**Project Description:-**

In large hospitals, hundreds of patients are admitted at a time. One or the other patient continuously keeps calling the nurse for some or the other emergency. The nurses have to continuously run from one room to another to attend the patient. At the same, they have to keep watch that from which room the patient is calling. But using the IOT system, we can reduce some tension of the nurses by providing them an app to see which patient is calling them. This app will also provide basic health conditions as temperature which will notify them if it is above threshold level. This system will make their work easy.

**Design Process:-**

* This system is basically for patient monitoring.
* Buttons are provided in rooms for patient.
* Buzzer is placed near the nursing department where all the nurses are available.
* The system is designed such that when any patient press the push button, the buzzer start to ring/buzz in the nursing department.
* The system is connected to app which is the IOT platform for this system.
* When the buzzer starts buzzing, corresponding led starts glowing the indicator which is placed in the app.
* App will also provide body temperature of patients so nurses don’t have to go in the room every time.

**Design option:-**

|  |  |  |  |
| --- | --- | --- | --- |
| |  | | --- | | App |  |  | | --- | | Alarm |  |  | | --- | | Controller |     Nursing Station |

Cloud/ Server

|  |
| --- |
| Bed 1  Controller |

|  |  |  |
| --- | --- | --- |
| Bed 2  Controller |  | Bed 3  Controller |

**Option Evaluation and choice:-**

1] Temperature sensor:-

There are varies types of temperature sensors such as NTC thermistor digital temperature. We have to measure the temperature of patient so we will use digital temperature. TSYS is a type of digital temperature sensor which offers accurate temperature measurement.

2] Push buttons:-

Electronic push button switch is used.

3] Controllers:-

Arduino – Easily available, low cost, no inbuilt WiFi module

Raspberry Pi – Easy to use, So many functions which we will not need for this project, inbuilt WiFi module, High cost

Netduino N3 Wi-Fi – It’s programmed in C ,easy to use

NodeMcu – Easy to use, easily available, inbuilt WiFi module, Low cost

We will use NodeMcu for this project.

4] WiFi module:-

We don’t need separate WiFi module as NodeMcu has inbuilt module in it.

5] Cloud to save data

6] App for nurses:-

We can develop app for our project using MIT app developer or Blynk. We will use Blynk as it has easy user interface and simple for connection. It can be connected to wide range of controllers.

7] Buzzers:-

We will use buzzer for alarms at nursing stations

8] Connecting wires