

Advanced Characteristic Analysis of Real Time Junk Occurrences in Twitter

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Abstract: Spam on twitter is a major threat in recent days. To overcome these problems we take many steps to work on this. This work uses twitter as the input data source to address the problem of real-time. As twitter data contains a lot of spam, we built a dictionary of words to remove spam from the tweet social media. In order to solve these problem, we firstly carry out a deep analysis on the statistical features of taking training sets of data to differentiate spam tweet and non-spam tweet. Then we propose a approach called “NLTK(Natural Language Tool Kit). The proposed approach can discover “changed” spam posts from unlabeled posts and incorporate them into classifier’s training process. To evaluate the proposed scheme many experiments were carried out. The results show that our proposed NLTK can remarkably improve the spam detection accuracy in real-world scenario

Keywords: cloud computing; Twitter ; Natural Language Tool Kit; Spam; statistical features;

1. INTRODUCTION

In the recent years, the micro blogging social networking service twitter has become a very popular tool for broadcasting news, expressing opinions and communicating with friends. People can publish short text-messages (of 140 characters) which can be viewed by their followers. The usability and ease of using this NLTK(Natural Language Tool Kit) tool contributed to its wide growth. This leads to both efficiency and high throughput rate deployments that uses the computing capacity provided by the network of nodes. Twitter spam, referred to as unsolicited tweets containing malicious link directs victims to external sites containing malware downloads, phishing, drug sales, or scams, etc. As a result of that, security companies, as well as Twitter itself, are combating spammers to make Twitter as a spam-free platform. For instance, Trend Micro uses a blacklisting service called Web Reputation Technology system to filter spam URLs for users who have its products installed. Twitter also implements blacklist filtering as a component in their detection system called BotMaker . However, blacklist fails to save victims from new spam due to its time lag. Before the sites are blocked by the black list ,researches proved that 90% of the users tend to visit the malicious links. In order to give a solution to the drawbacks of blacklists, researchers have come up with some machine learning based schemes which can make use of statistical features from sspammers’ or spam tweets’ to detect spam without checking the URLs. However, the observation made in our collected data set shows that the characteristics of spam tweets are varying over time. We name this problem as “Twitter Spam Drift”. As earlier Machine Learning dependent classifiers are not updated with the “changed” spam tweets, the performance of such classifiers are dramatically influenced by “Spam Drift” when detecting new coming spam tweets. Why do spam tweets drift over time? It is because that the spammers are struggling with security companies and researchers. The researchers are working to detect spam and on the other side spammers are trying not to be detected. This leads spammers to evade current detection features through posting more tweets or creating spam with the similar semantic meaning but using different text such social media is a good resource to obtain informal names of places such as acronyms, abbreviations, or nicknames. Additionally, words which indicate specific locations other than place names such as names of local foods or products and regional dialects and the words which indicate

specific locations only temporarily such as the names of events can also be obtained. All of these local words, which indicate specific locations at some point, would enrich the geographical dictionary; however, most of the existing methods extract the local words from the posts accumulated for a long period of time in a batch process, which makes it impossible to handle the temporal changes of the local words or of the locations indicated by them. In this work, we firstly illustrate the “Twitter spam drift” problem through analyzing the statistical properties of Twitter spam in our collected dataset and then its impact on detection performance of several classifiers.

2. RELATED WORKS

Many research works have been carried out for solving this spam problem. Some of the most recent works by Abdullah Talha Kabakus,Resul Kara in the year: 2017 . Twitter is one of the most popular social media platforms that has 313 million monthly active users which post 500 million tweets per day. This popularity attracts the attention of spammers who use Twitter for their malicious aims such as phishing legitimate users or spreading malicious software and advertises through URLs shared within tweets, aggressively follow/unfollow legitimate users and hijack trending topics to attract their attention, propagating pornography. In August of 2014, Twitter revealed that 8.5% of its monthly active users which equals approximately 23 million users have automatically contacted their servers for regular updates. Thus, detecting and filtering spammers from legitimate users are mandatory in order to provide a spam-free environment in Twitter. In this paper, features of Twitter spam detection presented with discussing their effectiveness. Also, Twitter spam detection methods are categorized and discussed with their pros and cons. The outdated features of Twitter which are commonly used by Twitter spam detection approaches are highlighted. Some new features of Twitter which, to the best of our knowledge, have not been mentioned by any other works are also presented.

Chao Yang, Robert Harkreader, Jialong Zhang worked in Analyzing Spammer’s Social Networks for Fun and Profit in the year: 2012. In this paper, we perform an empirical analysis of the cyber criminal ecosystem on Twitter. Essentially, through analyzing inner social relationships in the criminal account community, we find that criminal accounts tend to be

socially connected, forming a small-world network. We also find that criminal hubs, sitting in the center of the social graph, are more inclined to follow criminal accounts. Through analyzing outer social relationships between criminal accounts and their social friends outside the criminal account community, we reveal three categories of accounts that have close friendships with criminal accounts. Through these analyses, we provide a novel and effective criminal account inference algorithm by exploiting criminal accounts' social relationships and semantic co ordinations.

