1.INTRODUCTION

1.1 PROJECT OVERVIEW

Internet of Things (IoT) is a set of systems and devices interconnected with real-world sensors and actuators to the Internet. It is able to make decisions via detecting the surrounding environment without human interaction. In this research, IoT is applied to propose a wearable smart band which helps parents to monitor and get known of their child's condition at anywhere and anytime even if they are not by their children side. Via the IoT smart band, children safety is guaranteed, and crime rate is reduced as immediate actions can be taken in case the child is in danger. Besides, unlike existing smart band, which is less focusing on child security aspect, the proposed system emphasizes in getting as much data as possible so that actual situation can be identified. Since to prevent children before being attacked, an autonomous real-time monitoring system is necessary for every child out there. In this system, the collected values from every sensor like temperature sensor, pulse rate detection sensor, metal detection sensor, and the location value from GPS are used to detect the status of the child and alerts the respective guardians using GSM accordingly.

1.2 PURPOSE

Enable tracking of the child's location and capturing of data remotely such as temperature, pulse, respiratory rate, quality of sleep and many more.

TEo show the child's actual data with reference values. Enable sending of notification if the child is out of location or when the device realizes abnormal conditions/situations. To trigger the alarm and enable automatic video recording whenever the emergency button is pressed. Then, emergency notification along with real-time video will be sent to and display in the parents' mobile apps. Develop a prototype of IoT wearable smart band connected to parents' mobile apps so that they can monitor the actual condition of children at anytime and anyplace. Child tracker helps the parents in continuously monitoring the child's location. They can simply leave their children in school or parks and create a geofence around the particular location. By continuously checking the child's location notifications will be generated if the child crosses the geofence. Notifications will be sent according to the child's location to their parents or caretakers. The entire location data will be stored in the database.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

This is based on IOT (Internet of Things). As we know in present era everything is based on digital technology. Human being is going to connect each other by using mobile network. This paper proposes an SMS based solution to reduced parent insecurity and schools to track children's in real time. Different devices are connected with a single device through. The concerned device is

connected to mobile via SMS. The device can be used by stockholders to track children and get real time data. The main Advantage of the proposed system is sent location by using mobile network (GSM). Here a prototype model (device) is created which is hardware based. The work comprises ARDUINO UNO as microcontroller, along with GPS and GSM module. This device will also have the facility of different status of children by measuring the speed of hand movement of children.

2.2 REFERENCES

1. Morris Williams, Owain Jones, Constance Fleuriot and Lucy Wood

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3. Sai Pramodh Kumar.K; Bhavishya.p; Geetha.K; Rajesh Reddy.K; PatanMahammadAkhil

4.Anwaar Al-Lawati, Shaikha Al-Jahdhami, 'RFID-based System for School Children Transportation Safety Enhancement', Proceedings of the 8th IEEE GCC Conference and Exhibition, Muscat, Oman, 1-4 February 2015

5. M Nandini Priyanka, S Murugan, K. N. H. Srinivas, T. D. S Sarveswararao, E. Kusuma Kumari, 'Smart IoT Device for Child Safety and Tracking' International Journal of Innovative Technology and Exploring Engineering, Volume 8, Issue 8, June 2019

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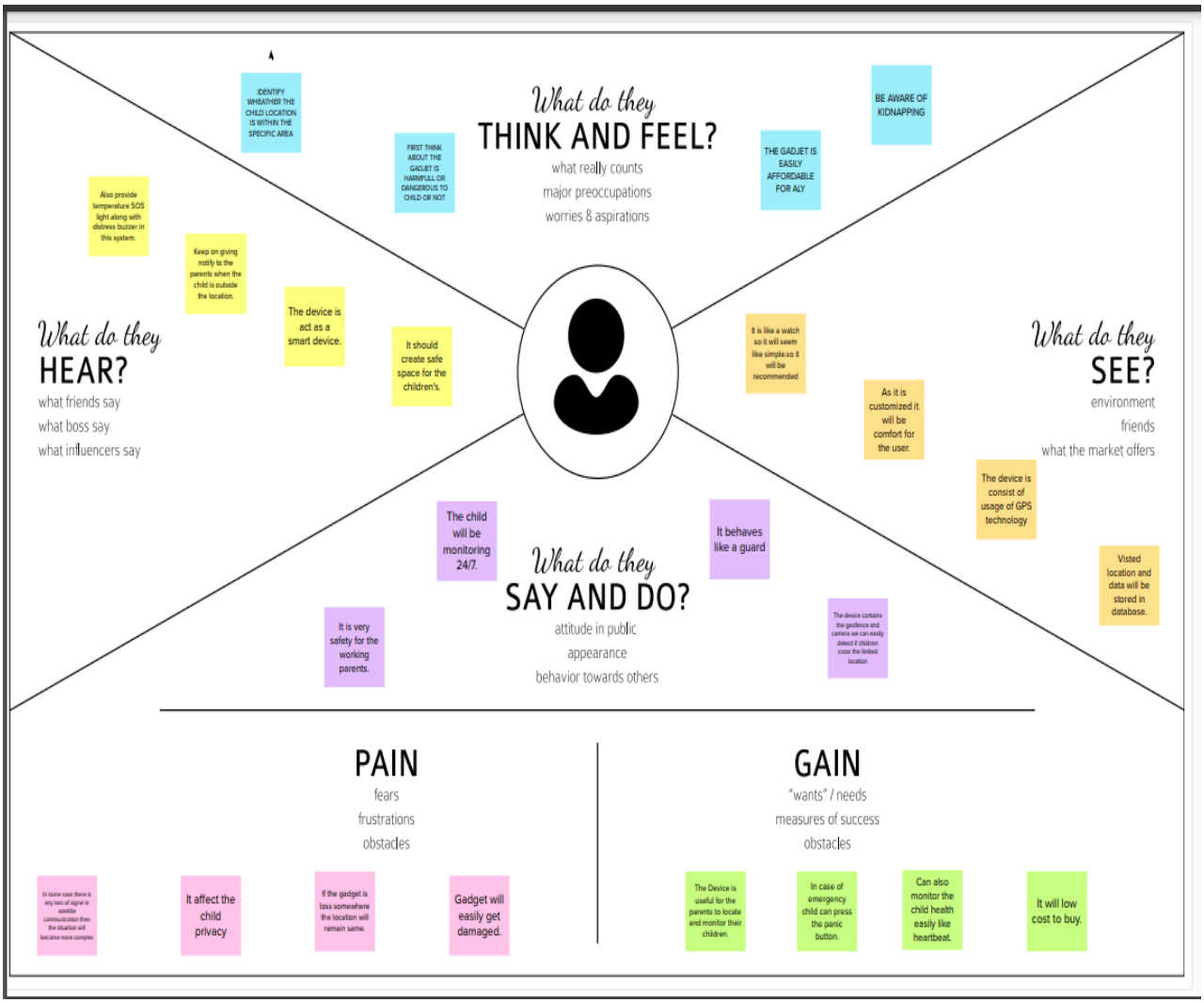
7. A. Helen, Kalaiselvi V.K.G, M. Fathima Fathila and R. Rijwana. A smart watch for women security based on iot concept ‘watch me’, International Conference on Computing and Communications Technologies (ICCCT),2017.

2.3 STATEMENT PROBLEM DEFINITION

Child tracker helps the parents in continuously monitoring the child's location. They can simply leave their children in school or parks and create a geofence around the particular location. By continuously checking the child's location notifications will be generated if the child crosses the geofence. Notifications will be sent according to the child's location to their parents or caretakers. The entire location data will be stored in the database.

