A close up of a map

Description automatically generated

Figure 1.1

Figure 1.1 shows the circuit diagram of the Patient Monitoring System. There are two adjacent circuits in the above diagram. Firstly, diagram on the left is the NodeMCU circuit and the sensors connected to it. This NodeMCU is used to ………

It is initialized independently by a six-volt battery power supply. It is capable to receive external power input from 5V due to low power consumption in IOT application especially in wireless communication [1].

There are two sensors connected directly to the NodeMCU, which are the BPM Sensor (Heart Rate Sensor) and the DS18B20 Temperature Sensor. The BPM Sensor is an analog based sensor, therefore the signal pin of the BPM Sensor is connected to the A0 pin of node MCU. The DS18B20 Temperature Sensor is a digital sensor where it is connected to the pin D2 of the NodeMCU to send information. Four 1.5 V AA sized batteries are connected in series in this work. The power supply is connected to the Vin (+) and GND (-) pins to turn on the NodeMCU whereas the other sensors are powered from the NodeMCU itself. A 4.7kΩ resistor is connected between the 3.3V output and the signal pin of the DS18B20 Temperature Sensor.

The diagram on the right is the circuit connection for the Raspberry Pi. There is only one device connected to it which is the Pi Camera. The Raspberry Pi has a dedicated slot for the Pi Camera to be attached and it is power by a USB power source.

# References

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| [1] | T. Qiang, G. Guangling, L. h. C. Lina and W. Han, "Nodemcu-based Low-cost Smart Home Node Design," in *IOP Conference Series: Materials Science and Engineering*, Jinan 250002, China, 2013. |