

# WATER MANAGEMENT SYSTEM

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## ABSTRACT:-

In India peoples are facing many problem day to today life problem just like Water management .and loss of water is more when filling the storage tank to overcome this probleme we developed the system in this project the system is on and off with the help of float sensor when the water tank is full then the system is off automatically and when the tank is empty then the controller send the message to the user on his mobile to start the system with the help of message to send the ON message to the controller then the system is ON due to this project minimize the loss of water and proper management of water is done.

**Keywords:** ATMEGA328, GSM MODEM, FLOAT SENSOR,RELAY,LCD

## I. INTRODUCTION:-

The concept of the project to reduce the loss of water during the filling the tank in village and city .When filling the tank of water supply there is man power is used and loss of water due to the management is not proper work and due to this loss of electricity also occur. So we developed the system to work properly and minimize the time and electricity consumption during the filling the tank.The system is OFF

automatically when the water tank is full and when the tank is empty then system is turn ON with the help of sending message ON to the controller.In this system We use the Atmega328 and gsm module is used to send message to the user .All this function is carried with the help of controller .Float sensor is used to detection the water in the tank

## II. METHODOLOGY






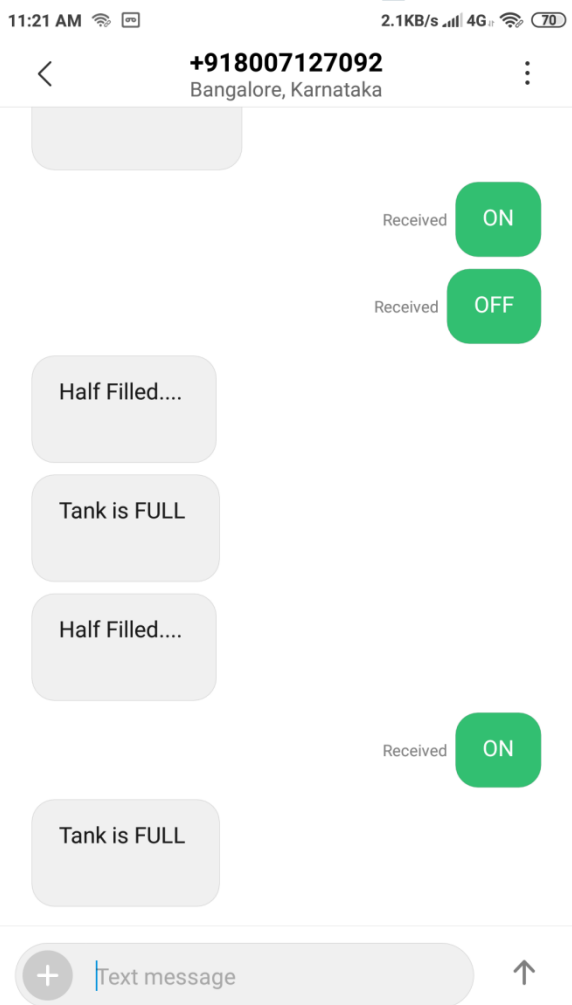
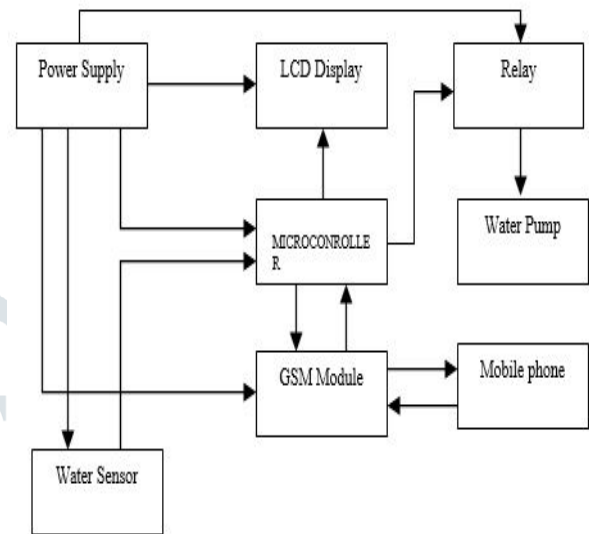
SR. NO	NAME	OUTLOOK
1	ARM 328p	
2	float sensor	
3	LCD	
6	GSM MODEM (SIM900A)	
	Relay	

Table1. Basic components

The prototype model of an water management system using GSM and using Atmega328p working will be made in the following steps:

- 1) The layout of whole setup will be represented in the form of a block diagram.
- 2) float sensor is connected to the microcontroller with the help of wire
- 3) float sensor is used to detect the water level in the tank
- 4) And GSM is also connected to the microcontroller to sending the message to the user of the tank status
- 5) When tank is empty then controller send the message to the user to turn on the motor
- 6) Then the tank is half filled at that time also controller send the message to user tank is half
- 7) and after that when tank is full the system automatically turn off the motor

### III. HARDWARE FRAMEWORK



#### 1) ATMEGA328p

The system is used controller Atmega328p for controlling the system and carried out the sequential programme .It has 32kb In system self programmable flash programme memory 1kb EEPROM,2Kb internal SRAM,8bit timer counter ,serial USART .All our required specification in this controller and it is cheap also

#### 2) Relay

The 12v relay is used in the system to turn ON and OFF the system it is protect the circuit from the short circuit. There is two relay is used ,one used for the connect the starter of the motor and another is used for spare purpose incase one is short circuited then another is used

#### 3) GSM MODEM

GSM is used as a media which is used to control and monitor the transformer load from anywhere by sending a message. It has its own deterministic character. GSM MODEM is built with dual band GSM engine SIM900A, works on frequency 900/1800 MHz. The MODEM is coming with RS232 interface which allows you to connect microcontroller with RS232 chip. Using this MODEM, audio calls, SMS, read SMS, attend the incoming calls can be made using simple AT commands

#### 4) Float Sensor

Float sensor is used for the detection of the water level in the tank. Internal float sensor structure is electromagnetic switch it works on the principle of the voltage when the float sensor is closed then 5v supply is flow in the circuit and it send to the controller and when the circuit is open then there is no flow of voltage in this way float circuit is works

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#### V. CONCLUSION

The project well define the water tank status and send the message to the user after filling the tank of water it will automatically turn off the system when tank is full and send message to the user .It reduces the loss of water and electricity. It minimizes the time and work properly time to time. it is well designed for the villagers

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