WATER ALERT SYSTEM

INTRODUCTION

- Our proposal is focused on a water alert system that warns when the water supply is at a certain location via SMS message or call based on the user's preferences.

- This is performed by installing water sensors in strategic areas, such as a shared tank pipe line. When the tap opens, the sensor detects the flow rate of water and the pulse count, sending an instant to the registered user.

- The microcontroller reads the data from the water flow sensor and transmits the data to the GSM module, which sends the message or call to the specific mobile number.

- By specifying the distance between the streets and the pipe diameter, it helps to deliver notifications properly. Users can register on a website using their mobile phones or in a local browsing center. Users must provide their phone number and location, as well as choose whether to get alerts via SMS or phone call.

MODULES

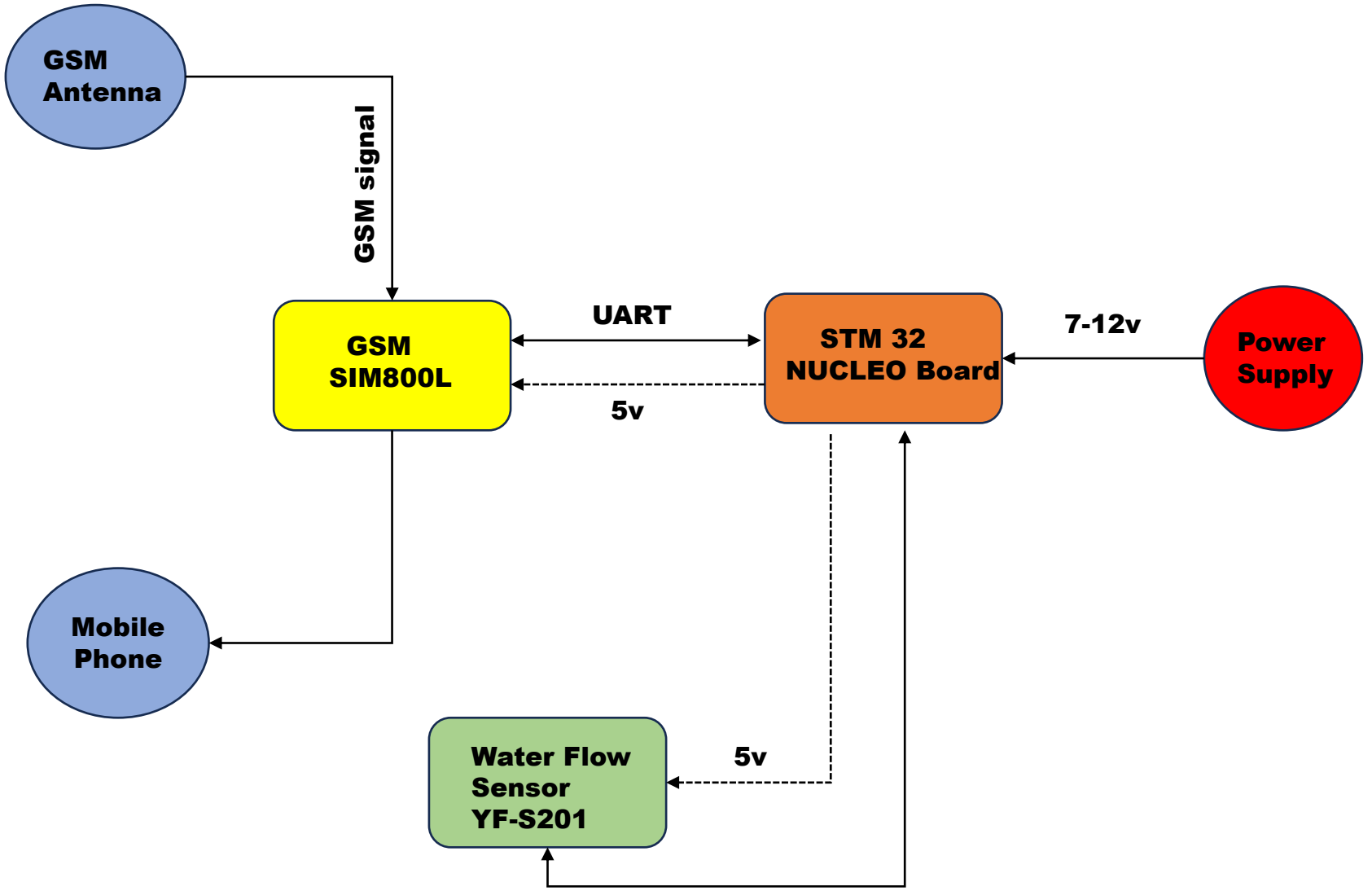
- MICROCONTROLLER - The STM 32 NUCLEO-64 Development Board - F401RE serves as a microprocessor, reading all the data from the water flow sensor and transmitting it to the GSM module. It functions as our system's brain.

