An IOT - Based Glucose Level Monitoring System Using Rapberry Pi

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ABSTRACT: Diabetes Mellitus cases are increasing day by day in our life .People Who are living in urban areas effecting much. It is a long term condition, So people have to consult doctor to check their blood sugar levels. People who are living in rural area without proper medical facilities Have to go on long for treatment checking. Existing tests are economically burden to the patients,People who are suffering from anemia face more problems to check their suger levels. In .this project we implement the levels of the glucose system

KEYWORDS: raspberry pi with pi camera;Iotsensor setup; a personal computer with LAN cable . .

I. INTRODUCTION

The interntet of thing is a physical thing that is embedded with sensorsover software for the connecting and exchange the data from one device to another device.the Iot is a computing devices and machines then provide the unique identifiers to transfer the data over the network with the human to computer interaction.
An IOT will be works use of embedded systems like as processors.any type of sensors and hardware type of devices The IOT will provide business with environment.The Thing can be refer to the medical devices connecting.Today in our day to day life the most of businesses will run through internet of things.connect to different sensors.For consumer side this means information about a global networking.The basic elements of the IOT are gather data,they are inter connected data,thet have each an ip address.The processing of data can take the place of cloud.The physical devices that are connected with the physical world

RELATED WORK

Since in this technology used with the past years the Glucometer are used to check the given user glucose levels. The uses of glucometer are how much glucose are presented in blood . The peoples are often by using of with the help of manage their conditions.This is an time taking process using the glucometer.In the proposed system. A raspberrypi is a 40 pin connector,a 40 pin GPIO(General -Purpose Input and Output) is found all current raspberry pi boards The IOT sensor set up that are connected with the our personal computer with the LAN cable.In the process of IOT sensor set the raspberry pi camera are used to take the picture from the user.The another sensor is added to the project are heartbeat sensor.The main usage of heart beat sensor are to display the given particular user temperature. The raspberry pi contain the CSI connector, the camera serial interface is the specification of the industry processor. It defines the interface between the camera and host
processor

EXISTING SYSTEM

The glucose monitoring estimation method that describe the existing system one touch glucose motor are used. It is use as simple. The glucose meter as the there are two alerts audio and color alerts ae raised in glucose meter. The glucose meter are the real time product used for glucose monitoring by getting the particular analog values . We use one touch real-time products for getting the glucose level of the patients.

PROPOSED SYSTEM

The present proposed system consist of the raspberry cam are used take fingertip from the user then calculate the glucose level and temperature. In this system the laser light are points to user finger that directly connected to raspberry pi board. In this proposed system of glucose monitoring system the differ components are listed below

1. Raspberry pi Board
2. Raspberry pi Camera
3. Temperature sensor
4. Heartbeat sensor

METHODOLOGY

In this section we will discuss about the glucose level for the given user .In the glucose estimation method the raspberry pi cam was used.The proposed system consist There are two elements the RPi camera and the laser are embedded in 3D case attached with the fingertip glove .The heartbeat sensor are connected with the raspberry pi board. The use of heart beat sensor calculate the temperature for the given fingertip of the user. The USB cable are used to give the power supply to the entire raspberry pi board and the LAN cable are used with connecting with personal computer to raspberry pi LAN port. The first step is open the vnc viewere in personal computer then enter the vnc server address press the enter key,authentication window will be appear,here type the user name as pi and password as raspberry then next click on ok button. Next raspberry pi vnc viewer window will be appear. The window will contain four pi related options go to the raspeberry pi option The another step is press programming option. The next step to run the particular code on python programming.

I.   EXPERIMENTAL RESULTS

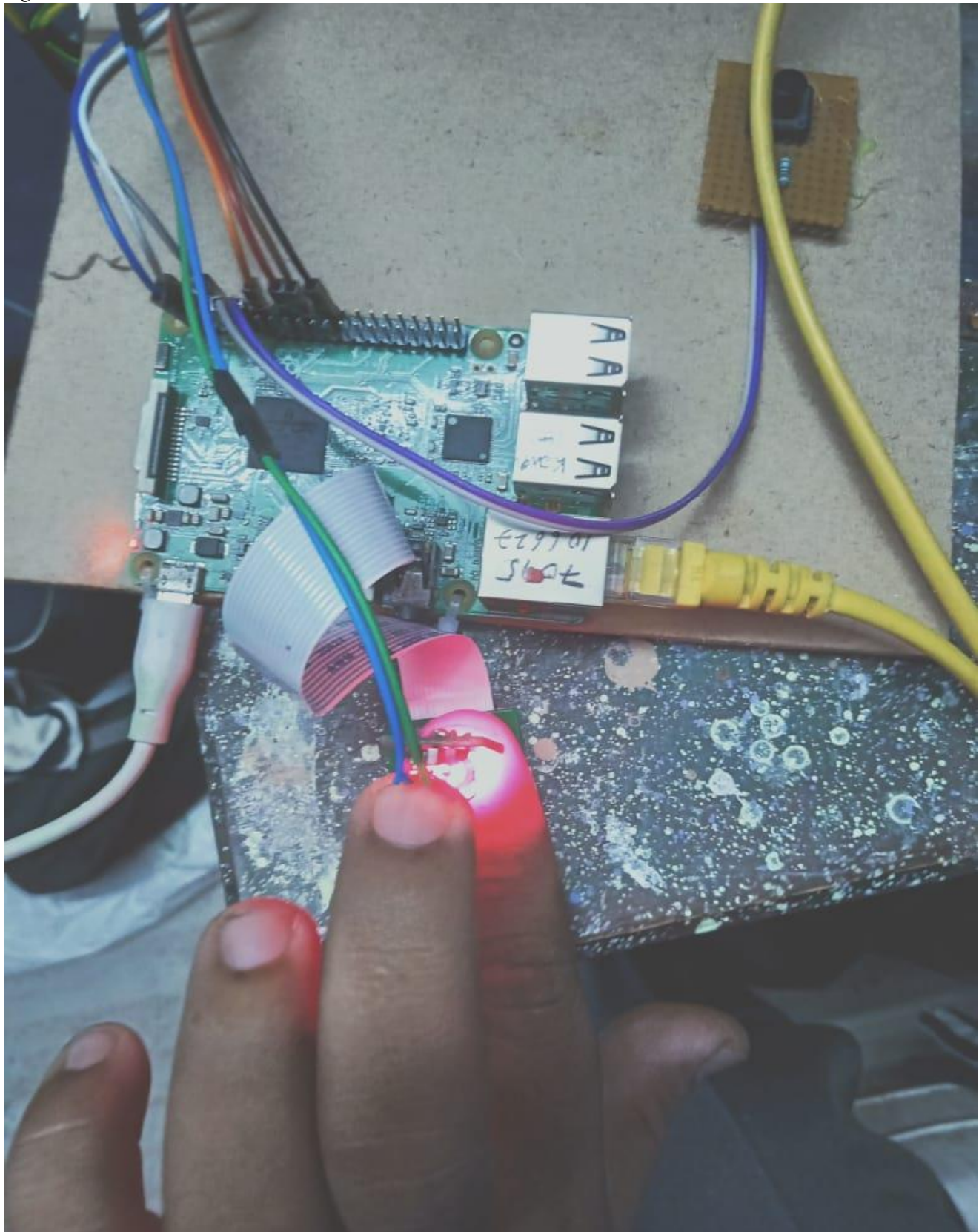Fig:1 will explains the taking the fingertrip image from the given user

