**FLOOD MONITERING DEVICE BASED ON IOT**

DEVELOPMENT OF FLOOD MONITERING:

• Sends alert in the event of rising water levels and classification such as warning ,critical and high critical.

• Helps to product against possible water damage.

• Reduce or prevent the dertermental effects of flood water.

WARNING MESSAGE :

An early flood monitoring solution that deploys accurate and well-maintained sensing instruments, like rain gauges, water level sensors, and flow rate sensors

The flood warning system utilizes computer technology,database technology,communication technology,and sensor technology.powered by IOT technology,rainfall and water levels are monitered and floods are predicted early warning of impending flooding can save lives and reduces extensive properly damage. to

Warnings are disseminated through outdoor warning sirens, local television and radio stations, cable television systems, cell phone apps, and NOAA weather radio

HELPS TO PREVENT THE LIFES OF PEOPLES:

Flooding can also be brought about as a results of overflowing river ,broken and a lack of vegetation. How we can prevent them?

When its come to be on optimising town infrastructure.

• Heavy rainfall resulting from tropical weather disturbances.

• Deforestation.

• Improper agricultural practices.

• Inadequate design of drainage channels and structures.

• Inadequate maintenance of drainage facilities, blockage by debris brought by flood waters.

• Construction of settlements in flood plains.

• Heavy rainfall is one of the major reasons leading to floods in an area. Storm surges or ocean waves coming to the shore area can also cause floods. Tsunami conditions can also lead to floods in large areas near the coastal line. Water from the sea caused by a tsunami can sometimes flow inland and cause damage

Python script

import RPi.GPIO as GPIO

import time

import requests

# GPIO pin connected to the water level sensor

WATER\_LEVEL\_PIN = 18

# Threshold for water level (adjust based on your sensor and requirements)

WATER\_LEVEL\_THRESHOLD = 100 # Example threshold in millimeters

# API endpoint for sending alerts

ALERT\_API\_ENDPOINT = "https://example.com/alert"

# Initialize GPIO settings

GPIO.setmode(GPIO.BCM)

GPIO.setup(WATER\_LEVEL\_PIN, GPIO.IN)

def send\_alert():

# This function sends an alert using API endpoint

data = {

"message": "Flood Alert! Water level has exceeded the threshold."

}

try:

response = requests.post(ALERT\_API\_ENDPOINT, json=data)

if response.status\_code == 200:

print("Alert sent successfully!")

else:

print("Failed to send alert!")

except Exception as e:

print("Error occurred while sending alert:", str(e))

try:

while True:

# Read water level sensor data

water\_level = GPIO.input(WATER\_LEVEL\_PIN)

# Check if water level exceeds the threshold

if water\_level > WATER\_LEVEL\_THRESHOLD:

print("Flood Alert! Water level exceeded the threshold.")

send\_alert()

else:

print("Water level is normal.")

# Check every 5 minutes (adjust the interval based on your needs)

time.sleep(300)

except KeyboardInterrupt:

print("Monitoring stopped by the user.")

finally:

GPIO.cleanup()

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