PARENT -HOOK: A CHILD TRACKING SYSTEM BASED ON CLOUD URL

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ABSTRACT

Child kidnapping, missing child and child harassment are the world wide problem related child safety.The children of age group 4 to 8 years are innocent and subject to kidnapping in frequent cases . Parents are always worried regarding their children's security mainly when they visit crowded public places and travel in widely physically located places . Number of applications is being developed to guard children in every manner . This paper introduces a Parent - Hook product which is designed for child tracking if the child is lost.The Parent-Hook is a safety band without the sensor or any chip harmful for the children can be put on the whist of the children . This band is easy to carry which is made of soft cotton webbing with parent contact information with QR Code and Cloud URL.

1. INTRODUCTION

In India the population is very high and occupy 2nd rank in the list of countries by population. Recently,all over the world,crimes against children are increasing at higher rates and many cases of missing children are reported.Parents are always worried about the possibility of kidnapping their children.Now a days, in many families both parents are working outside for their job.Due to this no one is with their child who can keep him or her under their observation.The security of a child could be identified as the greatest concern for public security agencies.These agencies need to improve their system with the help of modern technologies.

Technology must be blended to help the parents for their concerns regarding their child.The smart cities paradigm clearly takes into account the needs of providing a more favourable environment for children living and learning, but focusing on this aspect it has also to deal with challenges due to cities complex environments, for example : many construction sites,a large number of running vehicles, crowd meeting places and complex urbanized localities. Such environment is indeed lacking in safety conditions for children. Children are curious, activeand unaware about dangers in surroundings. Mobile technology plays an increasingly dominant role in human life .It aids for better communication, in obtaining more accurate and quickness in the field of emergency services.Hence a smart phone has become the basic need of citizens. This project focuses on one of such important initiatives in the form of a very useful service using "A Child Tracking System ".Today smart phones are the basic need of the users today, these smart phones,providing lots of features which make our life so simple and easier.This project is focused on a child tracking product name as Parent-Hook. Different systems related to this project is explained in section 2.The proposed architecture of the system is focused in Section 3.Methodology is suggested in Section 4. Finally, Section 5 presents the results and relateddiscussion.

2. LITERATURE SURVEY

TITLE: ”Bus Safety System for School Children Using RFID and SIM900 GSM MODEM”,

Millions of children need to commute between homes to school every day. Safer transportation of school children has been a critical issue as it is often observed that, kids find themselves locked in the school bus at the bus stop after going to school, they miss the bus, or ride the wrong bus with no way to track them. This project intends to find yet another solution to solve this problem by developing a bus safety system that will control the entry and exit of students from the buses through an energy efficient methodology. The proposed

system will control the entry and exit of students to and from the bus using RFID (Radio Frequency Identification) and GSM technologies to ensure the entering and exiting of all students to and from the school bus in a safer manner. The process, does not require any additional action by the student and drivers. The system will do all the process and allow the student to be tracked while entering and leaving the bus. If the bus journey is successful from the source to destination, it will send an SMS to the management to inform its departure and arrival.

TITLE: Smart Tracking System for School Buses Using Passive RFID Technology to Enhance ChildSafety
Millions of children need to be moved from home to school and vice versa every day. For
parents, obtaining a safe transport for their children is a critical issue. Many children find themselves locked in a school bus in the bus parking lot after falling asleep on their way to school, miss the bus, step into the wrong bus, or leave at the wrong station with no method to track them. This research tested the applicability of radio frequency identification (RFID) technology in tracking and monitoring children during their trip to and from school on school busses. The child safety system developed in this research utilized the passive RFID tracking
technology due to its efficient tracking capabilities, low cost, and easy maintenance. To explore the technical feasibility of the proposed system, a set of tests were performed in the lab and with the public. These experiments
showed that the RFID tags were effective and stable enough to be used for successfully tracking and monitoring children using the bus. When asked to give their feedback of the solution through a questionnaire, more than 95%
of the parents see that such a solution will take their anxiety and worry away and will provide them a tool to track their kids during commuting to and from their schools
TITLE: Design and implementation of a children safety system based on IOT technologies",
In this paper a system for increasing children safety is proposed. The focus is on the daily route from home to school and vice versa, assuming the use of school buses.IoT paradigm is exploited together
NL with different localization techniques i.e. RFID and GPS, in order to design a solution for parents willing
to make certain of their child's following the main steps to school or home, i.e. taking the school bus and entering school or leaving school and entering the school bus. In this paper the applicability of RFID technology efficient tracking capabilities is tested in children's tracking and monitoring during their trip to and from school by school buses. The proposed solution is discussed in terms of technologies and architecture and
the first prototype is presented. Finally a test phase is planned to verify the correct operation of the system.

