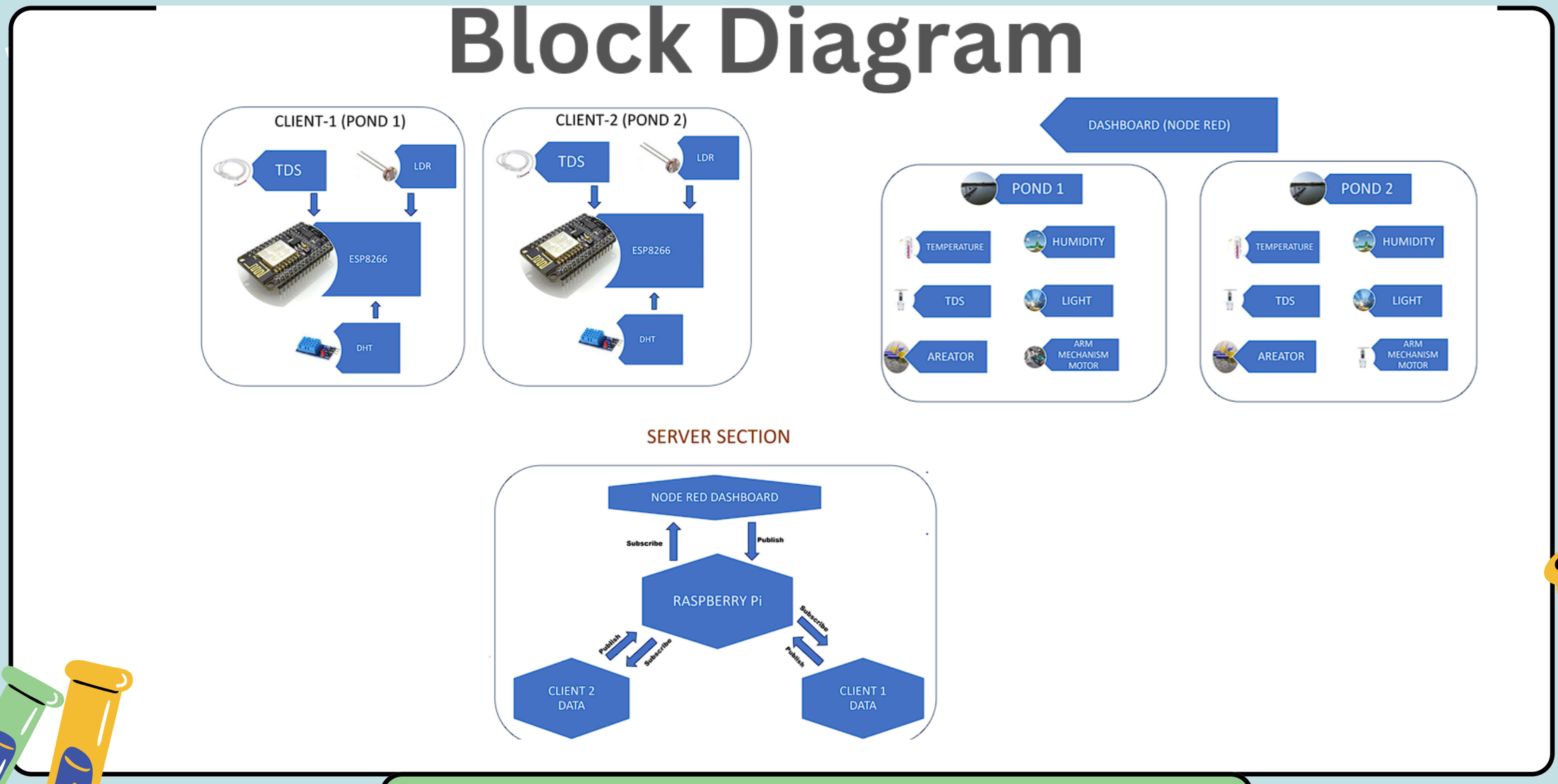
Water Quality measuring and controlling



Aim

The aim of the described project is to create an integrated and automated water quality monitoring and control system. This system utilizes TDS, DHT11, and LDR sensors, coupled with MQTT and Node-RED on a Raspberry Pi, to provide real-time data on water quality, temperature, and environmental conditions. The ultimate goal is to empower users to actively manage and control mechanisms, such as deploying the TDS sensor to deeper waters, for comprehensive and efficient water quality monitoring..

Working

The project integrates a TDS sensor to measure water quality, a DHT11 sensor for temperature, and an LDR for day/night detection. These sensor readings are transmitted via MQTT to Node-RED on a Raspberry Pi. Clients can access and observe the data, enabling control of water-related mechanisms. The arm mechanism, triggered by client input, deploys the TDS sensor to measure water quality in deeper locations, providing a comprehensive and automated water quality monitoring and control system.