Hongyu Gao, Yan Chen, Kathy Lee, Diana Palsetia, Alok Choudhary works in Towards Online Spam Filtering in Social Networks in the year :2008. Online social networks (OSNs) are extremely popular among Internet users. Unfortunately, in the wrong hands, they are also effective tools for executing spam campaigns. In this paper, we present an online spam filtering system that can be deployed as a component of the OSN platform to inspect messages generated by users in real-time. We propose to reconstruct spam messages into campaigns for classification rather than examine them individually. Although campaign identification has been used for offline spam analysis, we apply this technique to aid the online spam detection problem with sufficiently low overhead. Accordingly, our system adopts a set of novel features that effectively distinguish spam campaigns. It drops messages classified as "spam" before they reach the intended recipients, thus protecting them from various kinds of fraud. We evaluate the system using 187 million wall posts collected from Facebook and 17 million tweets collected from Twitter. In different parameter settings, the true positive rate reaches 80.9% while the false positive rate reaches 0.19% in the best case. In addition, it stays accurate for more than 9 months after the initial training phase. Once deployed, it can constantly secure the OSNs without the need for frequent re-training. Finally, tested on a server machine with eight cores (Xeon E5520 2.2Ghz) and 16GB memory, the system achieves an average throughput of 1580 messages/sec and an average processing latency of 21.5ms on the Facebook dataset.

Then the Detecting and Characterizing Social Spam Campaigns by Hongyu Gao, Jun Hu, Christo Wilson in the year 2009. Said that Online social networks (OSNs) are popular collaboration and communication tools for millions of users and their friends. Unfortunately, in the wrong hands, they are also effective tools for executing spam campaigns and spreading malware. Intuitively, a user is more likely to respond to a message from a Facebook friend than from a stranger, thus making social spam a more effective distribution mechanism than traditional email. In fact, existing evidence shows malicious entities are already attempting to compromise OSN account credentials to support these "high-return" spam campaigns. In this paper, we present an initial study to quantify and characterize spam campaigns launched using accounts on online social networks. We study a large anonymized dataset of asynchronous "wall" messages between Facebook users. We analyze all wall messages received by roughly 3.5 million Facebook users (more than 187 million messages in all), and use a set of automated techniques to detect and characterize coordinated spam campaigns. Our system detected roughly 200,000 malicious wall posts with embedded URLs, originating from more than 57,000 user accounts. We find that more than 70% of all malicious wall posts advertise phishing sites. We also study the characteristics of malicious accounts, and see that more than 97% are compromised accounts, rather than "fake" accounts created solely for the purpose of spamming. Finally,

we observe that, when adjusted to the local time of the sender, spamming dominates actual wall post activity in the early morning hours, when normal users are asleep.

Also in Detecting Spammers on Twitter by Fabrício Benevenuto, Gabriel Magno, Tiago Rodrigues, Virgílio Almeida. In 2010. With millions of users tweeting around the world, real time search systems and different types of mining tools are merging to allow people tracking the repercussion of event and news on Twitter. However, although appealing as mechanisms to ease the spread of news and allow users to discuss events and post their status, these services open opportunities for new forms of spam. Trending topics, the most talked about items on Twitter at a given point in time, have been seen as an opportunity to generate traffic and revenue. Spammers post tweets containing typical words of a trending topic and URLs, usually obfuscated by URL shorteners, that lead users to completely unrelated websites. This kind of spam can contribute to de-value real time search services unless mechanisms to fight and stop spammers can be found. In this paper we consider the problem of detecting spammers on Twitter. We first collected a large dataset of Twitter that includes more than 54 million users, 1.9 billion links, and almost 1.8 billion tweets. Using tweets related to three famous trending topics from 2009, we construct a large labelled collection of users, manually classified into spammer and non-spammers. We then identify a number of characteristics related to tweet content and user social behaviour, which could potentially be used to detect spammers. We used these characteristics as attributes of machine learning process for classifying users as either spammers or non-spammers. Our strategy succeeds at detecting much of the spammers while only a small percentage of non-spammer are misclassified. Approximately 70% of spammers and 96% of non-spammers were correctly classified. Our results also highlight the most important attributes for spam detection on Twitter.

3. PROPOSED WORK

Better result is obtained through the proposed methodology. Real-world dataset is collected and labelled, which contains 10 consecutive days' tweets with 100k spam tweets and 100k non-spam tweets in each day (2 million tweets in total). This dataset is available for researchers to study Twitter spam. We analyze the "Twitter Spam Drift" problem from both data analysis and experimental evaluation aspects. We are the first to study this problem in Twitter spam detection to the best of our knowledge. We propose a NLTK approach which learns from unlabelled tweets to deal with "Twitter Spam Drift". Through our evaluations, we show that this proposed NLTK can effectively detect Twitter spam by cutting down the influence of "Spam Drift" issue.

NLTK will aid you with everything from splitting sentences from paragraphs, splitting up words, recognizing the part of speech of those words, highlighting the main subjects, and then even with helping your machine to understand what the text is all about. In this series, we're going to tackle the field of opinion mining, or sentiment analysis.

