FLOOD MONITORING AND EARLY WARNING SYSTEM

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Objectives:

The main objectives of the project are:

- To read the temperature and humidity of the environment continuously
- To warn the people through SMS system using web API
- To detect the level of water in real time

Scope:

The main purpose of application is to know nearest flood situation.

SMS Based Early Flood Warning System Using Raspberry PI

This project is about designing a system that can measure the speed of the rise of the water level at the potential flooded area. Raspberry Pi is used to collect the data from the water sensor and transmit the data to GSM Module to send the alert by using an SMS via a mobile phone. The analysis will be done to show how the Raspberry Pi will be integrated with the smartphone to give an alert. The system will be tested in order to ensure that all specifications needed have been met. A performance test will also be run in order to see the efficiency of the system.

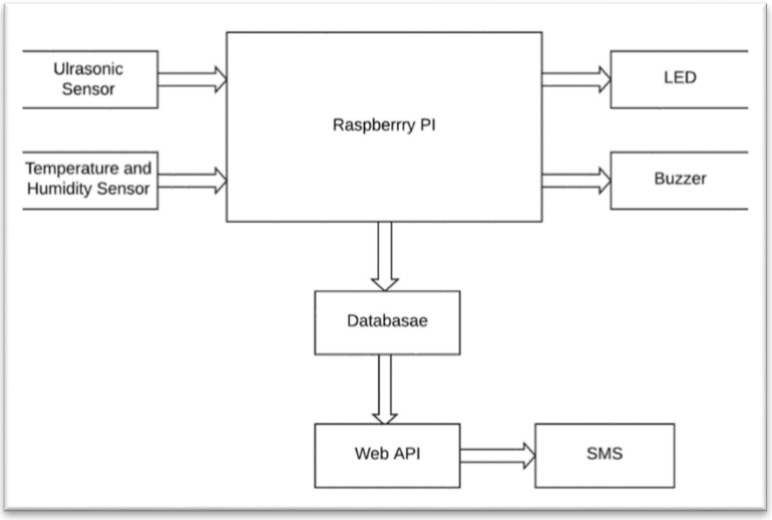

Fig: System block diagram

The raspberry Pi used is the brain of the project. It is responsible for acquiring, processing, storing and communicating the information from sensors, and then executing the events respectively. Raspberry reads the data from the Ultrasonic sensor (HCSR04) and Temperature and Humidity sensor (DHT11).

Hardware description:

Raspberry pi

The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python.

It's capable of doing everything you'd expect a desktop computer to do, from browsing the internet and playing high-definition video, to making spreadsheets, word-processing, and playing games. The Raspberry Pi has the ability to interact with the outside world, and has been used in a wide array of digital maker projects, from music machines and parent detectors to weather stations and tweeting birdhouses with infra-red cameras. We want to see the Raspberry Pi being used by kids all over the world to learn to program and understand how computers work.