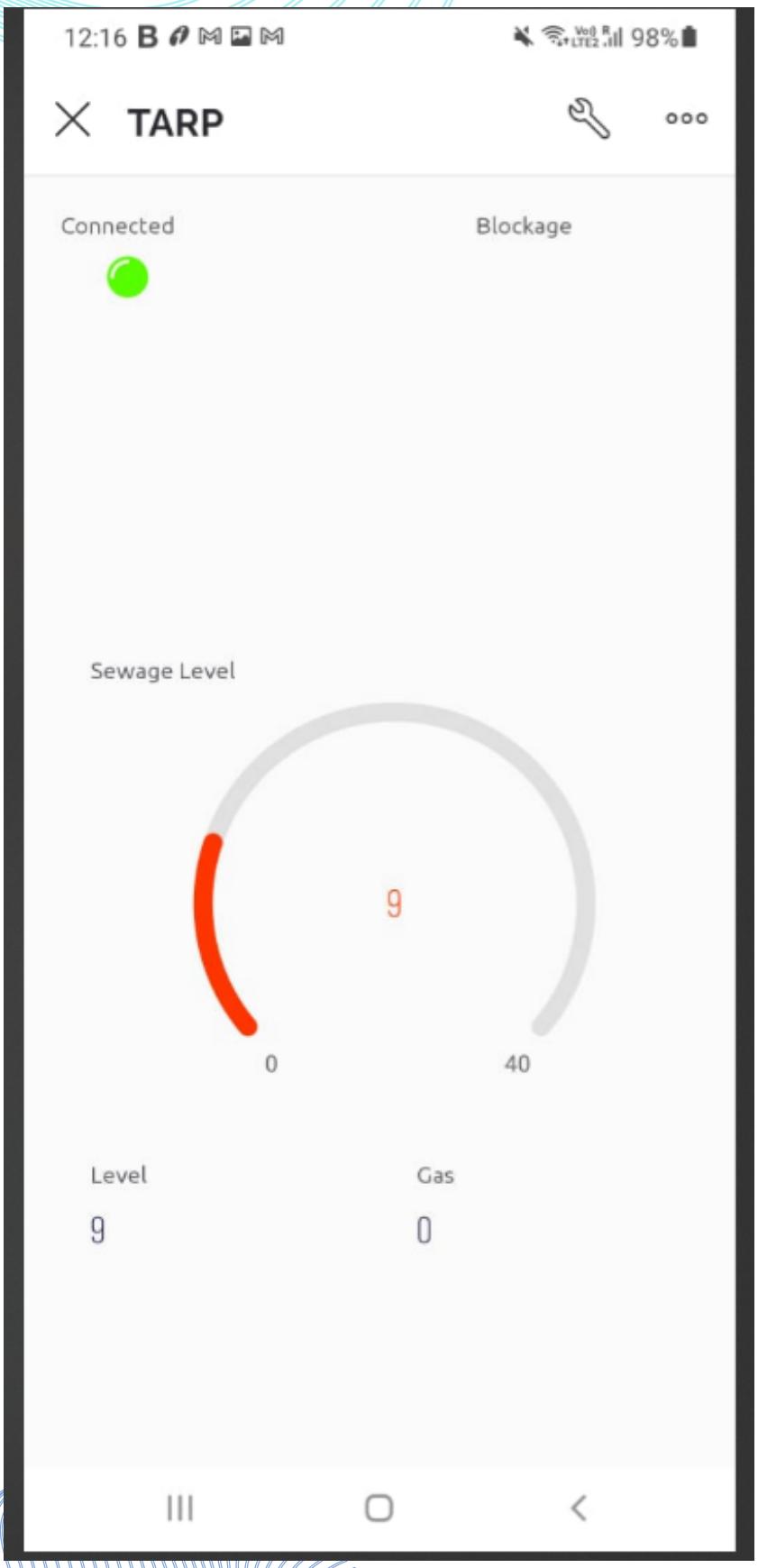
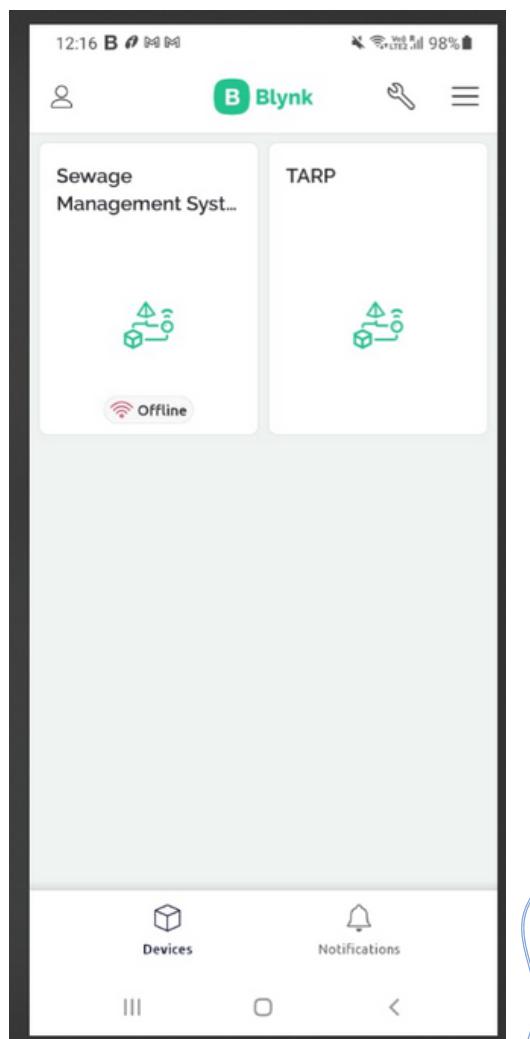
We have used Blynk App to set up our monitoring System which receives notifications when there is an overflow or blockage.



