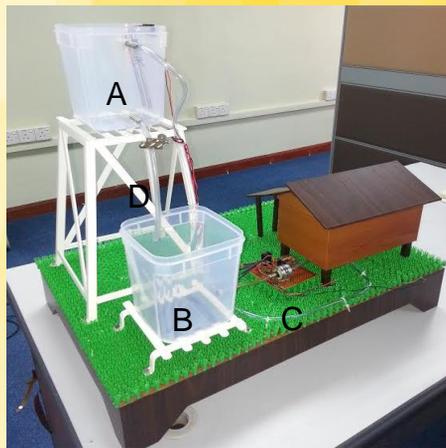# Automatic Water Level Control (AWLC)

Saiful Bahri Mohamed, Zakaria Ibrahim, Muhd Ruzlan Musanih, Khalid Jusoh, Mohd Rizal Abd Ghani, Shahrulnizam Muhmad, Muhd Zamree Zakaria, Zamri Abd Rahman

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ABSTRACT

Maintaining water level inside the water tank in every house should be considered in order to avoid waste of water due to overflow. The existing water level employs mechanical method which is commonly exposed to mechanical failure. This project introduce the notion of water level controlled which employs the concept of electrical conductivity. The system design used a solenoids shut off valve integrates with the electrical and electronic components in a wired environment. The valve system activated when the water level changes according to the preset level by the user. AWLC system would help in reducing waste water and easy maintenance. Furthermore, the amount of water level in the tank that can be adjusted accordingly.

Model of the System

OBJECTIVES

- ✓ To design automatic water level control based on required water level in the water tank.
- ✓ To improve the supply of water into the water tank as well as avoiding any excessing water.
- ✓ To provide easy installation and maintenance

NOVELTY & INVENTIVENESS

- ✓ Applying concept of electrical conductivity activated
- ✓ Easy adjustable water level

USEFULNESS & APPLICATION

- ✓ Practical and low cost over long run
- ✓ Easy installation and maintenance
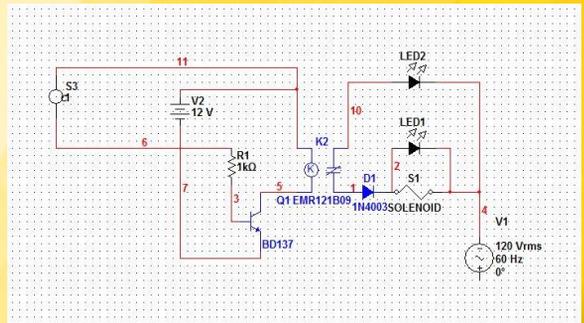- ✓ Reducing water overflow due to mechanical failure

System Architecture

COMMERCIALIZATION POTENTIAL

- ✓ AWLC targets all houses to replace with this innovative project

System Components

- ✓ Relay 12V
- ✓ Solenoid Valve 240V
- ✓ Transistor BD137
- ✓ Diode 1N4003
- ✓ Led

COST COMPARISON			
Existing	RM	Propose	RM
1. A set of Mechanical water control level	50.00	A set of Mechanical water control level	RM 250/ 5 Years = 50.00
2. Installation	50.00	Installation	50.00
3. Maintenance/yearly	50.00	Maintenance	0
Total Cost	150.00	Total Cost	100.00 / Year
Saving (150 – 100) / 150 * 100% = **33.33 %**			