**FLOOD DETECTION AND RESCUE**

The aim of this project is to design a flood detection and rescue system, using Arduino. To build the project, our required components are,

* Arduino UNO
* Water level sensor
* 4x4 Matrix keypad
* Servo motor
* Buzzer
* LEDs

**Introduction:**

In both developing and non-developing countries, flooding is the massive natural disaster that causes loss of human and animal life and property. Flood due to earthquakes in oceans, hurricanes, rainfall and other natural disasters occur in many parts of the globe every year.

During rainfall, unmanaged drainage system in various geographical regions leads to floods and many lives are lost. If we have some system which can give us early alert regarding flood then we can save lives of people. A system which uses technology to detect the increase in water level and alert people beforehand so many people can be evacuated.

So, in this project we bring you a prototype which can be used to detect water level in some river, dam or reservoir and then send an alert using a buzzer and LEDs. Also, the way to reduce water level. This is just a small-scale prototype in which we are going to use an Arduino UNO, ultrasonic sensor, buzzer, LCD, servo motor, keypad and some connecting wires.

**Working:**

The system is consisting of a water level sensor that measures the water level inside the river. If the water level is low, the green LED will be turned on to indicate the status. If the water level is increased, the buzzer will produce the alert sound and the red LED will be turned on to indicate the status. Also, to control the water level of the river, there will be a drainage system where the excess water will run off. The drainage system will be closed by a shutter and only the authentic person can open the shutter by entering the shutter password.