WATER PIPELINE BLOCKAGE DETECTION SYSTEM

Guided By:
Dr. K. Lalitha,
Assistant Professor,
Dept of AI & DS.

PRESENTED By :
Gobika. I (22AI015)
Kanishgaa. A (22AI019)
Narmatha. M (22AI029)

TEAM NO: 13

22AIC14 : Internet of Things & It's Application

Abstract

- This project presents an IoT-based system for real-time detection and monitoring of blockages in pipelines.
- By integrating IoT sensors, the system can automatically identify the location of potential blockages.
- This significantly improves operational efficiency and reducing repair costs by addressing issues before they escalate.

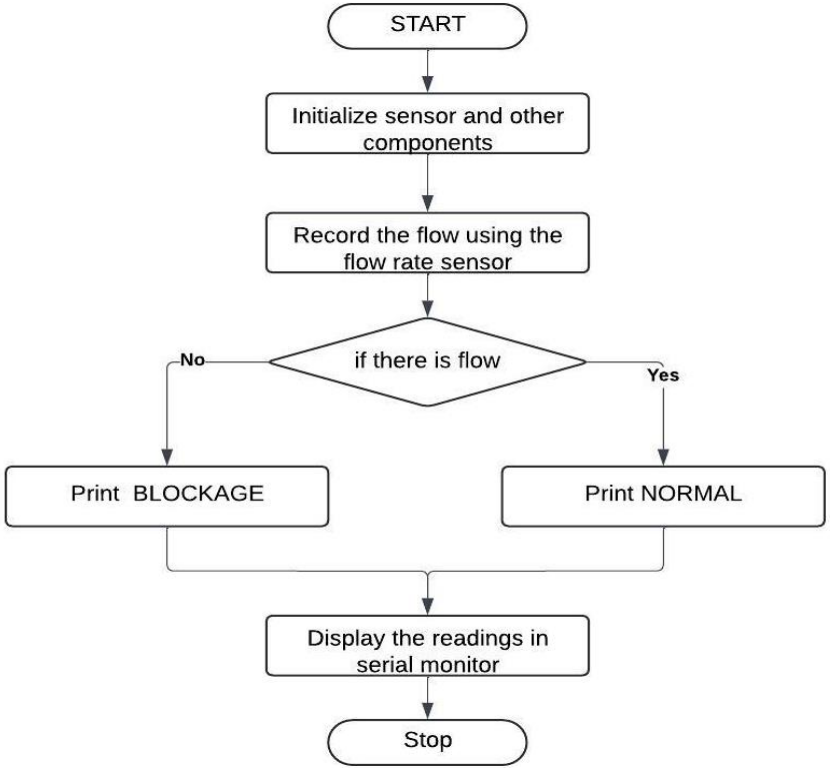
Objectives:

- To develop a system capable of continuously monitoring pipelines and detecting location of blockages in real-time using IoT sensors.
- To reduce pipeline downtime by enabling active maintenance and automated blockage alerts
- To reduce maintenance costs by preventing severe pipeline damage through timely detection of potential blockages

Components Required:

- Arduino Nano
- Flow Rate sensor
- LED
- Resistors
- Connecting wires
- USB Cable

Flow Diagram:



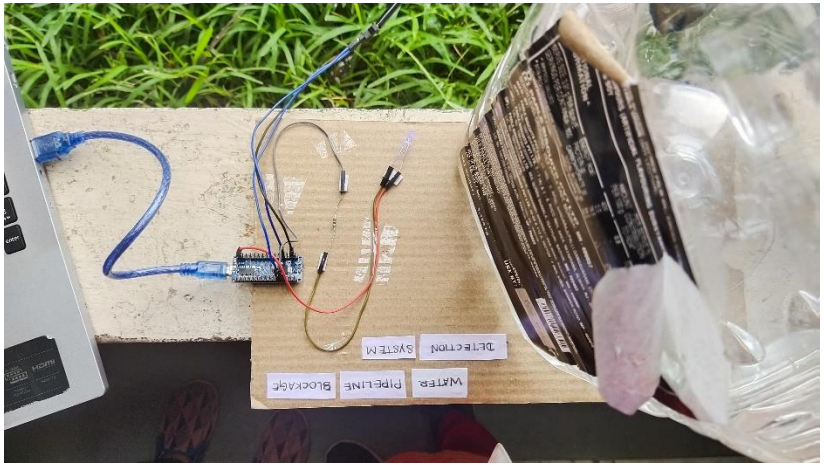
Implementation:

