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SURVEY PAPER ON THE SMART PARENTING APP USING FIREBASE AUTHENTICATION

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ABSTRACT

Nowadays, we know that everyone uses a cell phone even most of the children have their own mobile phones. With all its positives, mobiles do have its bad effects. In the present scenario, the parent can monitor their children's mobile activity only by getting the mobile on hands in the digital age, the demand for smart parenting apps equipped with features such as location tracking, app history monitoring, and screen time management has never been more evident. As technology becomes an integral part of children's lives, the need to ensure their online safety and responsible digital engagement has grown exponentially. Smart Parenting apps serve as vital tools, offering parents a means to protect their children from online threats, guide them towards responsible technology use, and establish a healthy balance between screen time and other activities. Beyond safety these apps facilitate crucial conversations about digital time management and privacy, enhancing communication between parents and their children. Smart parenting apps address the critical needs of modern parents who are raising children in a digital age. With children spending increasing amounts of time online, these apps provide essential tools to ensure their safety and wellbeing in the digital realm. They enable parents to protect their children from online threats, cyberbullying, and inappropriate content, while also helping manage and monitor screen time, fostering a healthy balance between digital and offline activities.

Keywords: Smart Parenting, Screen-Time, Digital Activity Details, Location Tracking, Child Safety, Child Monitoring.

I. INTRODUCTION

In the digital age, the demand for smart parenting apps equipped with features such as location tracking, app history monitoring, and the screen time management has never been more evident. Smart parenting apps address the critical needs of modern parents who are raising children in a digital age. With children spending increasing amounts of time online, these apps provide essential tools to ensure their safety and wellbeing in the digital realm. They enable parents to protect their children from online threats, cyberbullying, and inappropriate content, while also helping manage and monitor screen time, fostering a healthy balance between digital and offline activities. They prioritize data privacy and security, offer real-time monitoring, and provide valuable insights into a child's digital behavior, giving parents peace of mind and the ability to make informed decisions about their child's digital world. This app empowers both parents and children to navigate the digital landscape responsibly, ensuring that children are well-prepared for the opportunities and challenges presented by the digital era.

The smart parenting app project is extensive and encompasses a comprehensive set of features and functionalities designed to empower parents in the digital age. It includes core elements such as screen time management, real-time location tracking, and monitoring of app history to ensure children's safety and guide responsible digital behavior. The app will offer a user-friendly interface, supporting open communication and trust-building within families.

II. LITERATURE SURVEY

The paper [1] discusses a digital control and monitoring system that aims parents in providing their kids with excellent guidance. The paper [1] details about how parents can monitor their children even when they are not physically there and can be confident that they are safe online. Parent may be able to track their child using a separate Android app that has been made available to them. The child's mobile phone's contact list, call history, and location can all be accessed by the parent. One main feature described in the paper is about how, at any

time, a parent can discover and retrieve information. Because the toddler was too young to know how to update his location on a map at the time, the application also handles location queries without user input. Telephony and location services are needed by the system. Paper [1] tells how this app offers digital assistance for effective parenting in the contemporary world. The proposed app mainly focuses on monitoring and controlling of digital activities of the children.

The paper [2] is based on GPS and SMS-based child tracking system using smart phone. This paper describes how a smart cell phone helps track the children in real-time. Most children and parents use an android phone, and they know the mobile phone's available service. Their proposed system is divided into two sides, the child side and the parent side.

A request SMS goes to the child's device to know the child's exact location from the parent device. After getting the request SMS, the child's device replies to the parent's device's GPS position. Parents can get the addresses of their children and locate them on his/her mobile devices. School authorities can also monitor and track the school buses timely and ensures the safety of students. It also allows parents to track real-time information about the school bus during travels. A user can access this system at any-time from anywhere. There are two sides: client-server and server side. The server-side contains a GPRS, a web, and an SMS server, and the client-side carries a GPS tracker and a GPS modem. All the user information is stored in the database on the server-side.

The paper [3] is based on a client - server based approach for child monitoring system. From the client phone the registration is done by the server and then login is saved in the database of the server. Then the client sends location updates to the server and the updates are saved in the database of the server. Then with the assistance of Location Updates, the situation is tracked. In 2011 the Chandra et al. used an approach which used the assistance of SMS services. The system was implemented for JAVA mobile devices which supports google geo. The client shares his location through SMS to the online server. The Client views his location on the map. This method architecture is Client-server based application and mobile application. On the server-side, it uses longitude and latitude, and SMS for storing user details. On the Client-side it consists of a box that contains a google geo-tracking device and GSM modem. After registration and logging in the details are stored on the server. The paper [3] describes that the application was developed for monitoring the driving behavior of the employees.

The paper [4], is based on Location Based Parental Control Child Tracking App which will accept the command only if it receives the command from the parent's mobile number. If other unauthorized number send command to child phone via SMS, the app will not execute any action. The app also has a check module to find authorized parent's number and then only command with proper suitable action will be executed by our app. The app is able to get child's SIM details especially in emergency cases. This App have been tested as well and it works fine with the assumption of GPS is ON. The paper [4] also further describes about extending the functionality of this Parental Control Child Tracking App and to make it more efficient.

The paper [5] discusses about a system which uses client -server in its architecture. The approach was implemented in JAVA enabled mobile devices which support GPS. First of all the application works on two modules first for parents and the second one is for children, both applications are required to install on their smart phones. After installation, with their details. This application allows to add up to 5 members in a single parent application. Parents can monitor their child moment as per their choice as they are receiving the reports of their child movement from their devices. Along with the report and notification this system updates the parents when the child crosses the Geofence boundary. The child sends location coordinate by using GPS updates to the server and the updates saved in the database on the server. Then, with the help of Location updates the location is tracked and the child application shares his location through SMS or GPS to the web server. The parent views child's location on the map.

III. CONCLUSION

In this digital age, the Child Monitoring system assumes paramount importance in addressing the challenges posed by children's increased exposure to online environments. By leveraging features such as real-time tracking, location updates, and monitoring of digital activities, this system acts as a vigilant guardian against

potential online threats. As children spend more time engaging with technology, the Child Monitoring system serves as a crucial tool for parents to ensure their safety, prevent cyberbullying, and manage screen time effectively. Its client-server architecture, coupled with GPS and SMS-based functionalities, empowers parents with the ability to track and observe their child's movements, fostering a sense of security.

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IV. REFERENCES

[1] S. Yazhini Jeyam, N. Mounika, S. Vignesh, MS. T. Savitha Devi, Prof. Tamhane K.D. Android Parental Tracking, 2023. "Child Digital Monitoring and Controlling System.

[2] Mohammad Jahangir Alam, Tanjia Chowdhury, Sohrab Hossain, Shurmoy Chowdhury, Tanmoy Das, 2021, ISSN "Child tracking and hidden activities observation system through mobile app".

[3] Netravati, Dr. R. Savita International Journal of Creative Research Thoughts (IJCRT) "Child Monitoring System Using Android Application".

[4] Priyanka Kumar, Raghul M 4th International Conference on Com putting Communication and Automation (ICCCA) "Location Based Parental Control-Child Tracking App using Android Mobile Operating System".

[5] Aditi Gupta, Vibhor Harit 2019 Second International Conference on Computational Intelligence Communication Technology "Child Safety Tracking Management System By using GPS, Geo Fencing Android Application"

[6] Roopesh, Sai Prashanth, Sivakumar,2021, IEEE "Child tracking and hidden activities observation system through mobile".

[7] Hamza H.M. Altarturi; Nor Badrul Anuar, "A Preliminary Study of Cyber Parental Control and Its methods", 2020, IEEE

[8] Suzan Ali; Mounir Elgharabawy; Quentin Duchaussoy; Mohammad Mannan; Amr Youssef, "Parental Controls: Safer Internet Solutions or New Pitfalls?" 2021, IEEE

[9] Qian Luo; Jiajia Liu; Jiadai Wang; Yawn Tan; Yurui Cao; Nei Kato, "Automatic Content Inspection and Forensics for Children Android Apps", 2020, IEEE [9] S. Deepa, S. Dinesh Kumar, P. Prasanth, "Child Monitoring System", 2019, IJESC

[10] Maria Clenisha, Sandra, A Pio Sajin, B Baron Sam, "Survey on Automated Child Monitoring Image Processing", 2018, IJESC

[11] Garmendia, M., Jiménez-Iglesias, A., & Casado, M. A. "The impact of social media on children", (2018)., 9, 2151.

[12] Prof. S. Sundar, Rohan Ghosh and Harris Shahil, "A Prototype of Automated Child Monitor", 2017, ISSN

[13] J. M., Joiner, T. E., Rogers, M. L., & M. "Increases in depressive Twenge in depressive symptoms, suicide-related outcomes, and suicide rates", (2018).

[14] R. Kamalraj; M. Sakthivel, "A Hybrid Model on Child Security and Activities Monitoring System Using IoT", 2018, IEEE

[15] Y Sai Subhash Reddy, Koye Sai Vishnu Vamsi, Golla Akhila, Anudeep Poonati, Koye Jayanth, "An Automated Baby Monitoring System", 2021, IJEAT.