Advantages: 1. NLTK can effectively detect twitter spam by reducing the impact of "Spam Drift" issue. 2. If user post unwanted tweets more times it will be remove the followers

3.1 Architecture

The system architecture is given in figure 1. The user initially registers the login page. Once the registration process is over the registration details are stored in the database which is maintained by admin. The next time when the user logs in the username and the mail id is validated and if correct the user will be able to log in to the twitter account. As soon as the user logs in he or she can view the various tweets updated. All the tweets are classified using the RF algorithms. The result of the classification says whether it is a spam mail or not spam. If it is found to be spam tweet then NLTK is applied and the particular source is blocked or unfollowed.

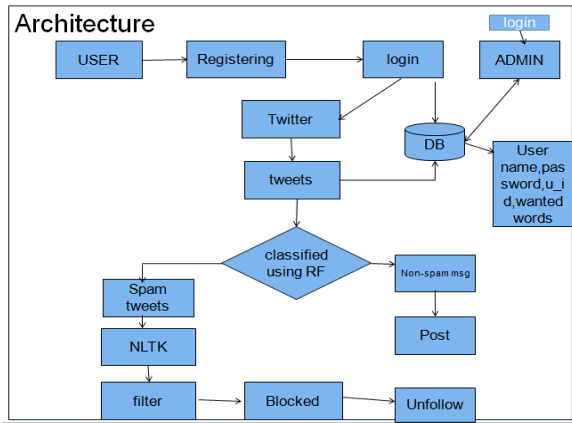


Figure. 1 Syste, Architecture

3.2 Authentication

In the module it we authenticate a valid user to enter into a twitter web page. Users are usually provided with a user ID, and authentication is accomplished when the user provides a valid credential, for example a password, that matches with that user ID. Most users are most familiar with using a password, which, as a piece of information that should be known only to the user, is called a knowledge factor. During authentication, credentials provided by the user are compared to those on file in a database of authorized users' information either on the local operating system or through an authentication server. If the credentials matches, and the authenticated user is authorized to use the resource, the process is completed and the user is granted access. The permissions and folders returned define both the environment the user sees and the way user can interact with it, including hours of access and other rights such as the amount of resource storage space. The username and the password is validated with data in the DB .

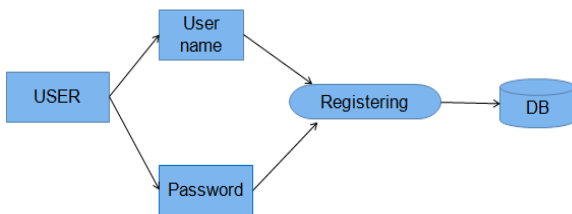


Figure. 2 Authentication process

3.3 Discovering

One of the efficient ways to end up in a subscriber's spam folder or junk folder is to load up your own email with words that have been identified as common words in spam mails by most of the email service providers. Spam words and phrases are that which can set off email service provider spam filters. Have in mind that it doesn't mandatorily mean that you can't use these words in variation. However, too many of them or too much repetition of one of them can land in you the spam. In order to validate the performance of twitter spam, we replicated a spammer's behavior by building a spam campaign generator that mimics a commercially available spamming tool. or junk folder. This has a source of good and bad words and based on which the tweet is classified as spam tweet or non spam tweet

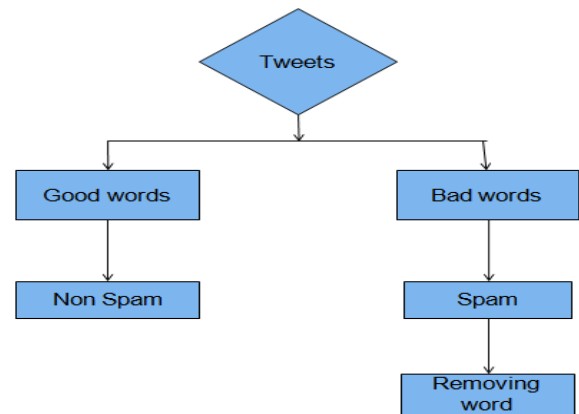


Figure. 3 Discovering process

3.4 Filtering

In this module we are separating the spam and all other mails. So that it will be easy for us to send it to trash. A spam filter looks for certain criteria on which it bases its judgments. For example, the simplest and earliest versions (such as the one available with Microsoft's Hotmail) can be set to watch in the subject line of messages for particular words and to exclude these from the user's inbox.

The method that employed here is not much effective, very often leaving out perfectly legitimate messages which are called false positives and letting actual spam through. Many well established programs, like Bayesian filters or other heuristic filters, attempt to identify spam through doubtful word patterns or word frequency. The several different types of spam filters which are already existing are as follows.

