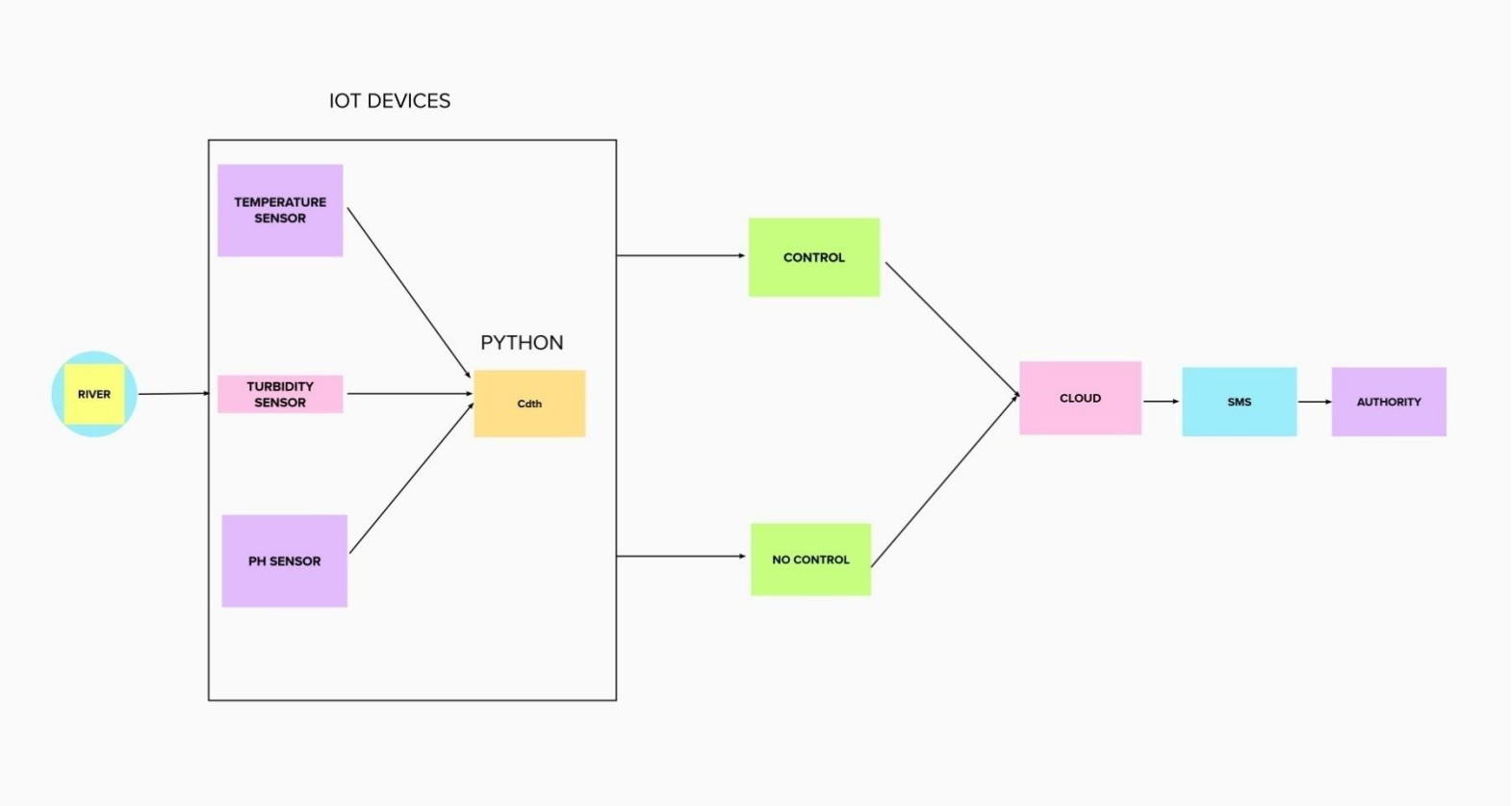
Project Design Phase-II
Data Flow Diagram &User Stories

Date	13 October 2022
Team ID	PNT2022TMID46174
Project Name	Project – **REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM**
Maximum Marks	4 Marks

Data Flow Diagrams:



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
Circuit designer	Designing the circuit	USN-1	As a user, I can design the circuit by using open source softwares.	I can get the exact design for my project.		
		USN-2	As a user, I can design the circuit by using free web app like Tinkercad.	I can make several attempts to get the right design.		
Programmer	Create a program suitable for the circuit	USN-3	As a user, I can create programs in the user friendly language.	I can create a simple program for the circuit		
		USN-4	As a user, I can compile and execute the programs.	I can get the program with accurate outputs.		
Engineer	Connects the output to the cloud	USN-5	As a user, I can connect the output values to the cloud services by using NODE RED.	I can make the datas to receive in cloud.		
	Store the output values	USN-6	As a user,I can make the data's store in IBM cloudant database.	I can retrieve the data anywhere,anytime.		
	Connects the cloud data with the authorities communication device.	USN-7	As a user,I can produce connection to the authorities mobile phones so that they can receive the alerts.	I can make the authorities informed about the water's quality.		
	Alerts has to be sent to the authorities	USN-8	As a user,I can make use of platforms such as Fast SMS to send the timely updates to the authorities.	I can make the authorities to get accurate values and alerts		
Authorities	Checks the water quality alerts	USN-9	As a user ,I check the quality values of the water that is sent to me .	I can make sure that the people in my zone gets quality water.		

Analysis, Intepretation and Modelling

Analysis:

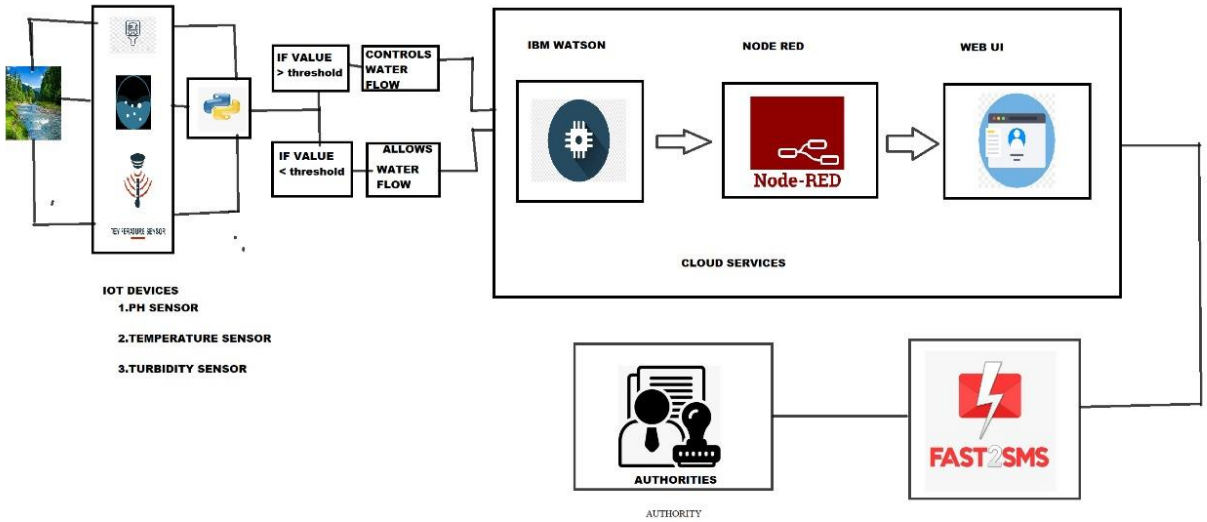
In this project ”Real time river water quality monitoring and control system” ,the river water temperature ,ph and turbidity values are monitored and the water’s quality can analysed.

- To ensure the supply of quality water.
- To improve the quality of life.
- To reduce the spread of water borne diseases.

Intepretation:

- River water quality can be monitored by the web application.
- Can be able to know if there are any dust particles present in the water.
- The PH level of the water can be monitored.
- Water temperature can be monitored.
- Alerting the authorities if the water quality is not good so that they can go and announce the localities not to drink that water.

Modelling:


IF VALUE
> threshold
CONTROLS
WATER
FLOW
IF VALUE
< threshold
ALLOWS
WATER
FLOW
IBM WATSON
NODE RED
WEB UI
Node-RED
CLOUD SERVICES
IOT DEVICES
1.PH SENSOR
2.TEMPERATURE SENSOR
3.TURBIDITY SENSOR
AUTHORITIES
FAST2SMS
AUTHORITY