

## **PROJECT DETAILS**

### **Advanced Customizable Suction Mechanism for Enhanced Hospital Hygiene**

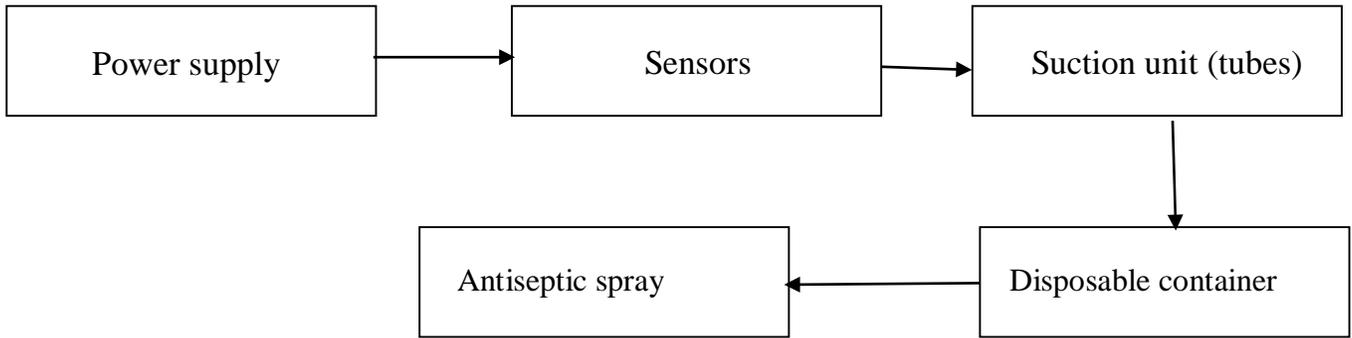
#### **1. INTRODUCTION**

Manpower requirements in healthcare settings are receiving increased attention due to the rising number of patients and various infections. The healthcare burden continues to grow because of a shortage of skilled health workers. Medical errors may occur due to work overload and excessive pressure in the workplace. Hospitals require more staff beyond just medical doctors and nurses. However, manpower alone is not the issue; the lack of skilled professionals is also a significant concern. In addition to skilled workers, hygiene plays a crucial role in hospitals. Since many people visit hospitals for various reasons, maintaining a high standard of cleanliness is essential. The fear of communicable diseases has a profound impact on people's minds due to the presence of mutated viruses, bacteria, and cells that lead to new diseases, which can easily affect the hospital environment. Hospitals maintain a high level of cleanliness in sterilized areas and operation theaters, but this level of hygiene is not always consistent in common wards. It is necessary to prevent the spread of infections and reduce disease incidence. Effective cleaning can save time and improve convenience, contributing to better hygiene. Our solution is to enhance hospital hygiene with a sense of confidence, even in common wards and laboratories. We propose a customizable suction device that automatically detects and extracts fluids such as blood, urine, chemicals, and other biofluids that can spread infections. This device can be both fixed and portable, and is customizable to meet specific needs.

#### **2. OBJECTIVE**

1. To implement an automated system to streamline and enhance the efficiency of cleaning tasks within the hospital.
2. To introduce a cutting-edge suction device to eliminate the need for manual labor and improve cleaning efficiency.
3. To minimize the likelihood of healthcare-associated infections (HAIs) by ensuring more effective and consistent cleaning practices, thereby improving patient safety.
4. To allow healthcare staff to concentrate on patient care by reducing the time spent on manual cleaning tasks through the use of automated cleaning technology.
5. To improve staffing efficiency and effectiveness by optimizing the allocation of healthcare resources.
6. To use the efficient cleaning mechanism to optimize healthcare resource distribution, leading to improved patient care and better ratios of doctors and nurses to patients.

### 3. METHODOLOGY



### 4. WORK PLAN

Content	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Study of Design												
Material Specification Study												
Purchase the components and assembly												
Testing and Calibration												
Troubleshooting and Final design												

## 5. BUDGET DETAILS

S. No.	PARTICULARS	COST
1.	Basic components	10500.00
2.	Sensor packs and Electronic consumables	6000.00
3.	Mechanical work and Fabrication	8000.00
4.	Miscellaneous	1500.00
	<b>TOTAL (Rs.)</b>	<b>26000.00</b>

## 6. REFERENCE

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