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**ABSTRACT**

In the planet earth pure water is becoming the scarce resource. Without water we can’t survive. Conserving the water is not a responsibility of a single person it’s the duty of whole humanity. In this project we try to conserve the water by methods like allotting particular amount of water for each person, rain water harvesting, automatic motor control and by detecting the overflows and leakages.

This project has mainly six sections. It will monitor the level of the tank and ON and OFF the motor. One section includes that determining the amount of water used by every users and when exceed daily usage limit it will shut down the flow. The project can also detect the rain and can store it in a tank. It can also water the plants and crops when there is no rain at a particular time of the day from main tank or from rain water tank. It can also confirm the leakage and overflow in line.

The project is done by using mainly 4 components which are Flow Sensor, Solenoid Valve, Transistors and Microcontroller. By using Transistors, the water level can be found on the tanks. And can activate the motor by using microcontroller. Transistors also can be used to detect the overflows. By using flow sensor, the amount of water used can be found. The valves are used to shut of the water supply whenever necessary.

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**LIST OF ABBREVIATIONS**

**ABBREVIATION**

AI

CAD

DSP

EDA

FTDI

IDE

IOT

IWMS

LED

PCB

PIC

PWM

UV

**EXPANSION**

ARTIFICIAL INTELLIGENCE

COMPUTER ASSISTED DESIGN

DIGITAL SIGNAL PROCESSING

ELECTRONIC DESIGN AUTOMATION

FUTURE TECHNOLOGY DEVICES

INTERNATIONAL INTEGRATED DEVELOPMENT ENVIRONMENT

INTERNET OF THINGS

INTELLIGENT WATER MANAGEMENT SYSTEM.

LIGHT EMITTING DIODE

PRINTED CIRCUIT BOARD

PERIPHERAL INTERFACE CONTROLLER

PULSE WIDTH MODULATION

ULTRAVIOLET