# SMART WATER SYSTEM

**PROBLEM DEFINITION:**

**Project Overview**

This project aims to revolutionize water management by implementing IoT sensors to monitor water consumption in public places such as parks and gardens.

**Objectives**

1. To improve water efficiency by reducing water wastage, optimizing distribution, and promoting responsible water consumption.
2. To develop real-time monitoring systems to ensure proper management of water in public spaces like parks and gardens.
3. To collect and analyze data to make informed decisions regarding water usage and promote water conservation by making the data available to the public.

**DESIGN THINKING:**

1. **Project Objectives**
   1. To develop a system that allows real-time monitoring of water consumption in public places like parks to enable data-driven decisions for proper water management and infrastructure maintenance.
   2. To create strategies to educate the public about responsible water use and encourage water-saving behaviors among consumers.
2. **IoT Sensor Design** 
   1. Sensors such as flow meters or pressure sensors are selected based on the specific monitoring needs in public places.
   2. Relevant data is gathered by sensor installation in key public locations such as parks etc.
   3. Power options such as battery or solar power is selected for uninterrupted IoT sensor working.
3. **Real-time Transit Information Platform**
   1. To employ user-centered design principles to create an intuitive and visually appealing mobile app interface which provides users with up-to-the-minute information about water consumption, quality and availability in their area.
   2. This includes features that allow users to set water usage goals, receive alerts for anomalies, and access water conservation tips.
4. **Integration Approach**
   1. To define data protocols for IoT sensors to transmit data to the data-sharing platform and implement data validation and error-checking mechanisms to ensure the accuracy and integrity of incoming data.
   2. An alert system is created to notify relevant personnel when sensor data indicates anomalies or potential issues and user access to the platform needs to be secured to ensure only authorized people and view and edit the data as needed.