- Physical sensors are installed in the pipeline to monitor conditions like flow rate and potential blockages.
- Additionally, It has the efficiency to detect the location of the blockage in the pipeline.
- Hardware components transmit data from the sensors to the serial monitor.

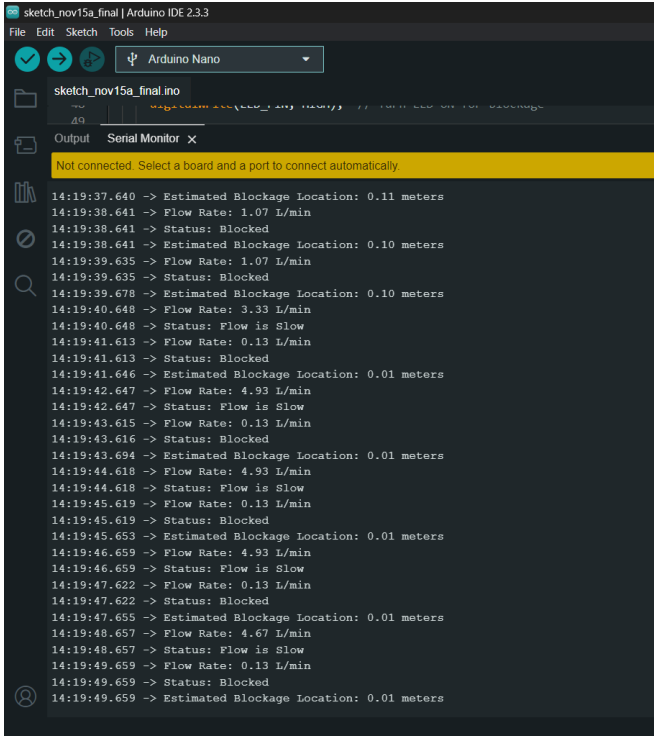
Implementation:

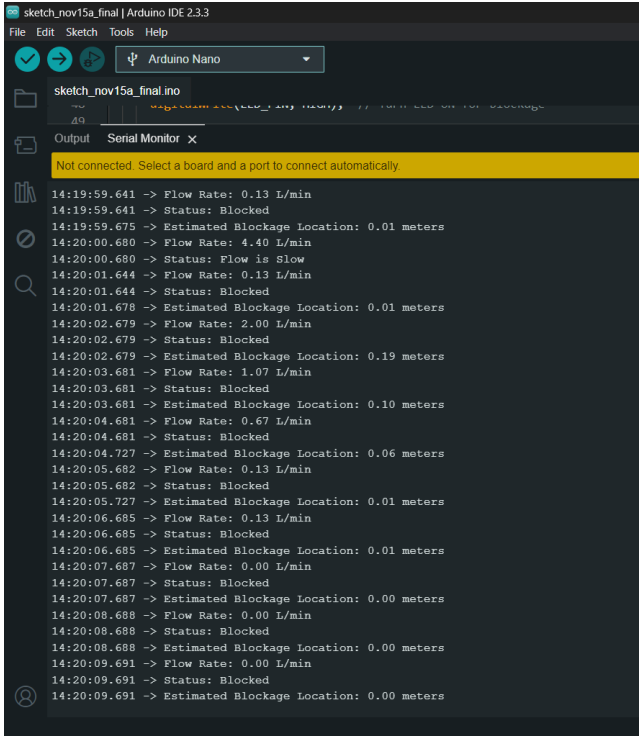
- Arduino IDE
- Tinker Cad (designing)

Output Screenshot:



Output Screenshot:





THANK YOU

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