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TOUCHLESS WATER DISPENSER

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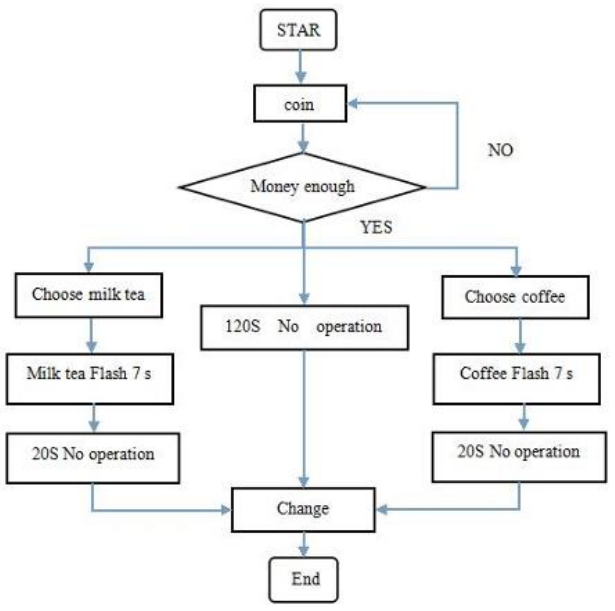
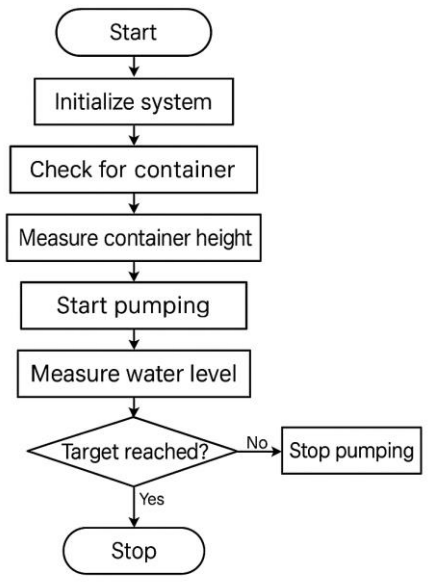
ABSTRACT

The touchless water dispenser is an automated system designed to promote hygiene and conserve water by eliminating the need for physical contact. It uses an IR sensor to detect the presence of a container and activates a motor to measure its height. A LiDAR sensor continuously monitors the water level, and a pump dispenses water until the desired fill level is reached. The system automatically stops the pump to prevent overflow. This project is ideal for public and domestic use, providing a smart, contact-free solution for water dispensing while ensuring efficiency, accuracy, and safety in everyday water usage scenarios.

EXISTING SYSTEM



PROPOSED SYSTEM



WORKING PROCEDURE

1. **Container Detection**
2. **Distance Measurement**
3. **Target Level Calculation**
4. **Motor Movement**
5. **Water Pump Activation**
6. **System Shutdown**

Touchless Water Dispenser System: Uses IR and LiDAR sensors to detect a container and measure its height, then calculates the required water level. The motor moves accordingly, and the pump fills the container. The system auto-stops at the target level, ensuring hands-free, overflow-free operation.

ADVANTAGES

1. **Hygienic & Contactless**: Prevents germ transmission with sensor-based automatic operation.
2. **Water Efficient**: Avoids overflow by measuring container height and stopping at the target level.
3. **User-Friendly**: Operates automatically without physical interaction.
4. **Ideal for Public Use**: Suitable for schools, offices, and hospitals due to its safe and smart design.

SDG GOALS

•**SDG 6 (Clean Water and Sanitation):** Your touchless water dispenser promotes efficient water use and reduces waste, ensuring responsible access to clean water.

•**SDG 12 (Responsible Consumption and Production):** The dispenser minimizes water waste by dispensing only when necessary, encouraging responsible consumption.

CONCLUSION

The touchless water dispenser project offers a smart, hygienic, and efficient solution for automated water control. By using sensors to detect container presence and measure water levels, it ensures accurate filling without manual effort. This system is ideal for modern public and personal use, promoting water conservation and convenience.