



INTRAVENOUS FLUID MONITORING DEVICE FOR PRIVATE AND SEMI-PRIVATE HOSPITAL ROOMS

**A Research Study
Presented to the Faculty of
Electronics Engineering Department
De La Salle University – Dasmariñas**

**In Partial Fulfillment
Of the Requirements for the Degree of
Bachelor of Science in Electronics Engineering**

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ABSTRACT

Title: **Intravenous (IV) Fluid Monitoring Device for Private and Semi-Private Hospital Rooms**

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The researchers aim to minimize the cases of mishaps and minor incidents happening in hospitals specifically the prevention of the occurrence of backflow, an incident brought about by the failure to replace an empty IV fluid bag. This led to the researchers' conceptualization of an Intravenous Fluid Monitoring Device for Private and Semi – Private Hospital Rooms.

This device is conceptualized using the principles and techniques that the researchers gained from the course. The microcontroller used for this device is the PIC16F877a. The researchers also used software for the design and fabrication of the circuit used in this project.

The researchers developed a dextrose stand where a weight sensor is attached and will serve as the fixture where the IV fluid bags are to be hung. This will determine the weight of the bag and detect the absence of weight, if the bag is empty or has been removed from the stand. The input to this design is the weight of the IV bag which will be relayed to the microcontroller in real time and

will activate the alarm device once the weight set for which the IV bag will trigger an alarm is attained.

The researchers recommend the future proponents to allot more time and dedication to improve this study. They may use a different sensor which will not be affected by external forces other than the input itself. They can formulate ideas on how to lessen the cost of this prototype, in terms of its production and use. The researchers also recommend the hospitals to adopt this study for the benefit of their patients.



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