- YF-S201 SENSOR - It computes the flow rate and pulse count to deliver data to the microcontroller.

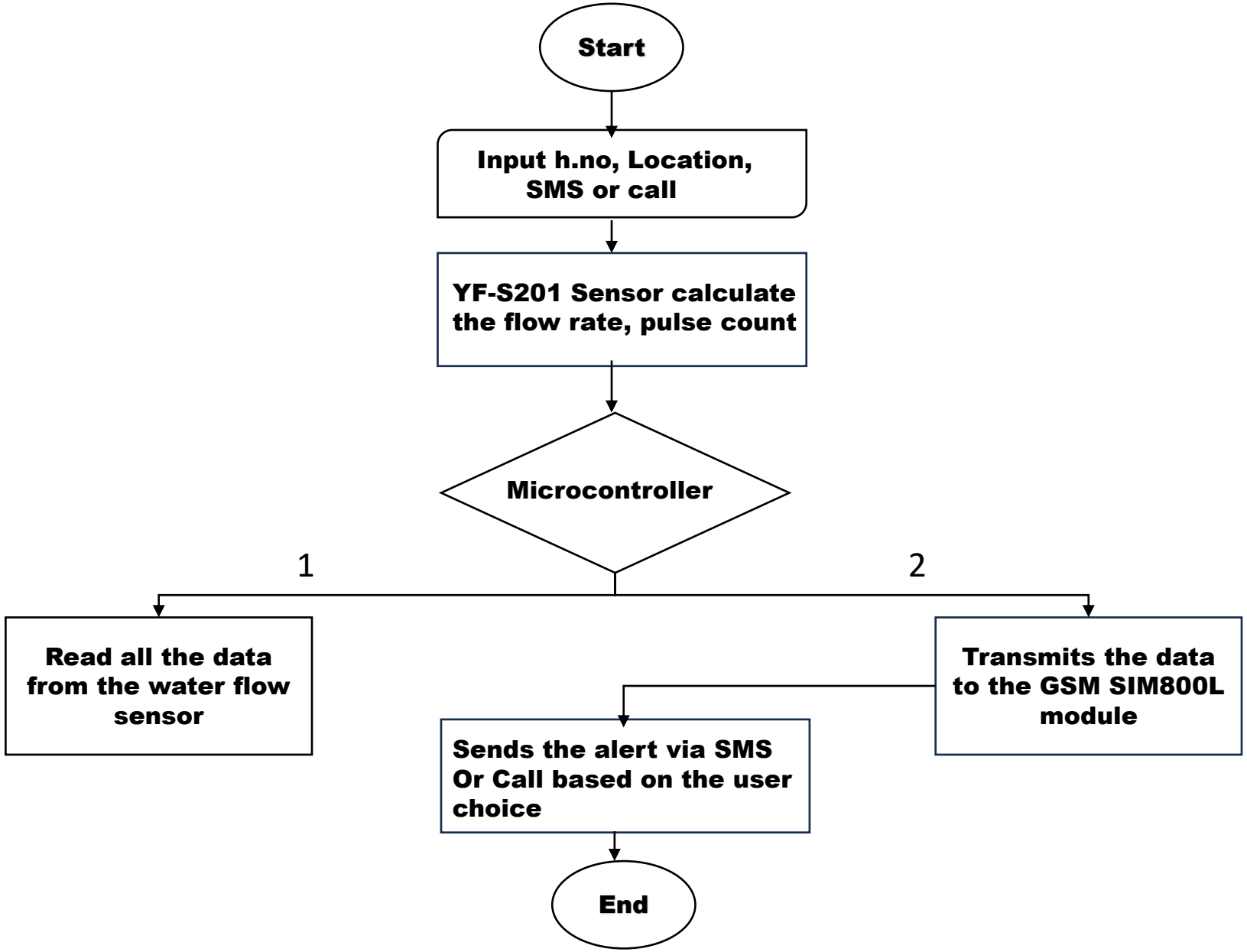
- GSM SIM800L - It receives data from the microcontroller and transmits messages or phone calls to registered users.

- BREADBOARD - It is utilized to supply 5 volts from the microcontroller to the GSM module and water flow sensor.

BLOCK DIAGRAM



FLOW CHART


Start
Input h.no, Location, SMS or call
YF-S201 Sensor calculate the flow rate, pulse count
Microcontroller
1
2
Read all the data from the water flow sensor
Transmits the data to the GSM SIM800L module
Sends the alert via SMS Or Call based on the user choice
End

ADDITIONAL DETAILS

- Using the YF-S201 sensor, we can also compute the total volume of water and its velocity.
- Calculating the total amount of water allows us to simply determine how many liters of water were consumed.
- Our team likes to install the water quality monitoring sensor to evaluate if the water is safe to drink or not. Using the sensor, we give the water quality level to registered users via SMS message, indicating if the water is safe to drink.