Students Innovative Project Report

DESIGN AND DEVELOPMENT OF IOT BASED PORTABLE BIOMEDICAL KIT FOR HEPATITIS AND JAUNDICE

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BONAFIDE CERTIFICATE

Certified that this project Report titLED "**DESIGN AND DEVELOPMENT OF IOT BASED PORTABLE BIOMEDICAL KIT FOR HEPATITIS AND JAUNDICE"** is submitted by Mr. Sakthivel .S , Mr. Rohith .P , Mr. Santhosh Kumar .V.M who carried out the work under our supervision. Certified further that to the best of my knowLEDge the work reported herein all the guidelines prescribed by the University was followed during and after implementation of the project.

SIGNATURE OF MENTOR

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ABSTRACT

Bilirubin is a compound which is yellow in shade, happens within the ordinary catabolic pathway is the breakdown made of heme in vertebrates. This catabolism is a necessary technique inside the body's clearance of waste merchandise that get up from the destruction of aged red blood cells. There are two types of bilirubin namely Conjugated (direct) Bilirubin and Unconjugated (oblique) Bilirubin. The un-conjugated Bilirubin is Albumin-bound in serum and by no means present in urine whereas Conjugated Bilirubin is unbounded in serum and it's miles present in urine. Our proposed concept is set to determine the amount of Conjugated Bilirubin in urine. A medical kit is a collection of supplies and equipment that is used for providing medical care, especially in situations where advanced medical facilities may not be available. It can include items such as bandages, dressings, gauze, adhesive tape, scissors, tweezers, antiseptic wipes, pain medication, and other items that may be needed to provide first aid or treat minor injuries. Some medical kits are designed for specific purposes, such as survival kits or kits for travellers, while others are mare general purpose. It is important to have a medical kit on hand in case of emergencies, and to make sure that the supplies are regularly checked and replenished as needed.

A urine analysis device is a tool that is used to test urine for various chemical and biological markers. These markers can provide information about a person's health and can help diagnose or monitor various medical conditions. There are several types of urine analysis devices available, including Dipsticks, cups or bottles and testing devices. Testing devices are portable devices that can be used to test a urine sample on the spot. They typically use a combination of chemicals and sensors to detect the presence of various markers in the urine. It is important to follow the manufacturer's instructions when using a urine analysis device, as the accuracy of the results can depend on proper use of the device. There are several methods for performing a bilirubin analysis, including spectrophotometry, which measures the amount of light absorbed by the bilirubin, and immunoassays, which use antibodies to measure the amount of bilirubin in a sample. The specific method used may depend on the type of bilirubin being measured and the equipment available.

We build here a easy electronic circuit fashioned of Light-emitting diodes and light dependent resistors that may be used for analysing bilirubin concentration. We recommend this method due to the fact the BoiLED Rice grains have the capability to absorb Bilirubin pigment. This Biomedical package is used to detect the Jaundice and Hepatitis affected sufferers via quantitative analysis of bilirubin in urine.

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