IoT BASED BABY MONITORING SYSTEM

**Team Name: NOT FOUND**

**Team members:**

2320040038 – Anjali P

2320040035 – Bhavya Sree B

2320040118 – M Hema Sri

2320040039 – P Trinayani

**Problem statement:**

A mother wishes to track her sleeping baby remotely from the workplace to have a comfortable environment. She requires an IoT system that will switch on the AC and close the curtains automatically whenever the room heats up and gets humid. In any other case, the curtains stay open, and the AC is off. In addition, she needs the system to remind the babysitter whenever the baby needs a diaper change. Design and implement an IoT system to meet these needs.

**Introduction:**

The Internet of Things, or IoT, is a tool for automation and remote monitoring that connects physical devices, sensors, and software to the internet so that data collection, exchange, and processing are feasible. An IoT system typically comprises real-time data acquisition sensors, microcontrollers for data processing (ESP32 or Raspberry Pi), and wi-fi, Bluetooth, or cell connectivity to transmit information to the cloud on AWS or Firebase. As an example, in case the room is overheated, the AC may be automatically switched on or diaper change alerts may be transmitted. In intelligent homes, healthcare, farming, and factory automation, IoT technology is used to help with quicker and more comprehensive decision-making.

**Context:**

Current generation parents being occupied in busy life schedule find babysitting will be hard. This abstract will present clear information regarding how we find the solution of this real-time issue by making use of the IOT system for monitoring the baby and enhancing the essentials. The Internet of Things (IoT) has transformed home automation, provided levels of control and monitored never before seen. From smart thermostats to networked security cameras, IoT devices are increasingly becoming part of daily life. This technology offers a special chance to meet the particular needs of working parents, giving them real-time information and remote access to their child's surroundings.

**Potential solutions:**

* For controlling the AC:

If we increase the temperature above the from the threshold value using fewer IOT devices such as humidity sensors and temperature sensor and fewer other actuators we will regulate the activities such as regulating the AC by switching on and off.

* To control the curtains:

To close curtains once the AC is switched on, we control movement of curtains by using servo motor. In case AC is switched off then the curtains will close by utilizing same sensor.

* For sending alert for baby sitter:

Solution1:

We use pressure sensor which is attached to the cradles where it will give notification after detecting the change in pressure. It sends a remainder to a baby sitter that the diaper needs to be change.

Solution2:

We employ a sound sensor such as microphones to provide an alert when the baby cries from inconvenience such as wet diaper or hunger etc. We will utilize CC cameras to observe the baby by the parent.

* To give access to the parent:

We will utilize Bluetooth module to interface the all devices with ESP32 whereas the parent will access the actions within an app.

**Expected Outcomes:**

The parent will get notified on the website and warn the babysitter to assist the baby. The parent will continue to monitor the baby with the app available. If the temperature rises above the room temperature the AC will close the curtains by servo motors and if the temperature goes below the room temperature the Ac will stop and he curtains will open.

When in the cradle pressure crosses the sensor senses the change and sends a notification to the mother with assistance of app and with assistance of Bluetooth microcontroller transmit the remainder to the babysitter.

**Conclusion:**

A system of IOT is designed to meet the needs of the mother who wishes to check her sleeping child remotely from her office so that she can ensure a comfortable environment. She requires an IoT system that automatically switches on the AC and shuts the curtains whenever the room gets hot and humid. Otherwise, the curtains will not move, and the AC will not be switched on. She can also instruct the system to send reminders to the babysitter whenever the baby needs a diaper change.