Smart Water Level Monitoring System

IoT Final Project

Team Members:

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Core Objectives

Continuous Monitoring
Monitor water level in real-time

Automated Alerts
Provide notifications for tank levels

Reduce Manual Checks
Eliminate human intervention

Prevent Issues
Avoid overflows and dry tanks

Project Overview

Real-time Monitoring

Arduino-based water level monitoring

Integrated Alerts

Buzzer and RGB LED notifications

Visual Display

LCD for clear readouts

Virtual Prototyping

Simulated using Tinkercad

Key Components

Arduino Uno

Main control unit

Ultrasonic Sensor

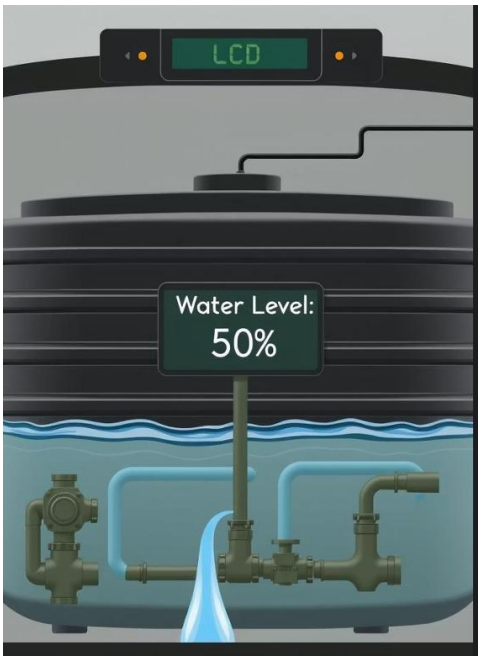
Measures distance

LCD

Displays data

RGB LED

Visual alerts



System Working Principle

Distance Measurement

Ultrasonic sensor detects distance to water surface

Level Conversion

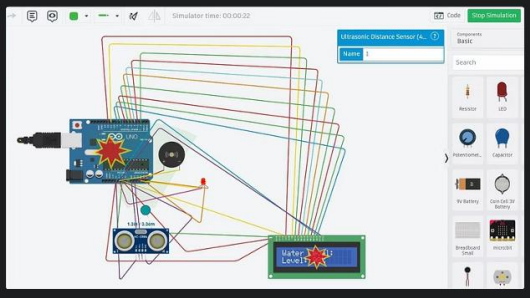
Arduino calculates water level percentage

Alert Activation

LED and buzzer triggered by thresholds

Continuous Feedback

LCD updates with live level



Tinkercad Simulation Circuit for Smart Water Level Monitoring System using Arduino

Simulation and Circuit Design

Tinkercad Simulation

Full system virtual testing

- Component placement
- Circuit validation

Circuit Connections

Interfacing hardware modules

- Sensor to Arduino
- LCD, LED, Buzzer connections

Team Roles and Responsibilities

Madduri Dashwanth

Code & Calibration

Kothith Pappala

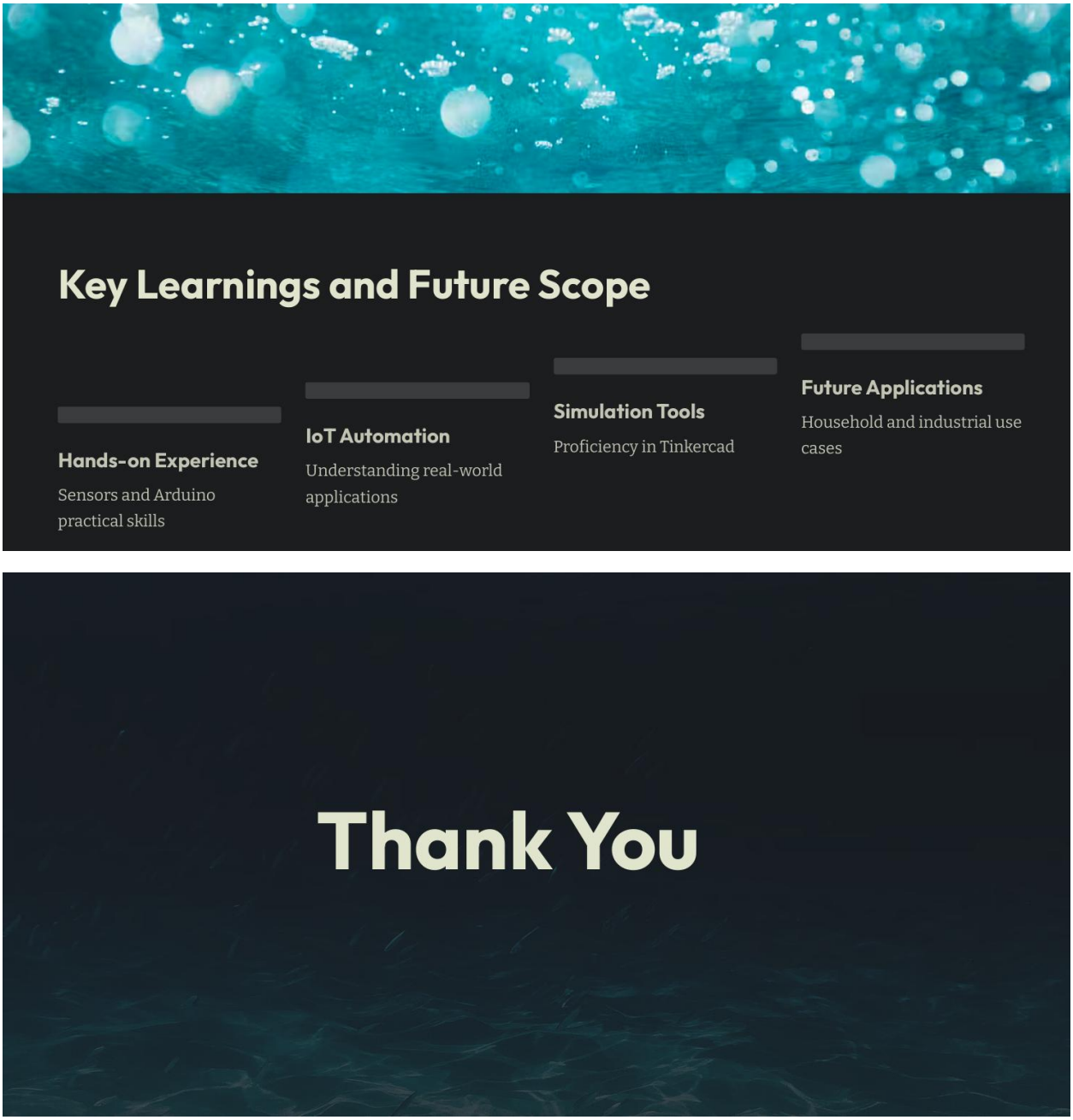
System Testing

Bozza Prakash Abhinay

Hardware Setup

K Author Abhikhyath Gundi

Integration & Debugging


Key Learnings and Future Scope
Hands-on Experience
Sensors and Arduino practical skills
IoT Automation
Understanding real-world applications
Simulation Tools
Proficiency in Tinkercad
Future Applications
Household and industrial use cases

Thank You