Project Design Phase-II
Data Flow Diagram & User Stories

Date	15 October 2022
Team ID	PNT2022TMID12777
Project Name	Project – Realtime River Water Quality Monitoring and Control System
Maximum Marks	4 Marks

Data Flow Diagram
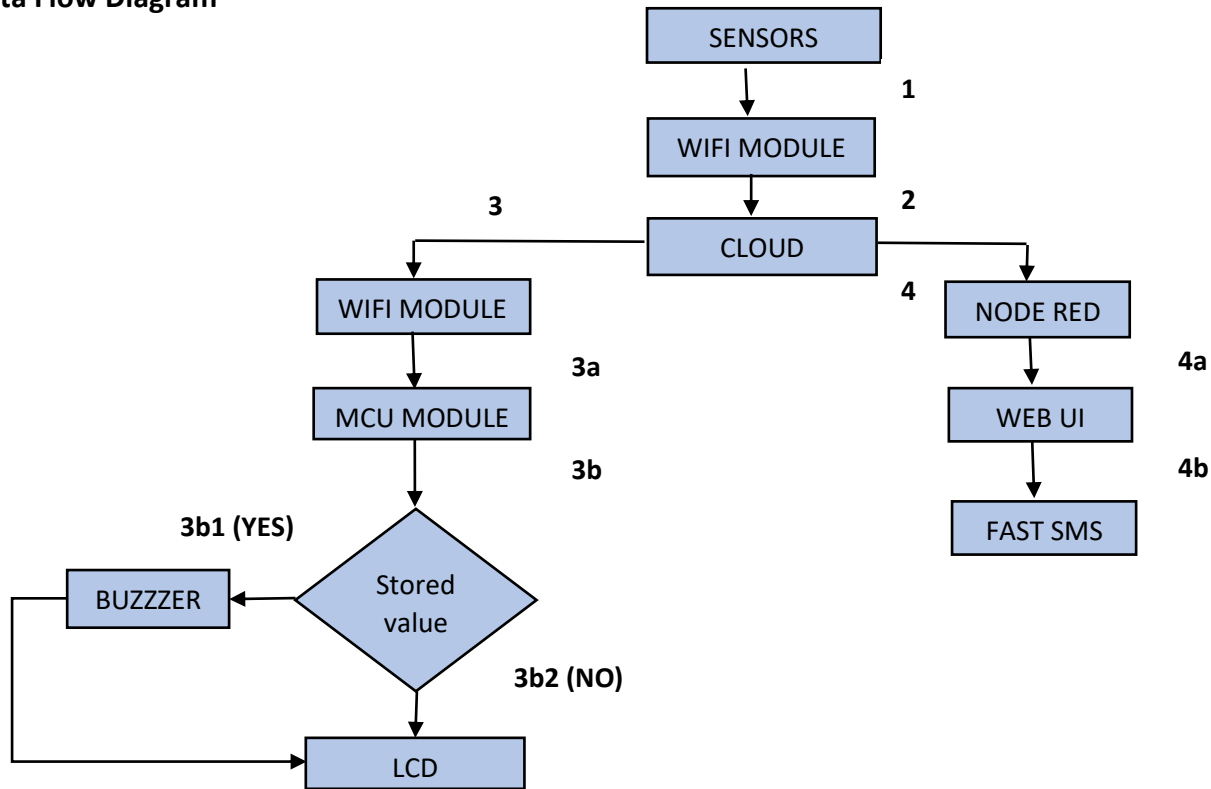
1. Sensors like turbidity and pH sensors detects the sample and collects the data and forwards to the Wi-Fi module in the transmitter side.
2. The forwarded data is gathered and uploaded to the cloud.
3. The data is sent to the Wi-Fi module on the receiver.

   3.a The gathered data is uploaded to the Microcontroller module.

   3.b Result will be compared with the threshold value or standard value.

      3.b1. If greater than threshold, it sets up a buzzer and value also get displayed in LCD

      3.b2. If not, Buzzer will not get turned ON but, the value is just displayed on the LCD alone.

 4. Building workflows for the scenario using Node Red

      4.a Web design for the scenario is designed using Web UI

      4.b Analysis of results and output is obtained from Fast SMS

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Officer, Water Quality wing, TWAD)	Data Collection	USN-1	As a user, he can collect data from the cloud that has been already collected by using the Sensors.	The user will not receive the data directly but the data is sent to the cloud.	High	Sprint-1
	Data Selection	USN-2	The user will select only the data he needed to process by using the Publish – Subscriber model.	The user will receive data only from that entity.	High	Sprint-1
	Data Retrieval	USN-3	The data collected is retrieved for processing.	The user will receive realizable values at the end.	High	Sprint-2

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
	Data Comparison	USN-4	The processed data is compared with standard values.	The user will receive message / buzzer if there's any discrepancies	High	Sprint-2
	Data Display	USN-5	The compared data is then displayed to notify the person.	The user will notified through SMS or through LCD window if there's any discrepancies in values.	High	Sprint-3