SMART WATER MANAGEMENT SYSTEM

Problem definition:

* The project involves implementing IoT sensors to monitor water consumption in public places such as parks and gardens.
* The objective is to promote water conservation by making real-time water consumption data publicly available.
* This project includes defining objectives, designing the IoT sensor system, developing the data-sharing platform, and integrating them using IoT technology

Design thinking:

Project objectives:

* Real-time water consumption monitoring.
* Public awareness.
* Water conservation.
* Sustainable resource management.

Design:

* The value of water consumption is obtained through a smart meter.
* The consumption is obtained through a sensor of water pulses where approximately for every 367 pulses they are equivalent to the pass of 1 L of water.
* Which is sent to the “Edge Gateway” component for storage.
* Then, each time period the accumulated consumption is sent to the cloud server so that this value is stored.
* Also, within the cloud there is a web portal that allows the user to visualize, in real time, the history of their water consumption.
* And this data is displayed on the LCD display which is installed near the water system for the public view.
* The IR sensor is installed in the water taps so that when the object is no longer present the IR unit sends an electronic signal to the solenoid valve again to terminate the flow of water usually after a few seconds.