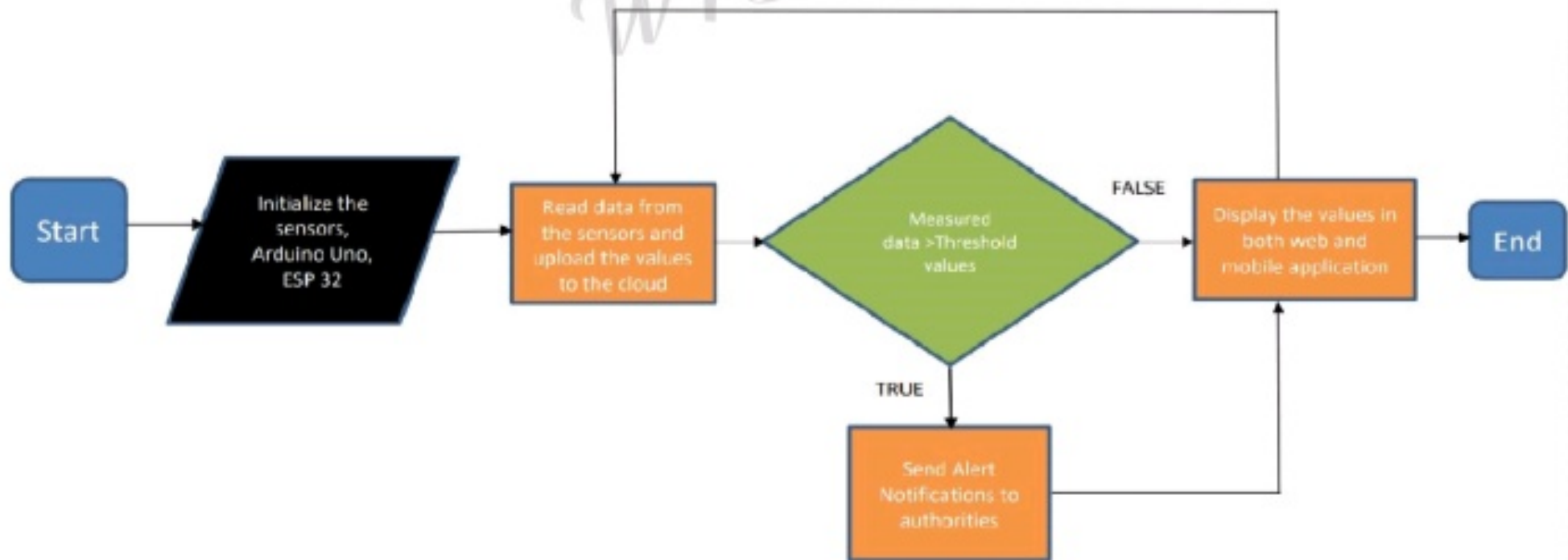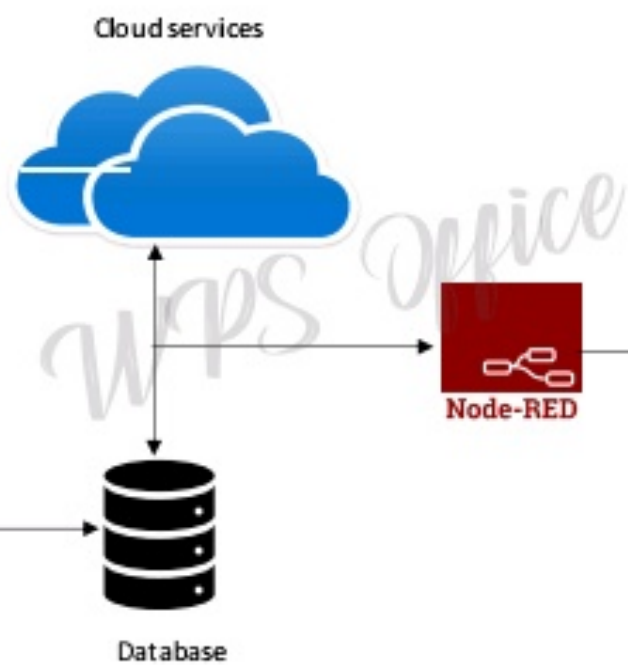**Data Flow Diagrams:**

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is
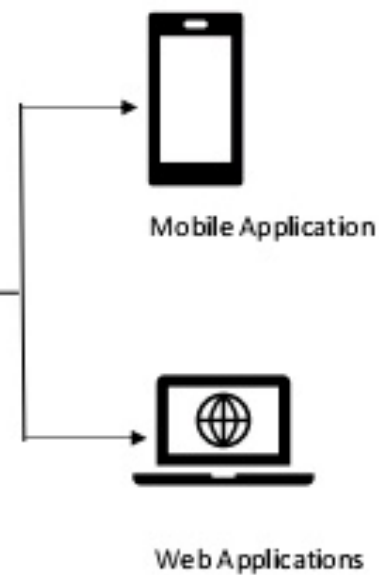
```
Start → Initialize the sensors, Arduino Uno, ESP 32 → Read data from the sensors and upload the values to the cloud → Measured data >Threshold values

Measured data >Threshold values → FALSE → Display the values in both web and mobile application → End

Measured data >Threshold values → TRUE → Send Alert Notifications to authorities → Display the values in both web and mobile application
```

River

Sensors

Arduino Uno/
ESP 32

Cloud

Cloud services

Node-RED

Database

Users

Mobile Application

Web Applications

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
	Registration	USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-2
	Dashboard	USN-3	As a user, I can monitor the condition of the River water in my mobile application	I can access the dashboard and monitor the quality of river water	High	Sprint-3
Customer (Web user)	Registration	USN-1	As a user, I can login to the web application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
	Registration	USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-2
	Dashboard	USN-3	As a user, I can monitor the condition of the River water in my web application dashboard	I can access the dashboard and monitor the quality of river water	High	Sprint-3
Authorities	Registration	AUT-1	As an authority, I can register for either web/mobile application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
	Registration	AUT-1	As an authority, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-2
	Notification	AUT-1	As an authority I will receive notification when the parameters of water exceed a certain threshold levels	I will receive notifications on certain conditions	High	Sprint-3