Smart water fountains

1.Introduction:

Welcome to the world of smart water fountains! In this presentation, we will explore how these innovative fountains are revolutionizing hydration. Discover the potential of these intelligent devices to improve access to clean drinking water and promote healthy lifestyles. Get ready to dive into the future of hydration!

2.History:

2.1 Ancient fountains:

Ancient civilizations built stone basins to capture and hold precious drinking water. A carved stone basin, dating to around 2000 BC, was discovered in the ruins of the ancient Sumerian city of Lagash in modern Iraq. The ancient Assyrians constructed a series of basins in the gorge of the Comel River, carved in solid rock, connected by small channels, descending to a stream. The lowest basin was decorated with carved reliefs of two lions.[3] The ancient Egyptians had ingenious systems for hoisting water up from the Nile for drinking and irrigation, but without a higher source of water it was not possible to make water flow by gravity, There are lion-shaped fountains in the Temple of Dendera in Qena.

Fig:2.1 Ancient fountains

2.2 19th century fountains:

In the early 19th century, London and Paris built aqueducts and new fountains to supply clean drinking water to their exploding populations. Napoleon Bonaparte started construction on the first canals bringing drinking water to Paris, fifteen new fountains, the most famous being the Fontaine du Palmier in the Place du Châtelet, (1896–1808), celebrating his military victories. He also restored and put back into service some of the city's oldest fountains, such as the Medici Fountain. Two of Napoleon's fountains, the Chateau d'Eau and the fountain in the Place des Vosges, were the first purely decorative fountains in Paris, without water taps for drinking water.

Louis-Philippe (1830–1848) continued Napoleon's work, and added some of Paris's most famous fountains, notably the Fontaines de la Concorde (1836–1840) and the fountains in the Place des Vosges.