TITLE:“Student Tracking System Using GSM and GPS Technology”,
Women are an equal soul of men by comprises men in her name itself but really they are treated equal
among men. There is a broad gap in between past and present centuries. Women are treated poorly on past
centuries by getting huge works, asking more dowries and even killing female infant but in present century
these has been reduced and crimes are increased more in numbers against women like abducted, murdered,
raped and harassed in various ways. This assessment is on women's tracking system which helps them in their safety and security. Although there are n numbers of tracking devices still crimes against women are in an increasing rate. These crimes have to be reduced in an effective ways of implementing versatile tracking system by combining various technologies into a single integrated unit.

TITLE: “Locating Friends and Family Using Mobile Phones With Global Positioning System (GPS)”,
This paper presents a mobile application based on providing location based services (LBS) using
Global Positioning System (GPS) as a location provider. The main objective of this work is to design and
implement a client server system that helps users to locate their family members and receive alerts when
friends are nearby.The mobile application was implemented using J2ME where the most recent APIs and other
older APIs were combined together in order to make the application reliable on all types of mobiles. The server was implemented using PHP since PHP guarantees that the server would not be overloaded. The type of the database used in the system was MySQL. The average location accuracy of the application is about couple of
meters.

3. EXISTING SYSTEM

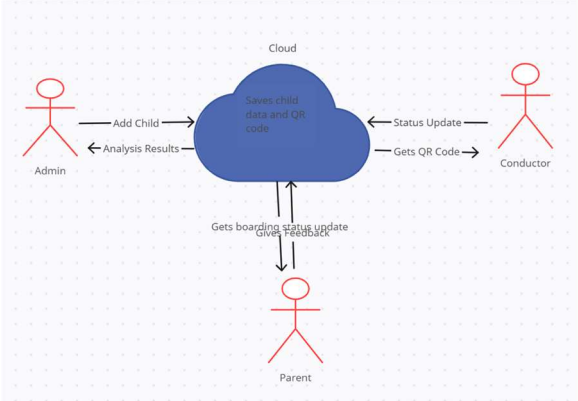
Priti et al. has implemented the system for Student Kidnapping prevention using GSM, GPS and Cell phone technology . This system is useful to track, monitor and stop the Kidnapping of students too. Bader et al. use J2ME applications to provide Location Based Services (LBS) on mobile. The LBS

service in this application use Global Positioning System (GPS) as its location provider . Client server system is developed to find the location of family members and alerts are received when family members/ friends are nearby. Php is used for server implementation and MySQL is used for databases. Loganathan et al. has developed a system including geo-fencing campus, a child module and a parent module which focuses on the cases where the children are kidnapped . This project includes a geo-fencing campus, a child module and a parent module. A sensor is used for detecting the child's emotions and child cries. A microcontroller ATMEGA 162 is used with a Global system for mobile communication and Global positioning system module . This helps one to hack and find the child movements . A model is proposed by Gupta et al. for child safety. This model allows its users to track the location of their children on their smart phones. The model also allows children to send a quick message if they feel some threat to their safety. They even can send their current location via Short Message services. Android platform is used for validation of the proposed system. Nandini et al. has developed a smart IoT device for child safety and tracking is developed to help the parents to locate and monitor their children . The proposed system automatically alerts the parents by sending SMS when emergency help is required for the children. The parameters such as touch, temperature and heartbeat of the child are used for parametric analysis and results are plotted for the same. The above system ensures the safety and tracking of children.

3.2PROPOSEDSYSTEM

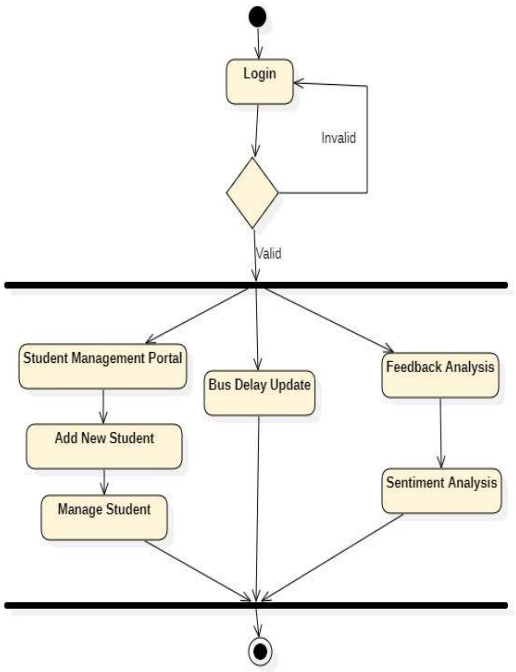
The base of the child tracking system is the Parent-Hook, which is made up of a modern satin wristband with two adjusters to make them adjustable to your wrist. You can have engraved names, initial, short message or any saying up to 20 characters.This is a wonderful personalized gift for Kids or someone your satin wristband love is a great personalized gift for everyone who loves Cloth Label with colour. This band is not only used for children's but also for theagedpeople.

4.SYSTEM ARCHITECTURE .



Activity Diagram

A graphical representation of the work process of stepwise exercises and activities with support for decision, emphasis and simultaneousness, used to depict the business and operational well-ordered stream of parts in a framework furthermore demonstrates the general stream of control.



