

IoT based Disaster Monitoring and Management System for Dams

<https://www.youtube.com/watch?v=ITxFpfB1BTg>

The main aim of the project is to design a “Smart IoT based Disaster Monitoring and Management System” in Dams by integrating IoT devices, including water level sensor, PIC Microcontroller and other complementary equipment.

This project makes a use of PIC microcontroller which is connected to the input and output modules for process. water level sensor is uses to measure the water level in dam. Rain sensor is uses to detect the rain. GSM and WI-FI module is uses for sending alert SMS to the system. Buzzer for abnormal alerts.

This project is to detect the rising water level in a dam from a reasonable distance and intimate that to the respective authorities through GSM and IOT and also alerts the person through buzzer if the flood level is high. The PIC Microcontroller used in the project is programmed using Embedded C language.

The features of the project are:

- Sensor based automatic water level and rain detection.
- GSM and IOT based alert intimation System.
- Audible alerts using Buzzer.
- To achieve this task using PIC microcontroller.

The main blocks of this project are:

- ✓ Power supply.
- ✓ PIC Microcontroller.
- ✓ WATER LEVEL sensor.
- ✓ RAIN SENSOR
- ✓ Reset Button

- ✓ Crystal Oscillator
- ✓ GSM module.
- ✓ ESP8266 WI-FI module.
- ✓ Buzzer.
- ✓ LED indicators.

Software's used:

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.

BLOCK DIAGRAM:

