International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056
Volume: 03 Issue: 11 | Nov -2016 www.irjet.net p-ISSN: 2395-0072

IOT based system for citizen awareness

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Abstract -*Almost all the citizens recruit helpers to take care of various maintenance issues in houses, offices, educational institutions etc. It has been observed that some of the workers are unreliable and that majority of crimes occurring in residential localities are committed by domestic helps. .This application is aimed to provide solution to the above mentioned problems and can also help to overcome various problems such as charging extra money, misbehavior, physical assault, etc. The problems mentioned above are usually encountered in households and industries. Most of the times the details of the person are not available and it causes difficulty in reporting and investigating the crime. This system addresses this issue and provides a feasible solution.*

Key Words*: *Relational databases, Multimedia Databases, Image databases, Query processing, User Profile and alert services

1.INTRODUCTION

Most of the citizens recruit helpers for almost all maintenance issues in houses, offices, educational institutions etc. But unreliability of workers is a huge problem. It is a common observation that majority of these crimes are committed by domestic helps. According to a survey mentioned by The Times of India, dated 11th January 2015, 40% thefts and burglaries are committed by domestic helps. Unreliable sources, improper verification, lack of availability of the worker's background information, etc. are mainly found to be the causes of these crimes. The problems mentioned above are usually encountered in households and industries. Most of the times the details of the person are not available and it causes difficulty in reporting and investigating the crime in this project the user requires to scan a QR code provided on the worker's identity card. If the worker is registered as authentic, then relevant information related to the worker is displayed with the status of worker profile verification. This will help the user to check whether the worker is authenticated or not. If the worker is authenticated, then it is safe for the user to allow him in his house. When the user scans the QR code on the worker's id, then the location of the scan will be recorded which will therefore help in maintaining the track of the worker.

1. Problem Statement

Providing an android application for enhancing citizen awareness using IOT to verify and analyze the responses and recommendations provided by the user and to gather relevant information about whereabouts of various domestic workers working in the area and constantly monitoring their performance and quality of their work.

2. RELATED WORK

2.1 GPS Navigation System

The GPS system can be used to form a good assistance system for tourists. Tourists will be able to easily reach their destinations in an unknown locality. But, no such application exist that integrates GPS with other application. This system presents a GPS on the android platform known as android mobile navigation system. This system provides the user with a navigation system and QR code decoding. It also supports friend positions. AMNS is an open source software hence developers can addtheir own addition services to the above system.

It contains 4 main sub systems:

1. UMIS - User Main Interface System. It is the main portion of AMNS. It includes operating maps, revoking other subsystem and displaying the result of other systems.
2. QDS-This part mostly makes use of libraries, of zxing barcode to decode QR code which may contain specific spot information into geographic information.
3. GNS-the information regarding maps provided by google is used to assist the development of the GNS subsystem
4. CAS-it has 2 modules:

1. Directory2. Friend positioningthe friend positioning module acquires the user's current position and then the directory module asks the user to select friend's name from it and then displays the friend's position too.

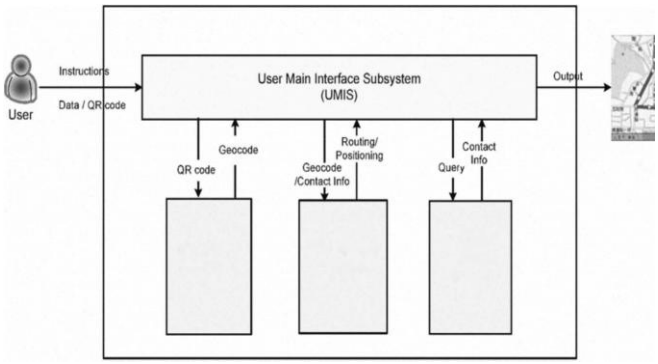

Fig -1: AMNS Software Architecture

2.2NEW APPLICATION IN TAIWAN

The manual sign-in system were been used for patrolling before the law enforcement system was adapted. Later on, many developed police departments had set up an electronic sign-in system with an infrared ray scanning model. However the system required heavy equipment's and hence wasn't considered practicable. This system wasn't to explore the addition of integrating smartphone's camera, the GPS system and maps into the computer-based sign-in system.The computer-based sign-in system was implemented to save-time by eliminating the processes that consume a lot of time.The characteristics of the system are as follows:-

1. Tight encryption & decryption2. Two-way communication networks3. Portable solution for area with poor global positioning system

In this research they compared various methods as well as concluded that the computer based sign-in system is better than the other QR codes, the GPS and electronic map are found to be the best combination with respect to costs, the products weight, design and manufacture.