5. SYSTEM IMPLEMENTATION

There are 2 modules:

1. Admin
2. Conductor
3. Parent

Admin:-

- Login
- Student Management Portal

- Add New Student
- Manage Student

- Bus Delay Update
- Feedback Analysis
- Sentiment Analysis
- Logout

Conductor:-

- Login
- Home School Scan
- Boarding Status
- School Home Scan
- Drop Status
- Logout

Parent:-

- Login
- My Profile
- Change Password
- Board Status
- Drop Status
- Track
- Notification
- Feedback
- Logout

6.1 TYPES OF TESTING

■Unit testing

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

■Integration testing

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

■Functional test

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

7.RESULTS

fig.7. 1 Home page

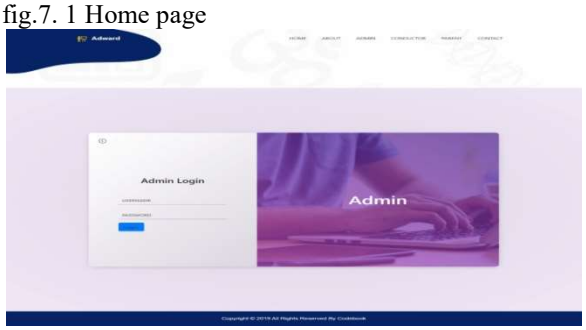
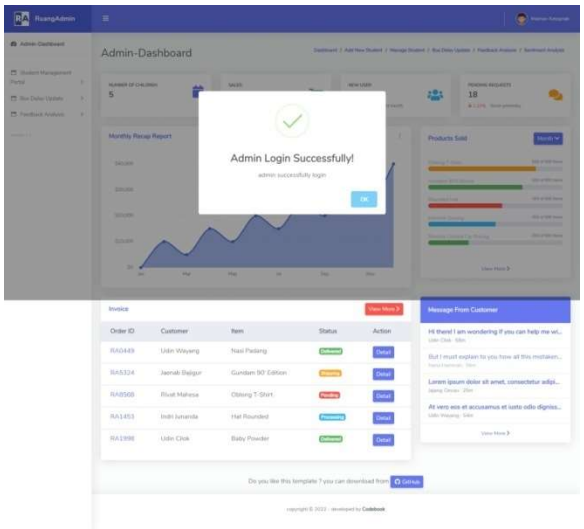
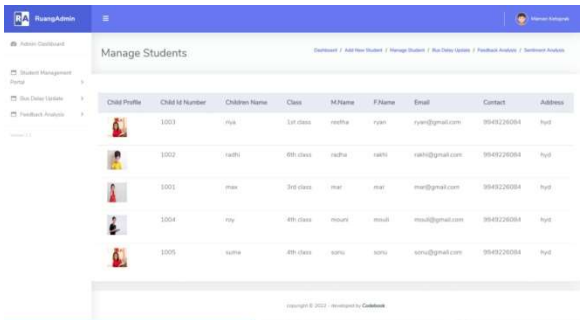
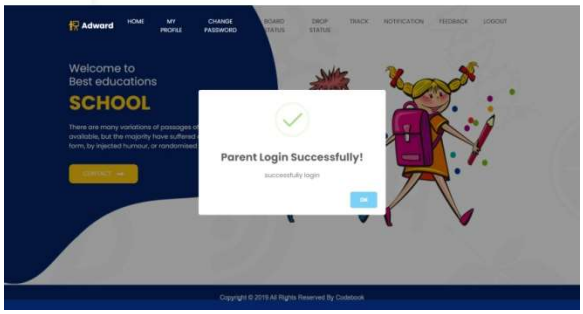
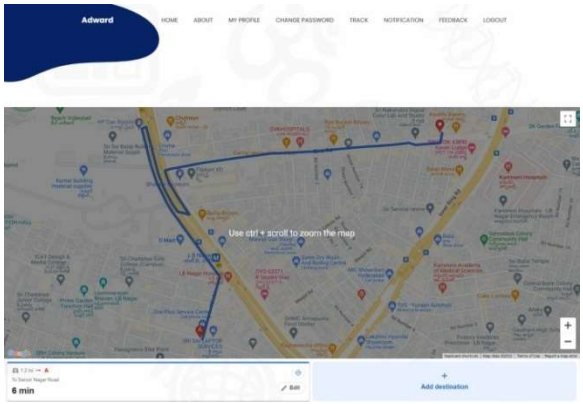


fig.7.2 view files









8. CONCLUSION & FUTURE WORK

Many sites are being developed to upload the information of finding a lost child. For this we need to remove the entire traditional database and use the JSON file that will allow us to link up the information available on other sites. The information available on other sites could be matched with the data of a lost child to generate alerts that could be received by respective parties. For security purposes we will use a user defined data encryption and tagging system. The future enhancement will be done to overcome various issues like auto calling to responsible persons if the system detects that the child is lost. The symptoms reflected by the bodies of the lost child and the person who is around him could be sensed by the technological updates in the "Parent-Hook"product.

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