

# ***Asthma Monitoring Device***

ASTHMA MONITORING DEVICE

Digital project manager

# Device Model Structure



# Devise Monitoring Factor

- Tracking Cough
- Respiratory Pattern
- Presence of Wheeze
- Heart Rate
- Activity Level

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# Device requirement

The Device is based on monitoring asthma in patients body and the device is portable. This device is going to measure the asthma rate of patients using sensors. Device sends the data from the sensor to the cloud. The patient's mobile phone will be connected and get data from the device and help the patient to check his asthma level in his body.

## Use Case

Monitoring asthma in patients body

# Power supply

Rechargeable battery

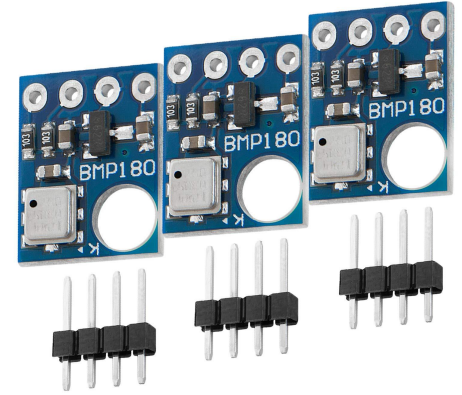


## • Microprocessor

Microprocessor used is Raspberri Pi. Huge processing power in a compact board. Many interfaces (HDMI, multiple USB, Ethernet, onboard Wi-Fi and Bluetooth, many GPIOs, USB powered, etc.). Supports Linux, Python (making it easy to build applications) Readily available examples with community support. Developing such an embedded board is going to cost a lot of money and effort. Raspberry Pi collects the data from sensors and sends the data to MQTT Broker. The mobile device and the patient doctor gets subscribed and receives alerts.

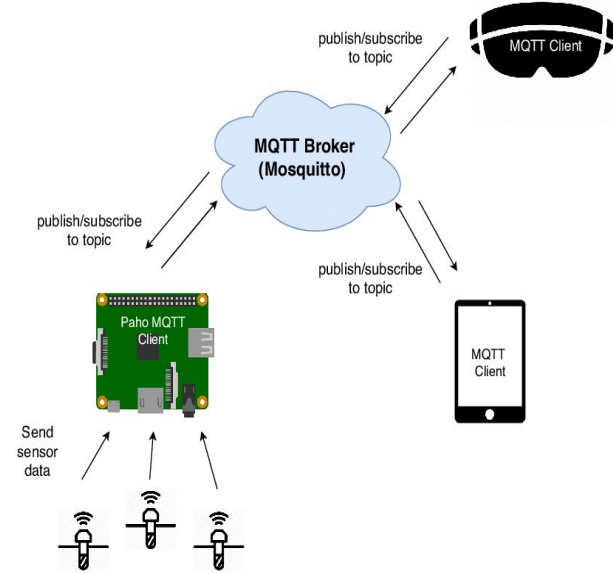
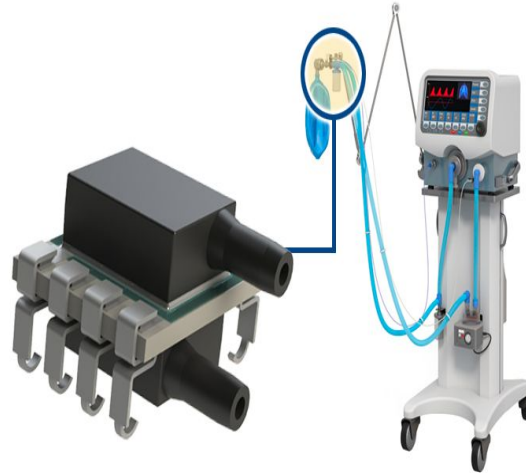
# Sensors used

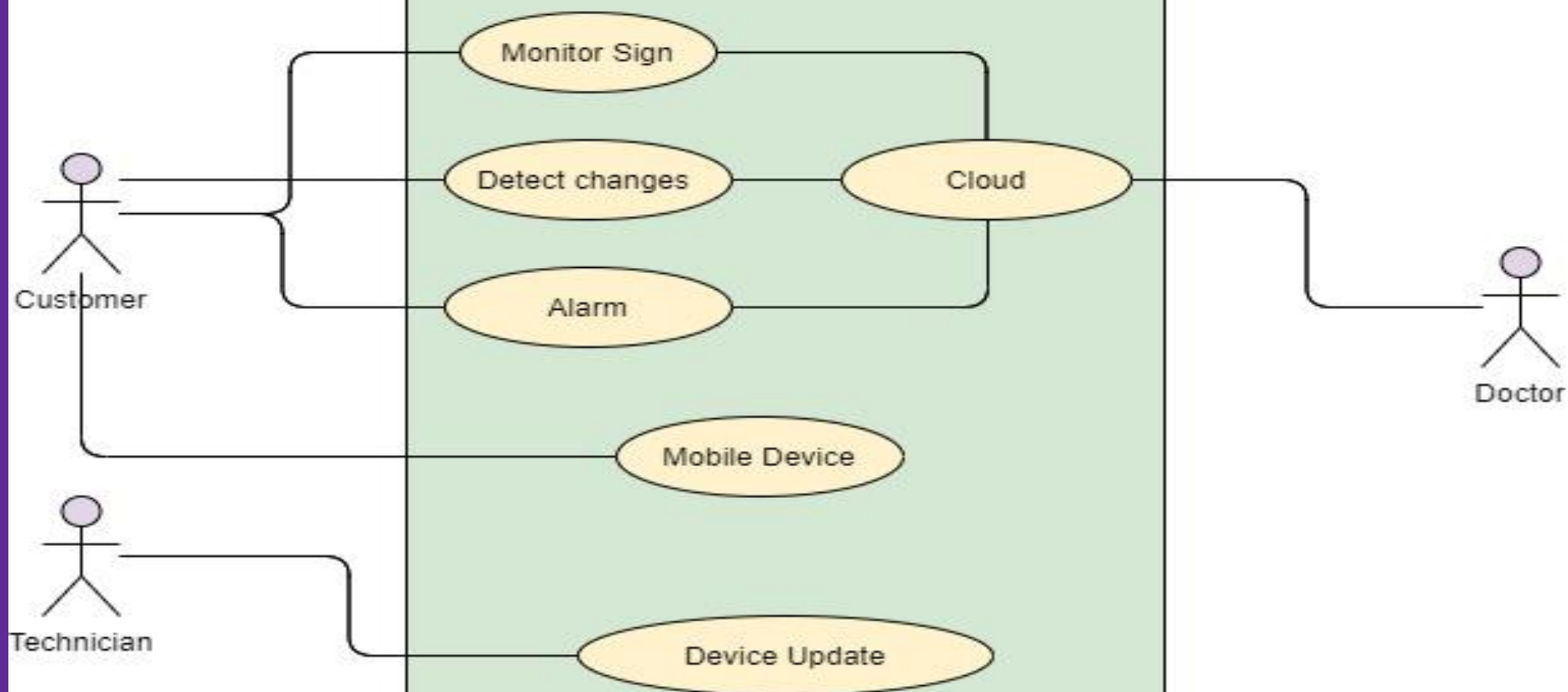
- activity and motion sensors
- location sensor
- ambient temperature and humidity sensor
- air pressure sensor

