FINAL YEAR PROJECT PRESENTATION

IOT BASED INFANT INCUBATOR

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Presentation Over Flow

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- Project Application
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- Conclusion

Project Objective

Today, technology is progressing in every conceivable way, particularly in the field of well-being and care items, mainly where necessities support life. Extra care is taken concerning babies. Particularly if there should arise an occurrence of premature (newborn children that appear on the scene sooner than full-term) babies/Low birth weight (under 1 kg) babies, who wouldn't have built up the Thermo-regulatory instrument (i.e. not ready to change by the outside ecological temperature on account of do not have the muscle to fat ratio) the safety measure is multiplied. The Neonatal Intensive Care Unit (NICU) is intended to give a climate that limits weight on the newborn child and addresses real issues of warmth, nourishment, care, and insurance to guarantee legitimate development and improvement. In such cases, babies must be kept either stripped/half-exposed in a hatchery (which can keep up the temperature inside it and solaces the child).

Features of the Project

Health of Infant

We have features to measure the health of the infant which include:

- Body Temperature
- Electrocardiogram (ECG)
- Blood Oxygen Level (SPO2)
- Weight of the Infant

Incubators

The features in the incubator like:

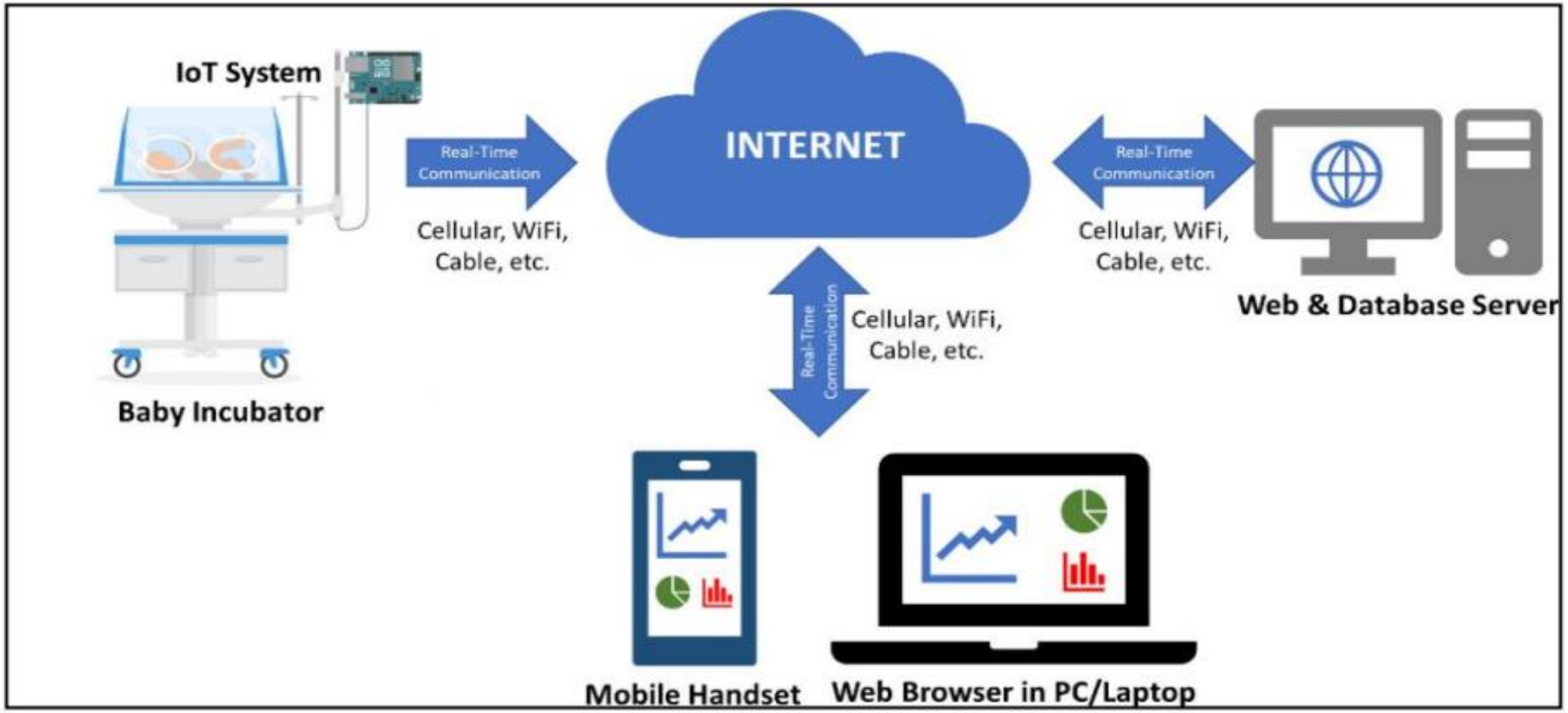
- Incubator's temperature & Humidity
- Oxygen level inside incubator
- Air pressure inside the incubators
- Phototherapy lights
- Emergency alert system