1. Content filters – the message content is checked to find out if there is spam or not.
2. Header filters – the email header is verified to find the presence of fraudulent content.
3. General blacklist filters – matches the sender address with the blacklisted spammer mail ids and intimate.
4. Rules-based filters – use user-defined criteria – such as notified senders or user defined specific wording in the subject line or body – to block spam
5. Permission filters – require anyone sending a message to be pre-approved by the recipient
6. Challenge-response filters – require anyone sending a message to enter a code in order to gain permission to send email

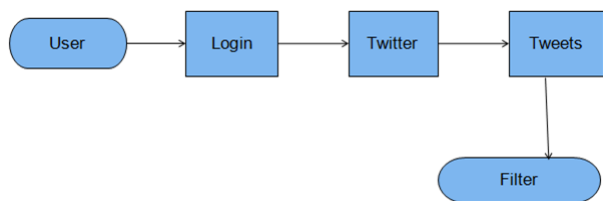


Figure.4 Filtering

3.5 Removing the spam

We believe these results to show clearly that Big data spam detection technique are ripe for in-production deployment. The spam detection mechanism currently uses the email body only.

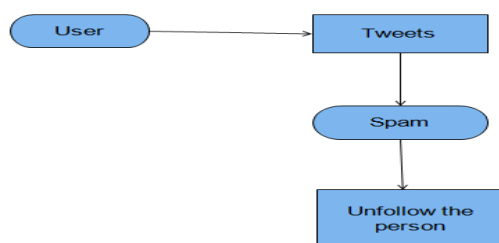


Figure. 5 Removing the spam

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4. CONCLUSION

In this paper, we firstly sympathize the "Spam Drift" problem in statistical features based Twitter spam detection. In order to solve this problem, we propose a NLTK approach. In our NLTK scheme, classifiers will be trained again by the added "changed spam" tweets which are learnt from unlabelled samples, thus it can reduce the impact of "Spam Drift" to a great extent. We evaluate the performance of NLTK approach in terms of Detection Rate and F-measure. Experimental results show that both detection rate and F-measure are improved a lot when applying with our NLTK approach. We also compare NLTK to four traditional machine learning algorithms, and find that our NLTK outperforms all four algorithms in terms of overall accuracy, F-measure and Detection Rate.

5. FUTURE SCOPE

The future work could be the revolutionizing trend of average value of each feature for two classes in 10 days. In routine, the variation of average value of feature from spam tweets is greater than that of non-spam tweets.

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A Cloud based Mobile Healthcare System

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Abstract: The Healthcare system is the mobile application that stores the large amount of private data of a patient's or users. Since the collected Patient Health Information (PHI) is private information of patients and plays a critical role in medical diagnosis and treatment. It is essential to strictly limit the access of these data to authorized users only in order to ensure the security of these data and preserve the patients' privacy. However, the security and privacy protection of the stored data is a major unsolved issue. So, the proposed system provides the security for that users data. The mobile healthcare applications provide easy access to medical care information anytime and anywhere. Recently health is important issue in our daily life. We must have to take care of our health. But this is not possible every time, sometimes because of busy schedule we can't take care of our health. So, I proposed to build an application of mobile healthcare System using cloud. The system provides a disease oriented information. Main features of this health care system is to provide medical camp with their location, disease oriented information, primary solution to particular disease and hospital locations. The system also provides privacy. This system or application is most useful in emergency cases. With the help of this system patients can check specialization of doctor and according to he/she can take the appointment with that particular doctor. Patients or user can also check for medical camps and then he/she can also register to that camp and take the appointment.

Keywords: Access control, Cloud computing, Mobile Health, Privacy

1. INTRODUCTION

Recently health is important issue in our daily life. A large amount of personal data for medical purpose is involved in PHI and people start to realize that they would completely lose control over their personal information. According to the government website, around millions of patients' health information was leaked in the past few years. There is need for keeping medical data private and limiting the access. The proposed healthcare system is inspired by the power, flexibility, cost efficiency, and convenience of the cloud-based data. Cloud is a large server in which large number of data is stored and cloud computing is computing in which large group of remote server are networked to allow centralized data storage and online access to computer services or resources. Cloud computing is computing based on the internet. We use the cloud which can be considered as a service offered to mobile users (SaaS-Software as a Service). User will transfer the data to the service provider via the internet and access their stored data using software provided by storage provider. Now a day's all are busy in their work. Because of lack of time they can neglect their health problems and because of busy schedule they can't meet to the doctor. So, there is need to everyone of taking care of their health. Because of changing atmosphere different diseases may occur. Sometimes this disease will be very dangerous, person can die. So, to solve this all problems of peoples I propose to build an application in which disease oriented all information will be stored using cloud. People can access this information easily and take care of their health. We also provide the privacy with the help of private cloud. There is large amount of personal health data involved in Personal Health Information. There might be no assurance of security or privacy of these personal health records. Cloud is a service which is offered to mobile user. Main features of proposed system is to maintain information of medical camps, online doctor's, nearby hospitals etc. In our system, we provide a list of doctor's with their name, specialization, address. We also provide the list of hospitals and find the nearby hospitals through Google map. It also provide different medical camp list and their current location and how much distance user will long from particular medical camp. It also provides each

medical camp's details. It also shows the shortest path using Google Map for medical camp where you will be standing. If patient want to register in particular medical camp they can also register through our system. Same way, patient can also online register to take doctor's appointment.