Fig:1

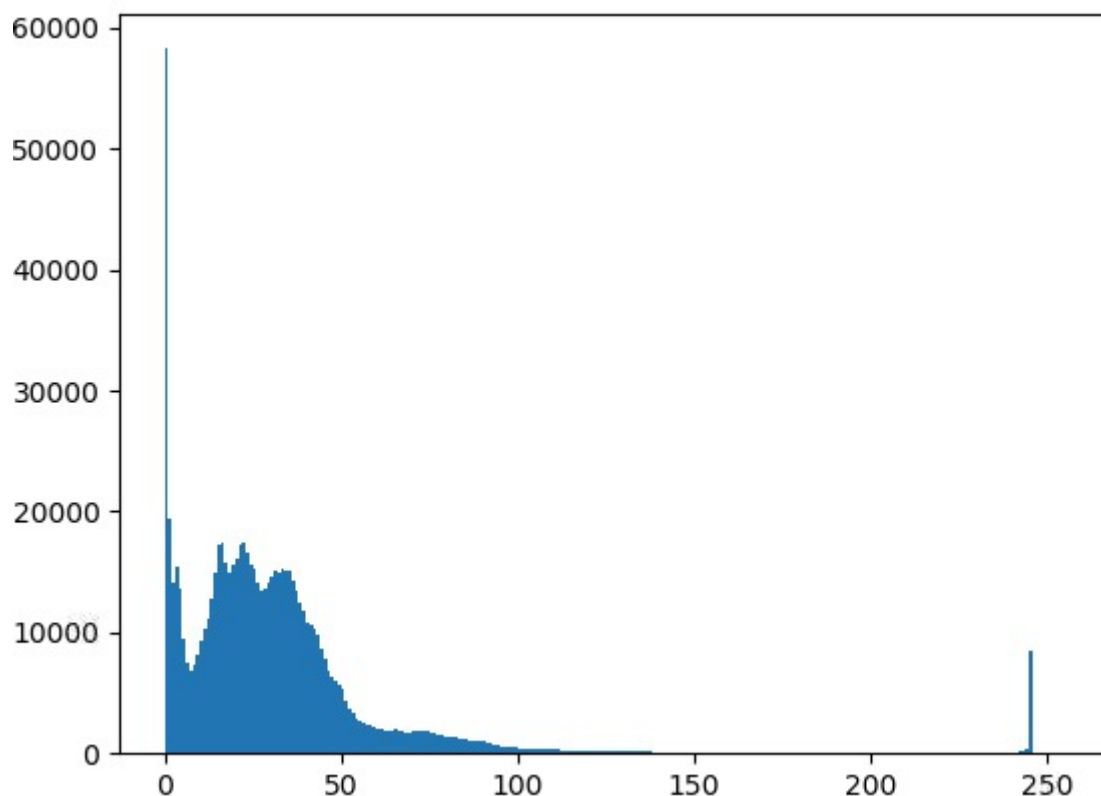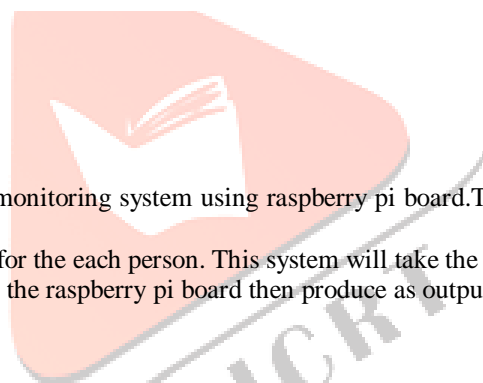Fig 2 is exaplains the glucose level for the particular user .

Fig:2

CONCLUSION

In this paper, we proposed an IOT based noninvasive glucose level monitoring system using raspberry pi board.The result we can take the picture from the user and displays the glucose level

In this system we implement the glucose level and body temperature for the each person. This system will take the input as user fingertip with laser light raspberry pi camera then it will pass through the raspberry pi board then produce as output.

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