**PROBLEM STATEMENT:**

In the modern world, hospitals have more than 120 rooms, and we have a well-developed healthcare system with significant infrastructure. A fifth of patients on an intravenous drip develop complications because they are given the wrong levels of fluid, according to a review of guidance in England and Wales. Taking care of such a large number of people can be challenging, particularly the current pandemic What Covid19 has shown us, Official estimates of deaths attributable to COVID-19 indicate that over 1 million Americans have lost their lives to COVID-19 since the first COVID-19 death was reported in the United States in March 2020.If there are patients in every room in such a large hospital, it is a problem. To remember every drip or IV the patient receives is challenging for nurses.

**Objectives:**

The objective of this project is:

* Enhanced precision: By integrating latest optical technology, which is primarily used for counting the drip speed and completion.
* To use a latest optical technology to continuously check the fluid level and speed.
* To make it simple for a nurse or observer to access.
* To monitor IV drip parameters in order to maintain safety and health.
* Remote patient monitoring would enable medical professionals to keep an eye on patients while they are receiving care, allowing for shorter response times in the event of difficulties.

**PROJECT SCOPE:**

A smart automated drip/IV system with latest optimal sensors and remote integration's project management scope may be divided into these stages:

* By using the latest cutting-edge optical technology for monitoring the drip speed and real-time drip completion progress, the project aims to have immediate care to the patient improving patient safety and at the same time make life of hospital staff easy.
* Using the latest optical technology would enable the system to continuously provide real-time drip/IV completion progress, define the drip/IV flow speed, and the fluid level in the current drip/IV.
* The system will be integrated with the hospital's electronic health record (EHR) system, enabling medical personnel to access patient history data, drug consumption. Analytics and reporting features will allow tracking of medication administration, dosage, and monitoring of drip.
* Mobile Notifications will allow the system to send notifications to healthcare practitioners' mobile devices if there are any issues with medicine administration, such as a potential overdose or an empty prescription bag.

The project's success will be determined by the system's capacity to improve patient safety, eliminate medication mistakes, and boost efficiency in giving IV medications and fluids. The project's success will be determined by the system's capacity to improve patient safety, eliminate medication mistakes, and boost efficiency in giving IV medications and fluids.