2. RELATED WORK

The system of Ming Li, Shucheng Yu, and Yao Zheng is based on multi-authority attribute based encryption to achieve fine-grained and scalable data access control for personal health record. They leverage attribute based encryption technique to encrypt each patient's PHI file. This paper is for find grain access control by the use of emergency attributes the system allows break- glass access [1]. The system of LinkeGuo, , Chi Zhang, Jinyuan Sun, and Yuguang Fang propose a decentralized system that leverages users' verifiable attributes to authenticate each other while preserving attribute and identity privacy. They design authentication strategies with progressive privacy requirements in different interactions among participating entities [2].

The system of Ganesan, Harish, provides authentication based upon the types of users who is authorized to use the application. Security is provided through the process of Encryption and data are retrieved through decryption. This system will provide security in delivering the EMR of patients [8]. The system of Wan-Ting Liu , Wei-Shan Chen monitors the patient's where about and then sends the patient's physiological signals to the hospital. They implement health-care box that collects ECG, video and location of the patient[9]. In this paper, the system is a Radiology Information System (RIS), a component of e-Healthcare Information System (HIS) .The RIS system will be hosted on a hybrid cloud where the private cloud is used to store the sensitive data of the patients and the public cloud is used to store the public data [10].

The Yan Tang, Zhenyu Chen, Yiqiang Chen paper presents a mobile phone based personal and pervasive health care system for the elderly to monitor their daily life and physiological indexes [7].The system of S. Yu, C. Wang, K. Ren, and W. Lou allow the data owner to delegate most of the computation tasks involved in fine-grained data access control

to untrusted cloud servers without disclosing the underlying data contents. They achieve this goal by exploiting and uniquely combining techniques of attribute-based encryption (ABE). The system of L. Guo, C. Zhang, J. Sun, and Y. Fang provide authentication strategies with progressive privacy requirements among patients or between patients and physicians [5].

3. LITERATURE REVIEW

Table 1: Literature Review

Sr.	Paper Name	Conference Name, Authors/year	Approach
1	Scalable and secure sharing of personal health records in cloud computing using attribute-based encryption.	IEEE Trans. Parallel Distrib. Syst., vol. 24, no. 1, pp. 131–143. M. Li, S. Yu, Y. Zheng, K. Ren, and W. Lou, Jan. 2013.	This system utilizes the multi-authority attribute based encryption.
2.	A Privacy Preserving Attribute-Based Authentication System for Mobile Health Networks	IEEE Transactions on mobile computing, vol. 13, no. 9. LinkeGuo, Student Member, Chi Zhang, Jinyuan Sun, and Yuguang Fang, Sep 2014	The system design authentication strategies with progressive privacy requirements in different interactions among Participating entities.
3.	PPCare: A personal and pervasive health care system for the elderly	Int. Conf. on automatic and trusted computing. Yan Tang, Zhenyu Chen, Yiqiang Chen, Sept. 2012.	The system present a mobile phone based personal and pervasive healthcare system to monitor physiological indexes.
4.	Design and development of secured m-healthcare system	Science and management (ICAESM), 2012 Int. conf. Ganesan, Harish. March 2012	This system is provide the security in delivering EMR of patients.

4. ARCHITECTURE

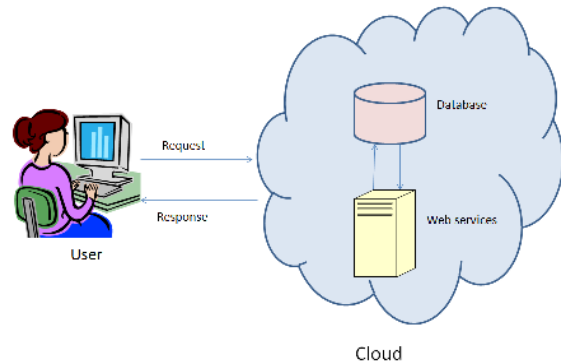


Figure. 1 Cloud assisted mobile health network

The Healthcare system is the mobile application that stores the large amount of private data of a patient's or users. This application provides large amount of disease oriented information. This application also provides different medical camps information with their location. We use the cloud infrastructure to store all disease oriented information and users private data. Only authenticated user can use this application. In this application there are two sections private and public. In private section users private data will be stored and in public section all public data will be stored. Public data such as all disease oriented information, solutions to each disease, medical camps information. When user wants to search any information, first user must have to be selecting the private or public section. If user wants to search in public section, then user will send the request to the browser. Then this request will be passing to the server by the browser and it will fetch the data from the server related to request and give response back to browser and then browser will display this response to user. If user wants to store the personal health data then it will use private section. We provide the privacy to the private data of user using secret key. We keep the entire user's private data in encrypted form. So, unauthorized person cannot access the user's private data. When user will search his private data then automatic secret key will be generated and this key will be passed to user's mail id. When user wants to fetch the data then it will get the data in encrypted form. So user must have to decrypt the data. When user click on decrypt it will ask for secret key which is user's email id. Using this secret key user can decrypt the data.

