Date:30/9/2023
project
id:proj_223334_team_3
project title: smart water
management

**Abstract: Water scarcity and water stress issues pose a serious threat to the global population. The traditional way of manual meter reading is furthermore inconvenient and time consuming, and it wastes resources. This method is also unable to manage the sustainable water resources effectively since it requires efficient, accurate and reliable monitoring techniques that enable the utilities sector and consumers to know the level of water consumption in real-time. Real-time smart water meters that can be monitored by the user are essential and constitute a key component of the water management system. A smart water-monitoring system based on internet of things will make users mindful of their water consumption and help them to reduce their water usage. At the same time, users will be alerted to abnormal water usage to reduce water loss.**

***Keywords:*** *Smart water meter, Internet of Things, Cloud storage, android application, storage, android*

## I INTRODUCTION

The earth has an abundance of water, but unfortunately only 0.3% of water is usable by humans. That's why, it is the need of mankind to save the water through proper management. Hence, there is a need for better water distribution technology. Water is commonly used for agriculture, industry, and domestic consumption. Therefore, efficient use and water monitoring are potential constraint for home or office water management system. This priceless resource usage need to be well monitored and for that a real-time monitoring system.is need right now [1].

Old and trendy water management systems have manual water flow meter whose reading is checked occasionally and there occurs lack of attention toward the usage and awareness. So there need a real time monitoring system which notice every usage and take necessary steps against extra wastage which were otherwise neglected [2][3].

By looking into present demand it motivates us to design a system which will regularly monitor the water flow. Despite of that there is immediate requirement of quality checking as well as acknowledgement of leakage (if any). It also guide us to get the user aware of the water level in tank, which user never knows.

For this purpose a wireless system need to be established to ensure user friendly system. And hence Internet of Things (IOT) appears as a boon to the system. The internet enabled system can let the user to fetch the data from any corner of the globe. The IOT based system is only responsible for real time monitoring and enables immediate action for any mishap [3][4].

In our proposed model, we have used raspberry Pi as a controller and different sensor which can upload data to the cloud. The system consists of different sensors like water flow sensor, ultrasonic sensor, pH sensor, water control valve and a raspberry Pi as a core controller. Our proposed model helps to indicate the level of water available in the tank, it checks the quality of water, identifies the water leakage in tank and prepares billing by keeping track of daily as well as monthly water usage. It displays all this information on android application in smartphones using Wi-Fi. Ultrasonic sensor is the basic component for the water level indicator. Our Project helps to indicate the flow of water and its corresponding bill is generated. The