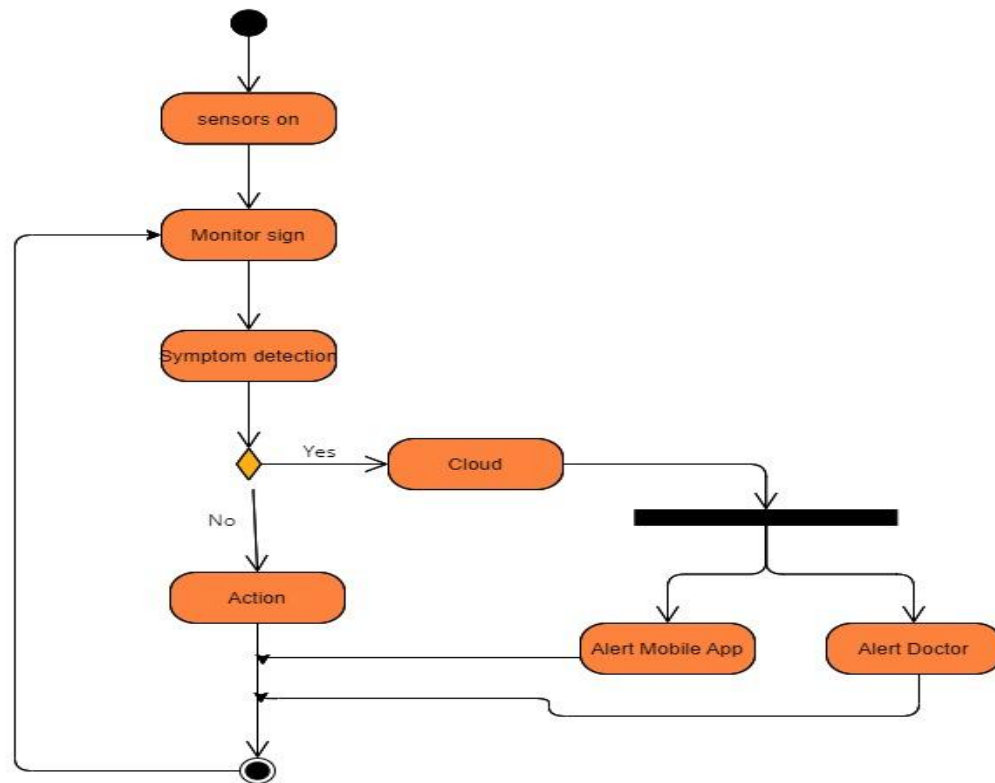


# Communication Protocol

MQTT Broker

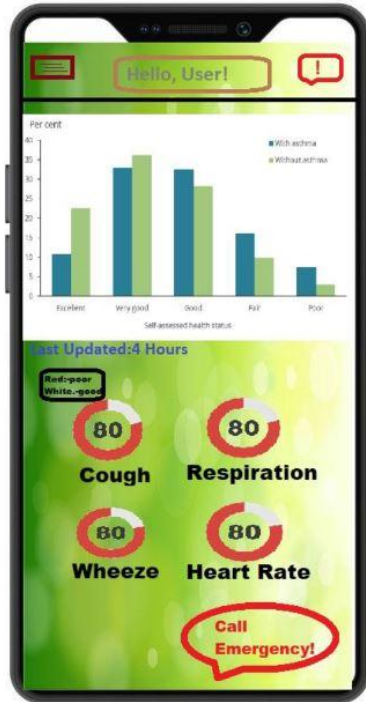








# User Interface



Mobile app login screen for "ASTHMA HEALTH CARE". The screen features a green background with a bokeh effect. It includes a logo at the top left, followed by "User-ID" and "Password" labels above their respective input fields. A "Forgot password?" link is located below the password field. At the bottom, there is a "Create Account" button.

# Thank you

**Kajeepan Umaibalan**