5. FUTURE WORK

As a future work, I plan to devise mechanism through which user can communicate with doctors or we can say that face to face communication of users and doctors. I also plan to devise mechanisms that can detect whether users' health data have been illegally distributed, and identify possible source(s) of leakage. In future Mobile health apps exist in a gray zone between medical devices, which are highly regulated, and computer applications, which aren't regulated much at all. Whenever an app is used to facilitate communication between a medical device, such as a blood pressure monitor and a mobile phone that transmits data to a physician's office.

6. CONCLUSION

In this paper, I proposed to build an application of mobile healthcare System using cloud. In previous papers, they provide privacy for health data using the private cloud and public cloud used to store the public data. As they use both private and public cloud they require more storage space than our system. Silent features of health care system is to provide medical camp with their location, provide disease oriented information, provide primary solution to particular disease, and provide hospital locations. This system provides a disease oriented information. This application provides easy access to medical care information anytime and anywhere. We also provide privacy. This system or application is most useful in emergency cases. These systems provide the different medical camps with their name and purpose. This system also provides the nearest hospital location.

5. ACKNOWLEDGMENTS

The author would like to thanks to the publishers, researchers for making their resources available. We also thank to the college authority for supporting me and providing required information. We would also like to thank our friends and family members.

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Application of Garbage Complaints Monitoring Using the Prototype Method

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Abstract: Utilization of mobile phone felt increasing with increasing community needs the latest information. Society as mobile phone users can utilize their mobile phones for a variety of needs including complaints against the government can provide. One complaint or report a social problem that can be given to the government of society is the garbage complaint. The trash problem as one of the environmental problems can be referred to as a social problem that needs to be regulated because it affects the lives of vast masyarakatl as it is said that the environment is a factor supporting human life. If the waste is disposed of carelessly, it will cause various health problems in the community. This application is expected to be able to facilitate the community to provide complaint reports about the garbage they have encountered around them to the authorities who are authorized quickly, easily and resolved.

Keywords: Application, Garbage, Mobile, Prototyping, Society.

1. INTRODUCTION

The development of information technology has a significant impact on every layer of community life, both individually and in organizations that causes information technology investment to become important and produce quality improvements from the information technology produced. At present, the application of information technology has developed rapidly not only in information technology based on websites and desktops but also on cellular based.

The development of cellular telephone telecommunications technology has progressed very rapidly, resulting in many changes that occur in people's lives, changing human lifestyles into easy and practical ways. Utilization of mobile phone felt increasing with increasing community needs the latest information.

Cellular phones today are no longer a luxury item. The use of cellphones has become increasingly widespread among the public. Society as mobile phone users can utilize their mobile phones for a variety of needs including complaints against the government can provide. The complaints or reports they provide are based on social problems encountered in the community. One of the complaints or reports of social problems that the people can give to the government is about garbage complaints.

The problem of waste as one of the environmental problems can also be said as a social problem that needs to be regulated because it affects the lives of the wider community as it is said that the environment is a supporting factor for human life [1]. Waste can have a negative impact on health if it is not addressed. If the waste is disposed of carelessly, it will cause various health problems in the community. Thus a more effective way is needed to improve communication between the community and the government related to the waste report.

The prototype of Garbage complaints reports monitoring is expected to be able to facilitate the community to provide complaints and complaints about the garbage they have encountered around them to the authorities who are quick, easy and resolved and can assist the government in monitoring waste complaints so the government can quickly overcome the problem that is.

According to Davis and Cornwell (2008: 737) explained that the word solid waste is a word commonly used to describe something we throw away. Solid waste, which consists of various objects that have been disposed of, contains various kinds of zar, which can be dangerous or not dangerous. However, in general, solid waste that accumulates can have a serious impact on dense human populations [1].

Waste must be managed properly until it is as small as possible so as not to disturb and threaten public health. Good waste management, not just for health purposes, but also for the beauty of the environment. Waste management includes collection, transportation, and destruction or waste management in such a way that the waste does not disturb the health of the community and the environment. Ways of managing waste include [1]:

- a. Collection and transportation of waste Garbage collection is the responsibility of each household or industry that produces waste.
- b. Destruction and Waste Management. Destruction and / or management of solid waste can be carried out in various ways, including: Landfill, Inceneration, Composting, Pulverization, Hogfeeding, Recycling.

This research use UML as a modeling proceses. UML is a unit of modeling language developed by Grady Booch namely the Object Modeling Technique (OMT) and Object Oriented Software Engineering (OOSE). The Booch method is known as the Oriented Object Design method.

OMT modeling developed by Rumbaugh is based on structured analysis and entity-relationship modeling. The OOSE method of Jacobson emphasizes the use case. With UML mtoode Booch, OMT and OOSE are combined. If People talk about UML, then it refers to Grady Booch, Ivar Jacobson and Jim Rumbaugh as creators, and they are called the Three Amigos [2].

UML diagrams have the main objective to help project development teams communicate, explore design potential, and validate software architecture designs [3]. To design an application or system using UML. In general, tools that can be used in designing UML-based systems consist of Usecase Diagrams, Activity Diagrams, Sequence Diagrams and Class Diagrams [4].