ABOUT BLYNK APP

Blynk consists of two parts:-

- Mobile App - It receives notifications from the sensors and shows the current status of the sewage.
- Desktop Website - It is helpful in creating Device Manager, templates for sewage monitoring systems, and events.



OUR PROJECT

Sewer management systems now have mobile apps that allow users and maintenance staff to access real-time information and alerts on their smartphones. This improves the efficiency and speed of responding to potential problems in the sewage network.

In general, recent technological advances have made wastewater control systems more efficient, reliable and cost-effective. These systems are necessary to maintain the health and safety of residents and to protect the environment against pollution caused by problems with the sewer network.

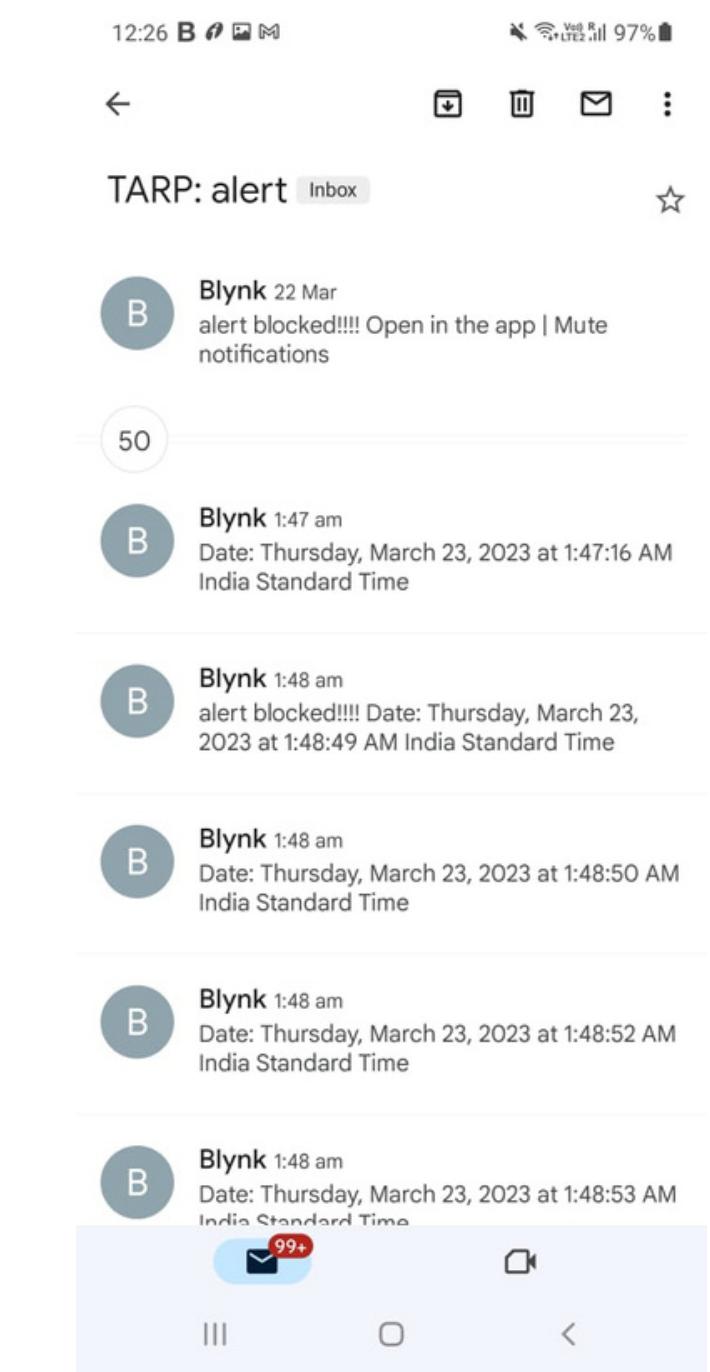
INPUT

The input of a sewage monitoring system is the wastewater being discharged from homes, businesses, and industries into a sewage and harmful gases like methane, carbon monoxide etc.



OUTPUT

The output of the system is data and information about the blockage, water level, gas involved. Processing: The system processes the data collected by the sensors and analytical instruments using algorithms and software to analyze the data and generate reports. The reports can be used by operators to make decisions about the proper functioning of the sewage and to ensure compliance with regulatory requirements.



COMPONENTS USED

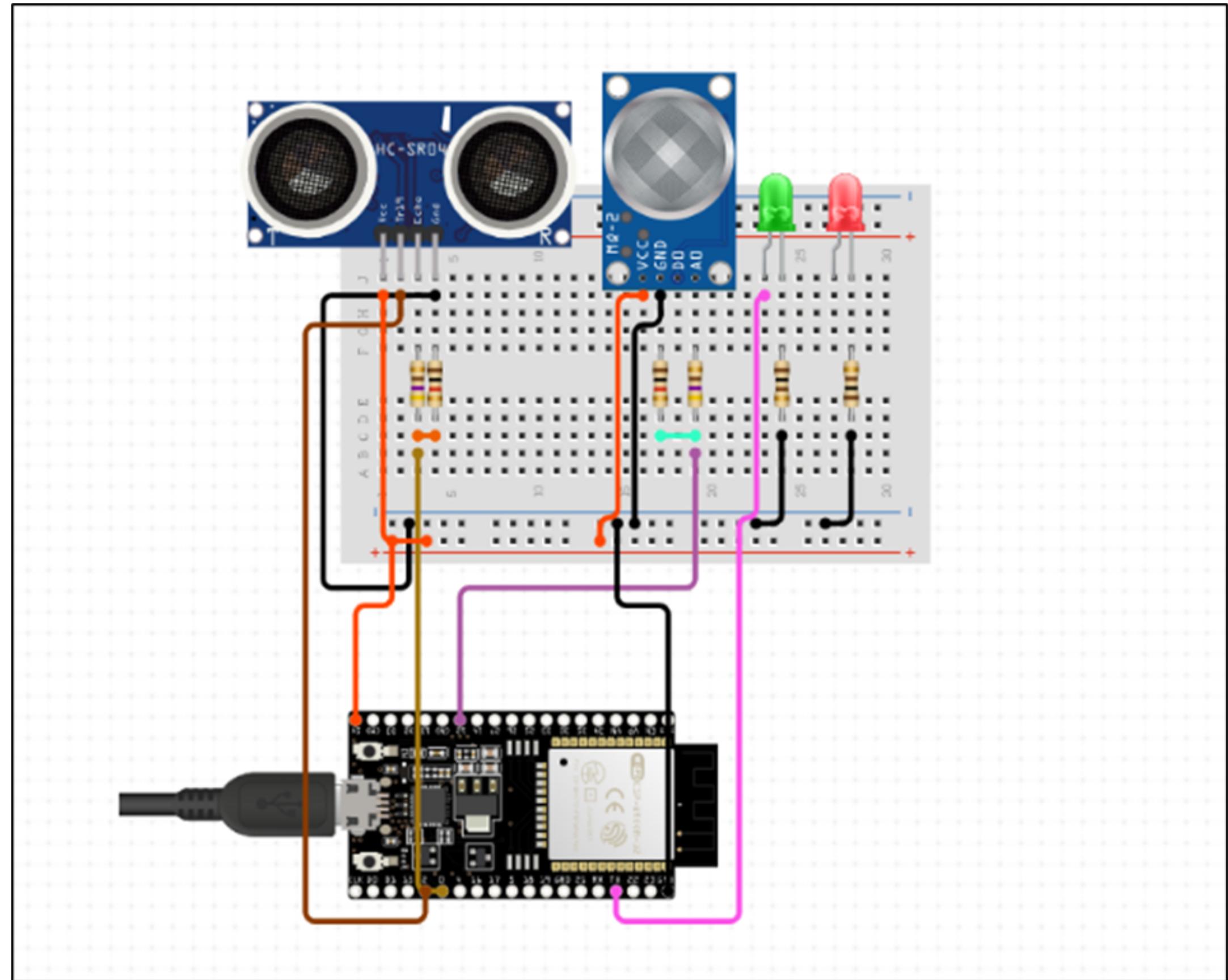
ESP32

Sensors (Ultrasonic, Gas)