Fig 2.2 19th century fountains

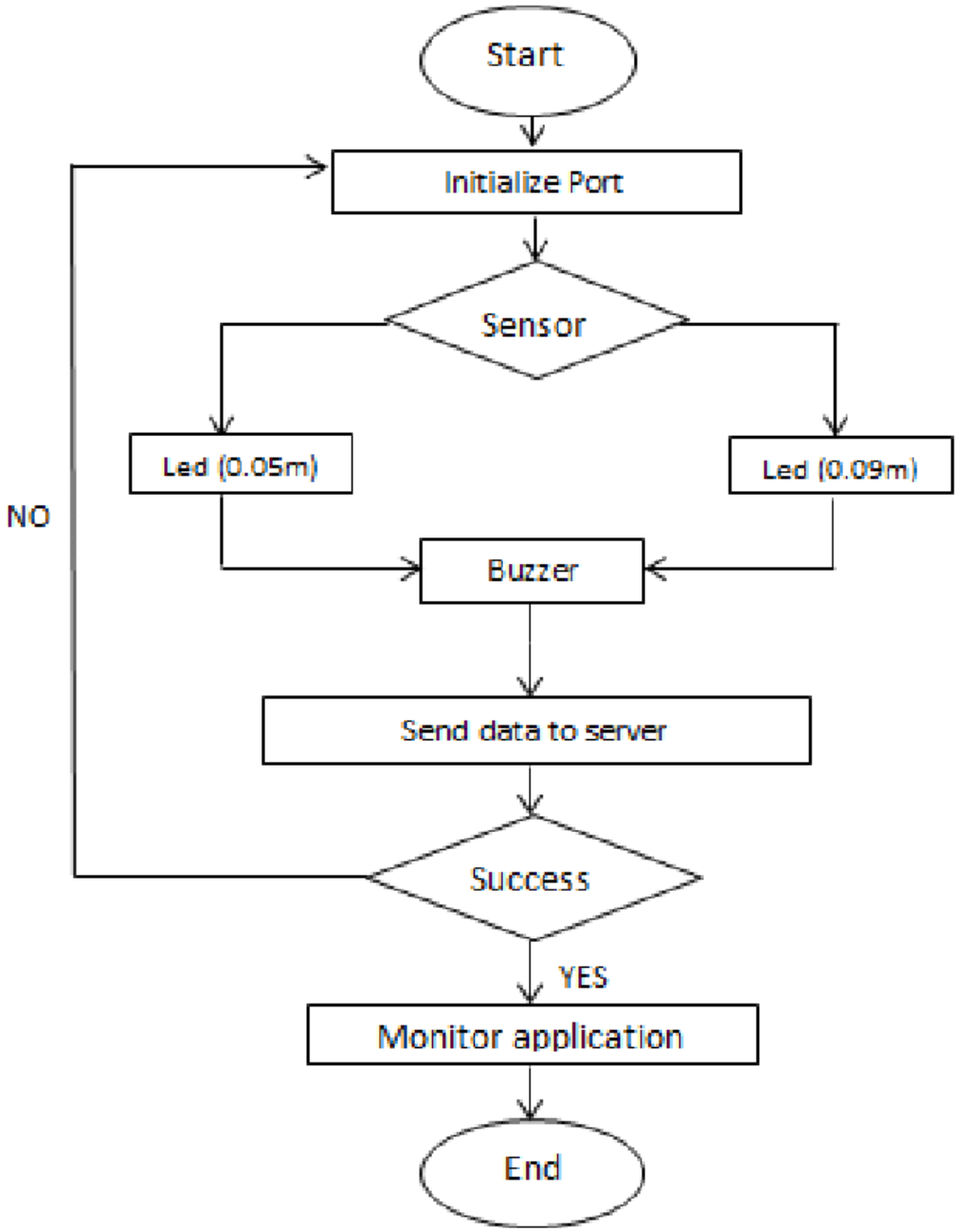
2.3 20th century fountains

Paris fountains in the 20th century no longer had to supply drinking water - they were purely decorative; and, since their water usually came from the river and not from the city aqueducts, their water was no longer drinkable. Twenty-eight new fountains were built in Paris between 1900 and 1940; nine new fountains between 1900 and 1910; four between 1920 and 1930; and fifteen between 1930 and 1940**.**

The biggest fountains of the period were those built for the International Expositions of 1900, 1925 and 1937, and for the Colonial Exposition of 1931. Of those, only the fountains from the 1937 exposition at the Palais de Chaillot still exist. (See Fountains of International Expositions).

Fig:2.3 20th century fountains

3.Resolution:



4.Graph:

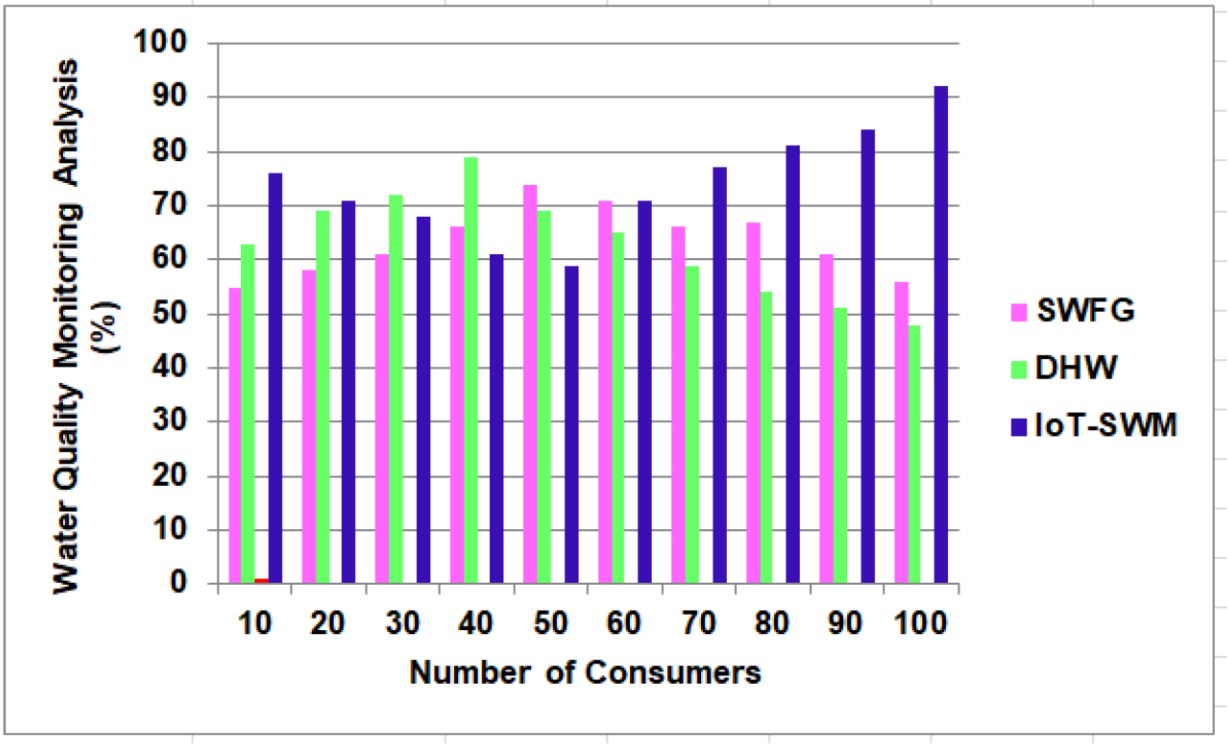


Fig:4.1 Water quality monitoring analysis.

The analyses of stormwater quality. The quality of rooftop rainwater can be affected by the local environment, roof material, and regular cleaning/maintenance. To further understand the water's diverse properties, we collected and examined 15 rainfall samples from the roofs of different buildings across the area. Samples have been analyzed immediately or within 24 h of being collected. Sterilized glass vials have been used to collect samples, subsequently transported, and kept in a freezer. The study results showed that the water samples reduced levels of chlorine anion and significant cations such as magnesium and calcium. This water meets all the requirements for safe consumption, including pH and electrical conductivity. As a result, the study's findings suggest installing a basic filtration system to catch roof sediments before they reach the storage tank and enhancing stormwater quality analysis by 98.7%.