Monitoring that can be explained as an awareness of what you want to know, high level monitoring is done in order to make measurements through time which shows movement towards the destination or away from it [5]. Monitoring is generally carried out for specific purposes, to examine the following processes of objects or to evaluate conditions or progress towards the objectives of management outcomes for the effects of actions of several types including actions to maintain ongoing management. Monitoring will provide information about status and the tendency that measurements and evaluations are resolved over time [6].

Monitoring is a routine process of collecting data and measuring progress on program objectives, monitoring changes that focus on processes and outputs. Monitoring provides basic data to answer problems while evaluation positions these data so that they can be used and are expected to provide added value.

Monitoring is defined as a cycle of activities that includes the collection, review, reporting, and action of information on a process that is being implemented. Generally, monitoring is used in checking between performance and predetermined targets [7].

In its implementation, monitoring is carried out when a process is underway. The level of study of the monitoring system refers to activities per activity in a section, the indicator that is a reference for monitoring is output per process / per activity [7].

A prototype is an early version of a software system that is used to demonstrate concepts, design experiments, and find more problems and possible solutions. The prototype system allows users to know how the system is running properly [8]. There are 4 main prototyping methodologies, namely [9]:

1. Illustrative, produces an example report and screen display.
2. Simulated, simulates several system workflows but does not use real data.
3. Functional, simulates some actual system alaur and uses real data.
4. Evolutionary, produces a model that is part of the operational system.

Prototyping starts with gathering needs, involving system developers and users to determine system objectives, functions and operational needs. The steps in prototyping are as follows [9]:

1. Collection of Needs.
2. Fast design process.
3. Build a prototype.
4. Evaluation and improvement.

2. RESEARCH METHODS

Data collection methods used in this study are:

1. Literature Study

Literature study in this study comes from previous studies that can be used as a reference for this research material.

2. Field Study

Collecting garbage points and other locations that have the potential to accumulate garbage. The required point is the latitude and longitude coordinates and digital documentation.

The data analysis process is using the Prototyping system development method. The result of the data analysis is to produce a prototype of garbage complaints reports monitoring application.

The stages of system development or prototyping software methods consist of: Identification of system requirements, development of system prototypes, testing and

revision or modification of prototypes made, and system development and maintenance.

3. RESULTS AND DISCUSSION

a. Designing Process Models

In modeling the process of garbage monitoring application based on mobile, the prototyping method is made in 2 model forms, namely use case diagram and activity diagram.

Use case diagrams show the interaction between users and the system built. In the design it can be seen that there are 5 cases of interaction between users and systems, namely login, new complaints, complaint lists, profiles, about applications.

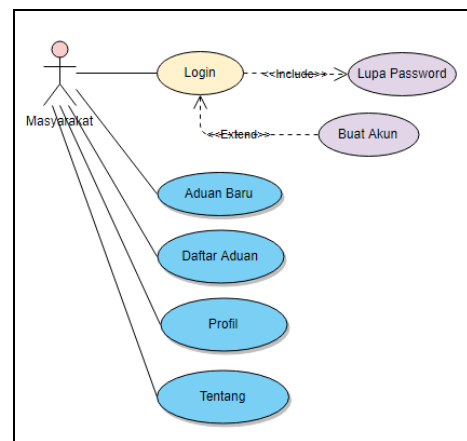


Figure 1. Use case Diagram

Activity diagrams show the activities that occur in the program to the process that takes place.

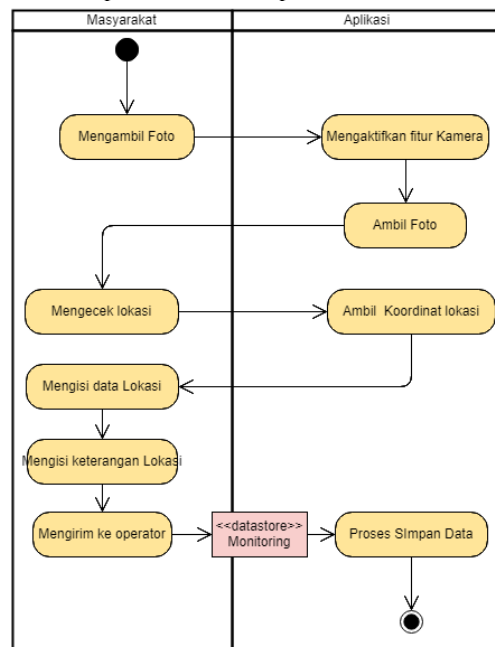


Figure 2. Activity Diagram of New Complaint

Activity Diagram of new complaints is the process of submitting a new complaint made by the people by utilizing the camera feature to record the location of garbage dumps. Then the location coordinates will be checked to be sent to the government operator.

b. Implementation

After the system needs identification phase and process modeling, the next step is to make the application prototype in accordance with the UML design diagram that has been made.



Figure 3. New Complaint Page

The new complaints page is a page where people provide reporting or garbage complaints that they encounter in the surrounding environment. The image and location of the trash that becomes a complaint will be sent to the operator in this case the city government to take action against the report.

The workings of this page are people taking pictures of the location of the trash that is a complaint. Then the community complements other data such as the coordinates of the reporting location, and information as perceived complaints. After that the data is sent to the server where the city government operator reads the report sent by the peoples.