3.IDEATION AND PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS

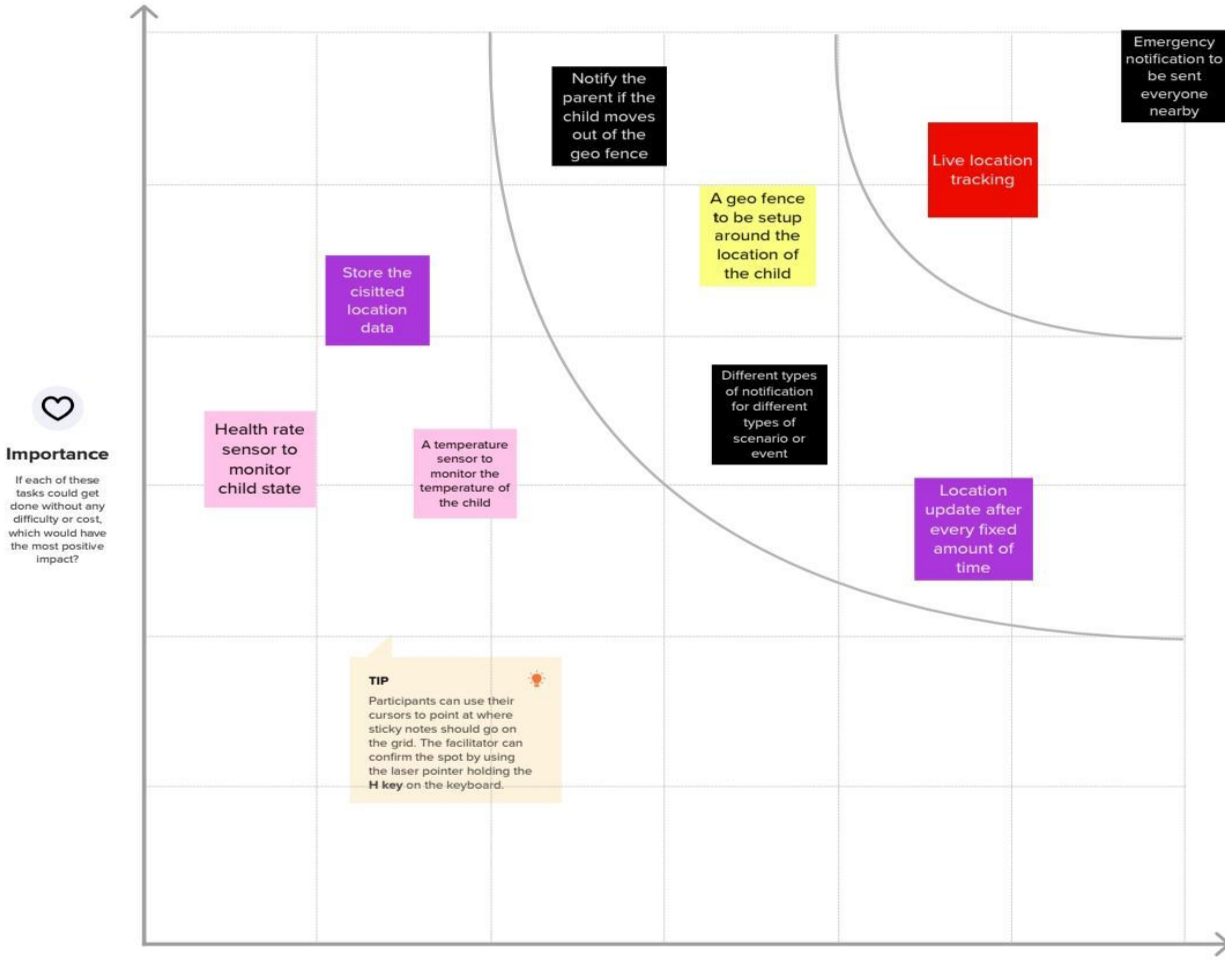


3.2 IDEATION AND BRAINSTROMING

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes



Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

⏱ 20 minutes