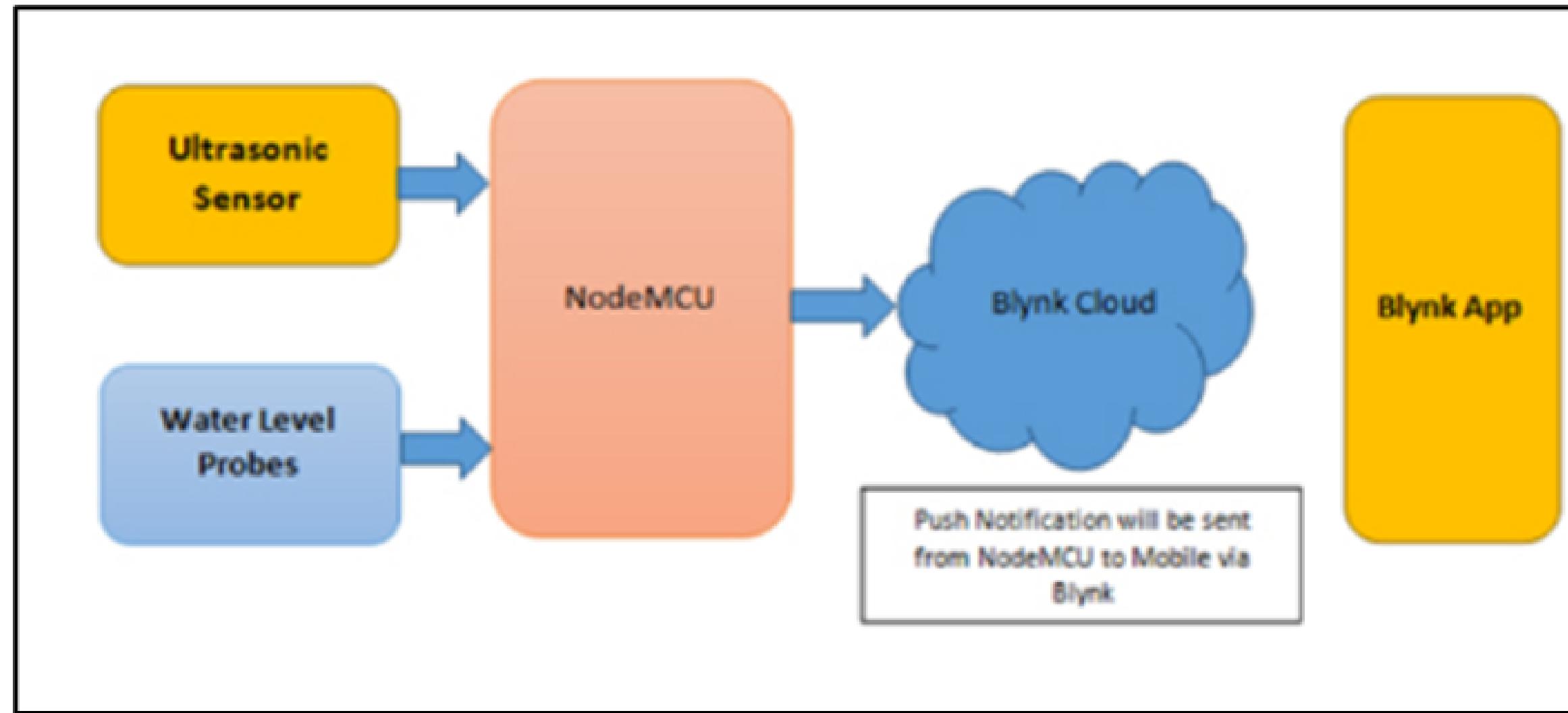
Buzzer , LED lights

Software Tool (Arduino
IDE, Blynk App)

CIRCUIT



FLOW DIAGRAM



THANK YOU

