IoT Based Health Monitoring System

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This project charter describes the overall elements of our project. We present

the purpose and the objective of the project then we describe the whole scoop

specifying the inputs and the outputs.

1 | Project Purpose

The project purpose is to help the doctors and nurses to monitor the patient

heath state remotely with no need to be next to him and to ensure that the patient

is staying in the best environment.

2 | Project Objective

In the end of the project a Dash-board will be displayed showing all the data

and information needed to know the state of the patient in real time.

3 | Project Scoop (Hardware)

3.1 Sensors

— DH11: for room temperature and humidity

— LM35: for body temperature

— SEN11574 & AD8232: for heart monitoring.

— ADXL335: for patient position detecting

3.2 Cards

— Arduino Uno: we will connect Arduino to the sensors where we will get the information from.

— ESP-8266: It will make us able to connect to the internet and send the data to the cloud where we will process it.

4 | Project Scoop (Software)

4.1 Inputs

Patient Data

— Body Temperature

— Body Position (standing, laying : up, down, left, right)

— Heart Rate

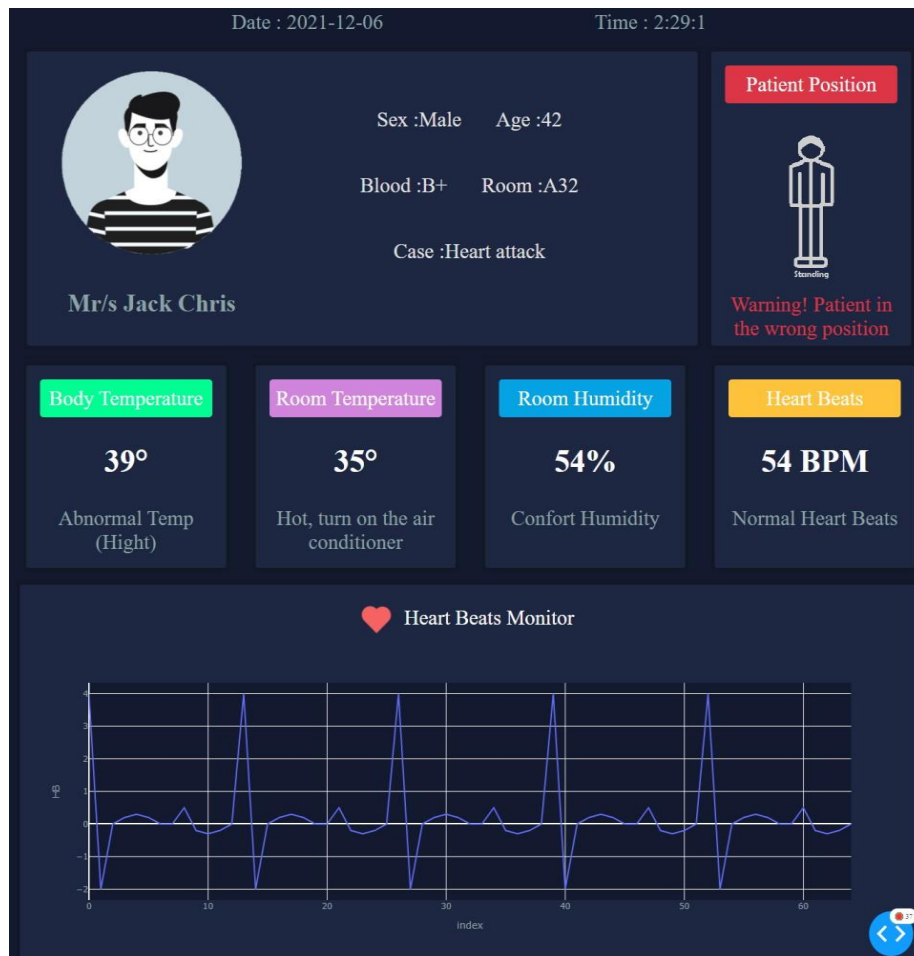Room Data

— Temperature

— Humidity

Doctor specifications

— Position of laying (if exists)

4.2 Outputs

Dashboard (Real Time)

— Body temperature (real time): The dashboard shows a notification to the doc-

tor/nurse if the body temperature reaches the abnormal.

— Body Position (simulated photo): The dashboards show a notification to the

doctor/nurse if the body position is different of what the doctor had declared.

— Heart Rate (number per minute): The dashboard shows a notification to the

doctor/nurse if the average heart rate reaches the abnormal.

— Room Temperature (real time): The dashboard shows a notification to the doctor/nurse if the room temperature reaches the abnormal (Hot/Cold).

— Room Humidity (real time): The dashboard shows a notification to the doctor/nurse if the room temperature reaches the abnormal.

5 | Out of Scoop

This system is not a medical decision-making system, and does not help the

doctor to take medical decisions according to its data, it's just for monitoring the

health state of the patient and it help the nurses or doctors to take the intervention

when it is needed.