Controlling Mechanism of Water Tank

Abstract:

- This project presents a system for the automated control of water levels in a storage tank using a microcontroller-based mechanism.

- The objective is to develop a reliable and efficient water tank control system that manages the inflow and outflow of water to maintain a desired water level.

- The system incorporates sensors to monitor the water level inside the tank and control valves to regulate the flow of water. A microcontroller unit (MCU) processes the sensor data and activates the control valves based on predefined setpoints and algorithms.

- The MCU is programmed to implement a feedback control loop, adjusting the valve operation to maintain the water level within a specified range.Key components of the system include water level sensors (such as ultrasonic or float sensors), solenoid valves or pumps for water flow control, and a microcontroller board (e.g., Arduino, Raspberry Pi) for data processing and decision-making.

- The system's operation is visualized through a user interface, which can display real-time water level status and allow users to set desired water level parameters.