IoT Based Baby Monitoring System using Smart Cradle

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Abstract: *Nowadays current number of working mothers are increased. For that Parents are sending their children's to the baby care houses they are worried about the secureness, health of the baby So we have proposed a smart Cradle with so many benefits to help a working mother. By this cradle with So many benefits to help working mother. By this cradle working mother can also monitor the babies activities. This cradle is connected to the parents mobile to monitor the babies activities. We have used a many of the sensors to Sense & send the intimation alert messages to the parent, mobile Suppose it the baby is crying then the cradle Start automatically swinging & plays melody songs. the until the baby a Stops Crying Sound Sensors are attached to the cradle by hearing the Sound of the baby the cradle Starts Swinging. we have used a sensor to check the heartbeat, room & baby temperature of the baby. Moisture sensor is used to check whether the baby's diaper is condition is wet. To avoid sending childerns to the baby care houses use this Smart cradle for more benefits & they helps the mother.*

Keywords: Baby Monitoring

I. INTRODUCTION

Baby health monitoring is very important working mothers are increasing now days so it is difficult to monitor the babie's health all the time. Parents are busy with their professional life, they do not get sufficient time to take care of their babies so they are Sending their babies to baby care houses but they are worried about their babies in the care of others. So, we proposed a Consist of baby monitor my system that Video Camera & wifi module to that it can send data & immediately notify the Parents about their baby activities.

II. LITERATURESURVEY

According to our survey, we have used an Arduino board it is a open source hardware and software company. Earlier everyone used a raspberry Pi. Raspberry Pi has more features in the board itself. But in our smart cradle we have used an Arduino with all the features which are present in the raspberry Pi. Raspberry Pi is very costly compared to Arduino. So with the low cost we have many features in the smart cradle. Some are used only automatic swinging and some are used only sound and temperature sensors and some are used only ESP camera. But in our cradle system we have used all the sensors in only one device. If the baby starts crying the cradle starts swinging automatically and also checks the heartbeat of the baby and live monitoring is visible to the parents mobile and also sends intimation message through telegrambots.

III. METHODOLOGY

Arduino:
It is a open source hardware and software board which helps all the activities on one single Board.

Heart Beat Sensor:
It helps to check the babies heart beat whenever necessary it checks the heartbeat and sends the intimation message to the parents mobile through telegram. If the heart beat is more it sends message as (more heart beat) if it is normal it shows the heart beat.

Wet sensor or moisture:

It helps to check whether the babies condition is wet or not. If the babies condition is wet then it sends an intimation message as wet detected. So that, we change the diaper of the baby..

Temperature Sensor:

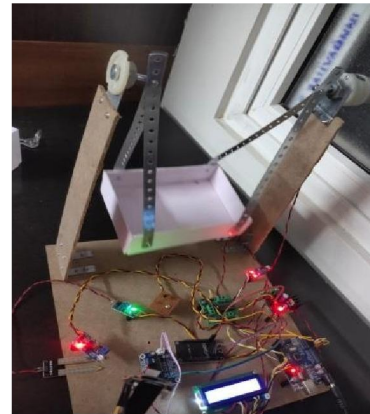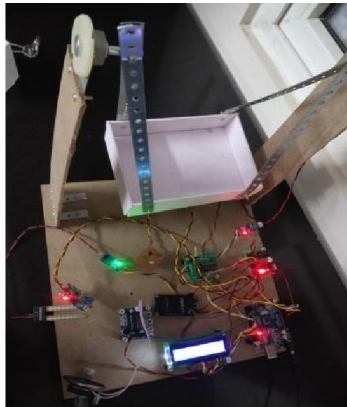It helps to check the body and room temperature of the baby.

Sound Sensor:

It detects the babies sound and if the baby is crying then the cradle starts automatically swinging.

ESP8322 Camera

It helps to monitor the baby activities by live streaming.

IV. PROTOTYPE

V. RESULTS
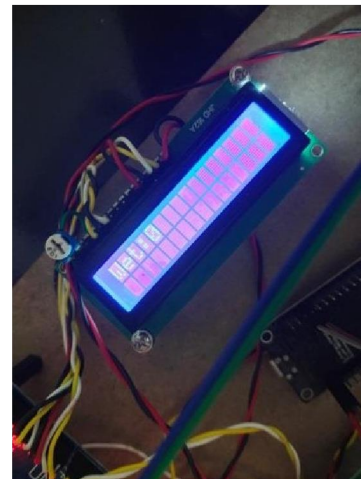

Fig1:Temperature   Fig2:To check heart beat   Fig3:Wet Sensor

Fig4:Sound Sensor
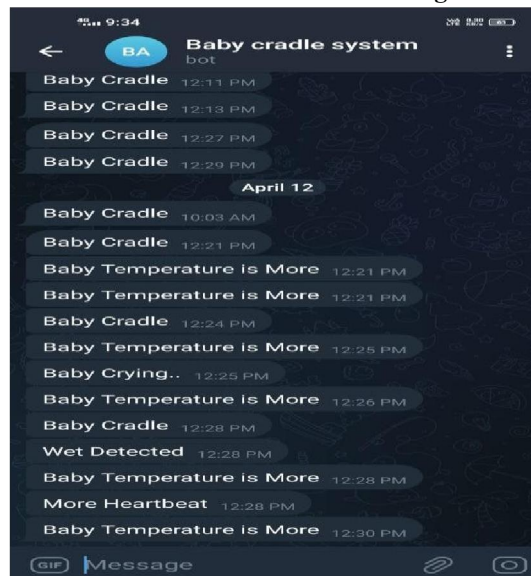

Fig5: Heart beat Sensor

Fig6: Telegram bot intimates messages to parents about their baby.

VI. CONCLUSION

The modern-day workforce comprises of working parents. Baby monitoring system helps in monitoring the baby without direct help from any human in the times of busy working schedule for both the parents. The baby monitoring system is equipped with live video relay to the parents, so that, in case of exceptions, the parents or the guardian can act accordingly. The baby monitoring system utilized the entire proximity of the room to ensure that the baby is safe from any external elements. This system is equipped with the various sensor to endure the safety of the baby and make the parents aware of what happening around the baby.

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