Web-Server

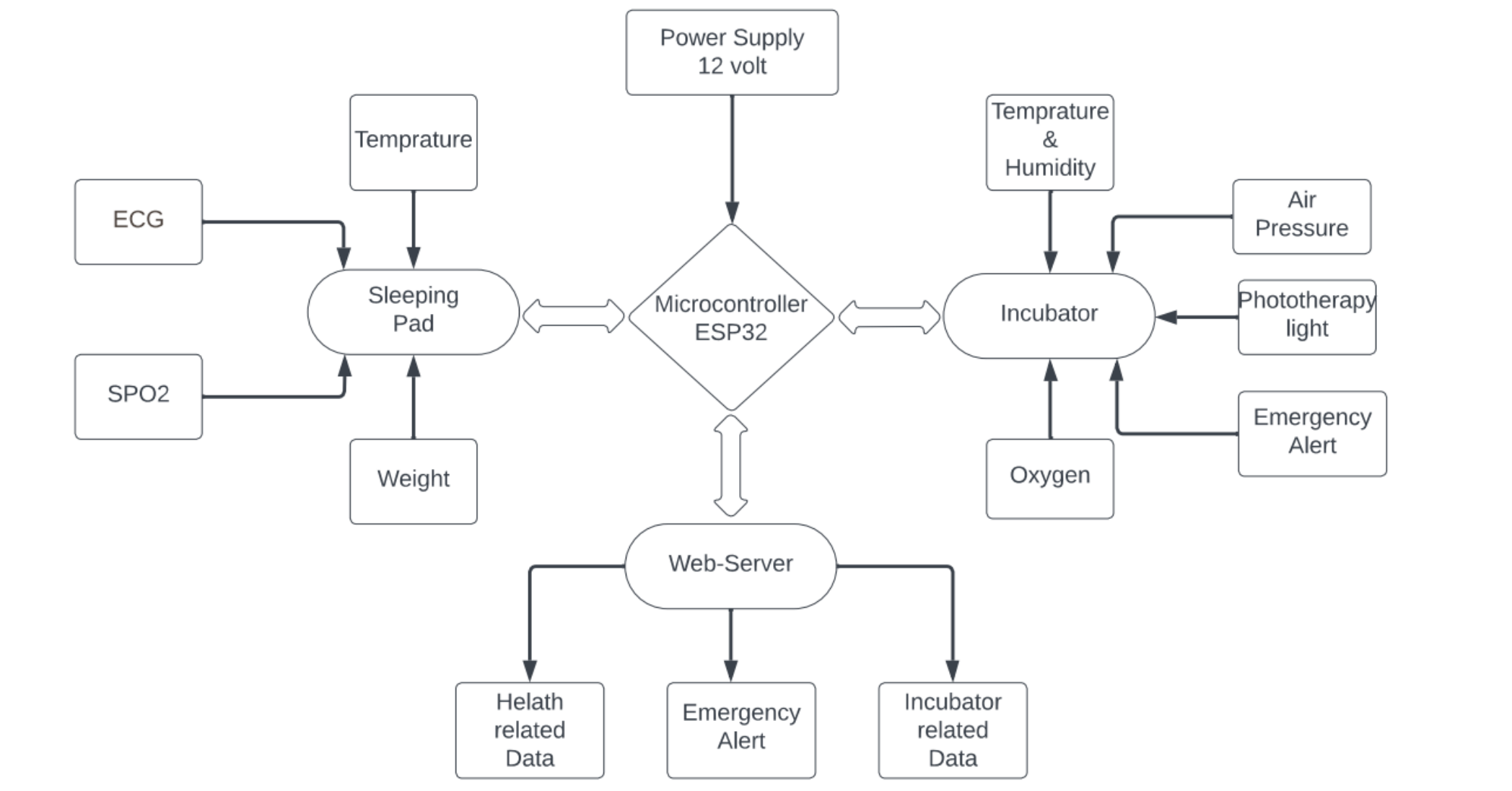
All the data monitored by the sensors will be reflected in real-time on the website by the web server and from anywhere we can check and make some changes like:

- Health's data
- Incubator's data
- Emergency alert

Block Diagram



Flow Diagram



Electronics Components

Health Sensor

- ECG sensor (AD8232)
- Body Temp. (MLX90614)
- SPO2 (MAX301002)
- Weight Sensor (HX711)

Incubators Sensors

- Temp. & Humidity (DHT22)
- Pressure sensor (MBMP180)
- Oxygen sensor
- Phototherapy Light

Emergency Alert Sensor

- microphone
- Buzzer
- Red LED

Application

- This project can be used in area where hospitals and not developed.
- It also be used for premature birth.
- Our system is easily connected with any type of incubators.
- Anyone can easily use and manipulate this system through the website.
- Since it is IoT based hence we can easily monitor all the data from anywhere.

Future Enhancement

- We will add some more features like blood supply control, nutrient supply, and more health data monitoring.
- We will also improve our UI system to make it more easily usable.
- We also improve the size to make it more portable.

Conclusion

Considering, this work proposed a model of an infant youngster incubator that is sensible to be used for office in the rustic locale. A moderate, transportable, and essentialness-saving infant youngster hatchery was adequately made through this work. The place might provide a correct condition that over the long-term ready to deflect child that was thought of within the nation district from hypothermia condition. They will have the ability to get the fundamental consideration inside a concise period in the midst of the essential condition, subsequently decreasing the mortality case among them.


THANK
YOU