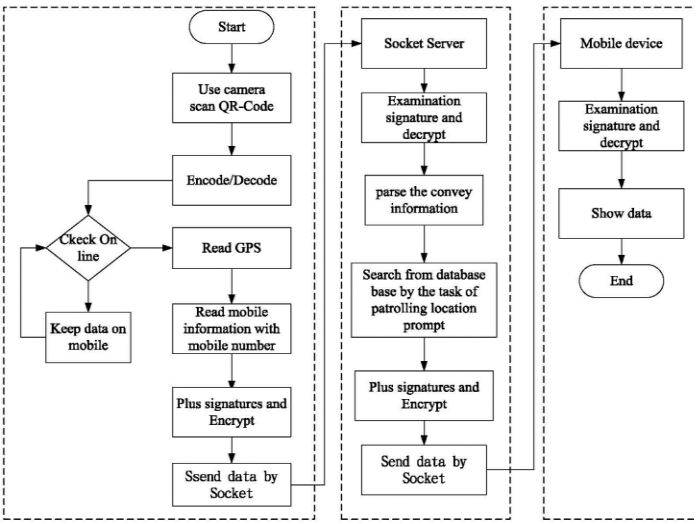

Fig -2: Operation Workflow

3.PROPOSED SYSTEM:

The main goal is to provide necessary and relevant information to verify and analyse the character of the worker based on his/her work history reviews and profile generated. Thus improving the interactivity and participation of the citizen as a part of the smart citizen community.

The system aims at providing an android application for enhancing citizen awareness using IOT to verify and analyse the responses and recommendations provided by the user and to gather relevant information about whereabouts of various domestic workers working in the area and constantly monitoring their performance and quality of work.

Our goal is to design a compact system which is easy to use and providesCitizen Security against crimes by domestic helpers. We have designed the model without compromising on design or functionality and will create a prototype that will be sleek in size as well as accurate in its functionality.

The system not only provides valid & verified information of the worker but also provides the reviews of the domestic helper work history & location.

The proposed system incorporates the features of the above system wherein it records the GPS location whenever the QR code on the domestic helper's id is scanned. Hence, the work history along with location is recorded. The system filters the verified information about the workerand displays the relevant to the user. The above systems also record the user's location on scanning. This system uses this feature to improve citizen security. It also provides a suspicion list for a given vicinity.

Hence, we can say that this system will contain legit data about the domestic helper and will be presented to the user on scanning the QR code along with a few additional features like work history. This system therefore up to some extent guarantees security of users against theft or crime by domestic helpers.

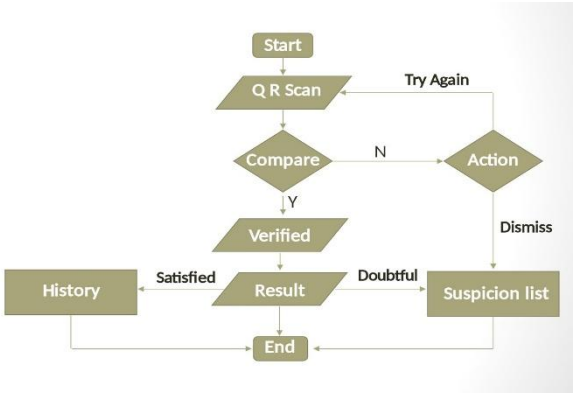

Fig-3: Flowchart

4. CONCLUSION AND FUTURE SCOPE

Hence, the objective to provide an android application for enhancing citizen awareness is implemented using IOT to verify and analyze the responses and recommendations provided by the user and to gather relevant information about whereabouts of various domestic workers working in the area and constantly monitoring their performance and quality of work.

Deploying this technology on a large scale would help determine the location of workers without invading their privacy and also provide real time data thus reducing the efforts and time required to investigate a crime. Integrating this technology with biometrics and Government authorized database would make the system foolproof. In the future, this technology could be used to authenticate and monitor the work of a person by combining it with AI and facilitate the workers to maintain flexible work time thus providing security to the home owner and convenience to the workers.

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