AC Lab Project document

Smart Water Level Monitoring System

Video link:

https://drive.google.com/file/d/1sLQjN3sKWsUDiInLERMFxNUoDE2apIY-/view?usp=sharing

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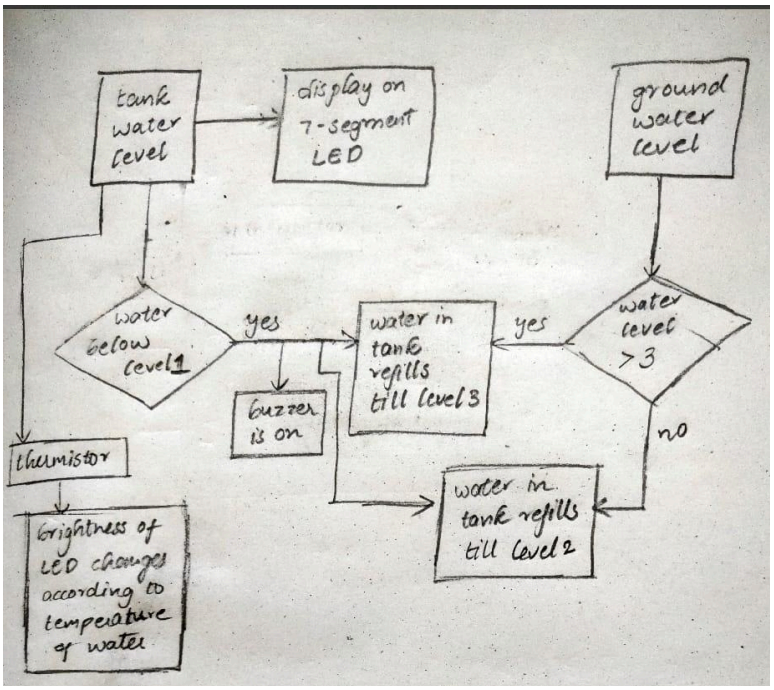
Brief Working:

Our project aims to provide users with information about the water levels in the tank and its refilling process.
When the water level changes, the timer circuit detects and the information will be displayed on the 7-segment LEDs.The water level is detected for the tank and for the source(ground water). We detect the tank in 3 levels and the source in 5 levels. If the water level goes below or at 1 ,then according to the level of the water in source the tank is refilled.We have 2 cases:

a. When the water in the tank is below or at 1 and the water level in the source is above 3 the tank is refilled to 3(fully).
b. When the water in the tank is below or at 1 and the water level in the source is below 3 the tank is refilled to 2.

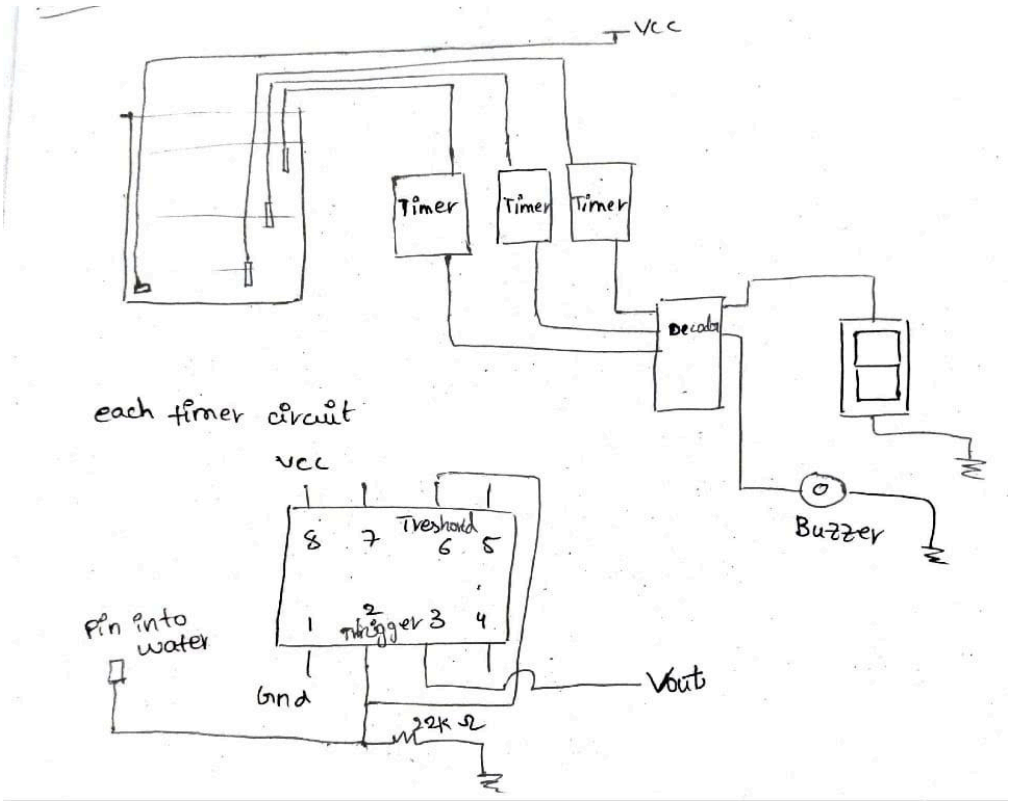
The circuit also incorporates a thermistor to indicate whether the water is hot or cold.

Operational flow:

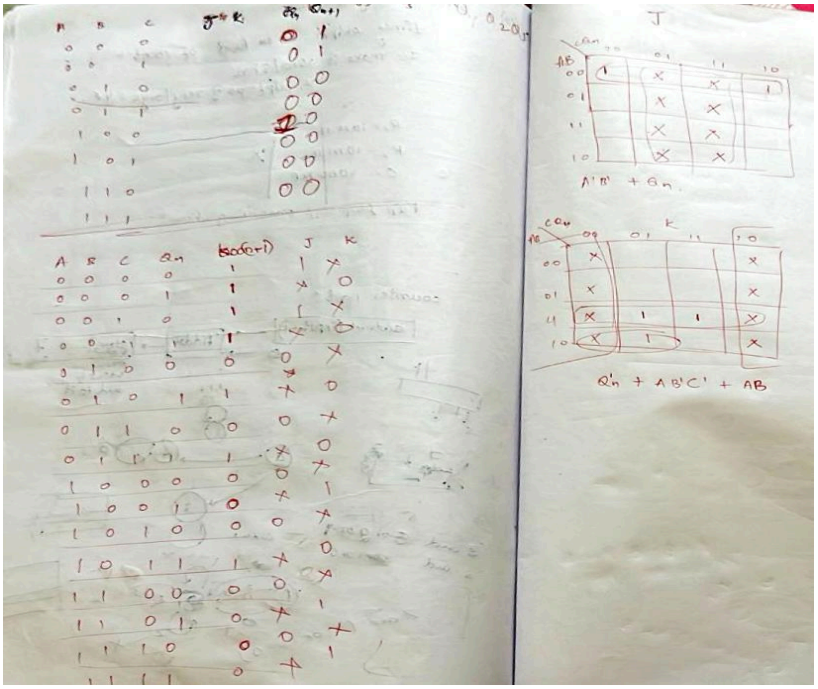


Circuit diagrams:

Circuit for level detection



Logic for the refiling part using jk flip flop



Budget :

Component	Quantity	Price
Aquarium Pump	1	400
DC pump	1	70
NTC thermistor	2	20
Containers	3	120
Battery	5	225
Dunzo delivery	1	300
		Total : 1135