Figure 4. List of Peoples Complaint Locations

A public complaint list page is a page that can be used by application users to see where the location is a list of complaints reported by the public.

On this page there is a map of the location points of community reports. In the map there is a point that is represented by a different color icon with a description, the navy blue is used to mark the location that has been or is in the process of action by the city government on community reports while the icon is red to indicate the location where the public complaint has not been followed up or still on the public complaint list.

4. CONCLUSION

The conclusion in this research is:

- This application is expected to be able to facilitate the community to provide complaint reports about the garbage they have encountered around them to the authorities who are authorized quickly, easily and resolved
- The city government that gets complaints or reports from the public can monitor the location of the points that become complaints by the peoples.

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Enhancing Security of Contactless Payment Using RFID and GSM

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Abstract: The debit card is a plastic payment card which is made up of the integrated chip, magnetic strip, an RFID tag. It is used for money transaction and eliminates the need of carrying cash. It directly deducts money from consumer's account to pay and transaction. RFID (radio frequency identification) is considered as an advanced technology for automatic identification of objects. RFID and NFC (near field communication) technology is considered as the future technology for contactless payment. NFC allows two devices placed within few centimeters to exchange data. One of the biggest problems of RFID and NFC card is that RFID reader can easily read and get the data when RFID tags come in the range of RFID reader. In our paper, we have proposed a system using GSM (global system for mobile communication) module providing extra security to contactless payment.

Keywords: RFID, GSM, NFC, POS.

1. INTRODUCTION

Contactless payments help to make transaction faster and make customers life easier. It works simply by holding or placing the RFID card next to the POS (point of sale) device enabled for this type of transaction or near the RFID reader which is placed in the ATM machine. RFID is a core technology for our debit card, together with GSM technology. RFID consists of three key elements: RFID tags, RFID readers and backend database server to identify information with the help of radio waves. In our proposed system GSM module is used for authentication. GSM modem will send a message to an account holder that please enter four digits one-time password. Now the user will enter security password through SMS if password will correct then the transaction will proceed.

2. EXISTING SYSTEM AND ITS PROBLEM

NFC technology the make contactless payment possible. Referred as 'tap and go' consumers can then either wave or tap their debit cards counters with contactless terminals without the need of keying a PIN or signing a receipt.

1. Wireless identity theft is a widely used technique of gathering an individuals personal information from RF-enabled or RFID cards carried on a person in their access control, credit, debit, or government-issued identification cards.
2. Upon harvesting the important data, one is then able to program other cards to respond in an identical fashion (cloning). Many websites are dedicated to teaching people how to do this, as well as supplying the necessary equipment and software which is required for cloning.
3. Floor Limit of contactless payment in various countries

Economic Space	Limit	Comment
India	Rs2000	above Rs.2000 contact chip transaction need to be done.
Ireland	euro30	previously euro15 until 1 october 2015
Japan	JPY 20000	JCB QUICpay and QUICpay +

3. PROPOSED SYSTEM

3.1. In prior system:

3.1.1 Neither the tag nor reader can identify illegal signal sent from a rogue reader or a rogue tag, due to the lack of authentication..

3.1.2 Data in the tag is easy to be eavesdropped and intercepted and this information can be used to steal money from the user's account.

3.2. In our proposed system:

3.2.1 After initiating the transaction the POS and RFID reader reads the data verifies that card detail form bank database if

the card is valid is valid or not. If the user is authenticated then an OTP is sent to the register mobile number of the cardholder. Now has to enter the received OTP, if the entered OTP and generated OTP is same then the transaction is successful and money is transfer to the merchant account. Our proposed system enhances the security for contactless payment using RFID card which increases the floor limit for contactless payment.

3.2.2 System architecture of proposed system is shown in below figure:

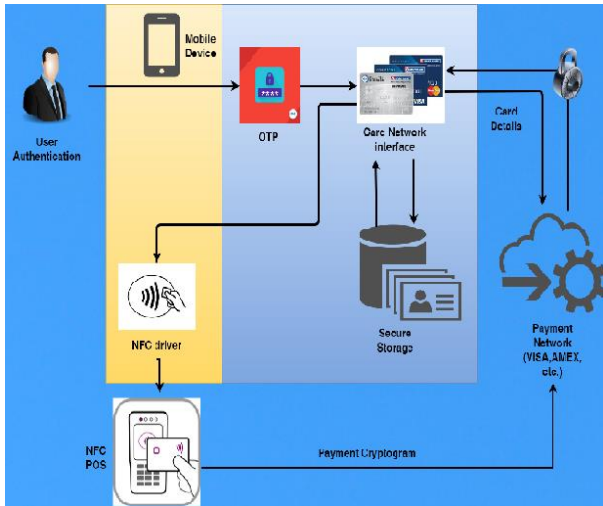


Figure. 1 System Architecture

When the user or the cardholder tap the card or wave it in front of POS, it gets the data and that data including some transactional data will be stored in encrypted form then that data sent to the bank for card authentication via card network then bank decrypt the data and then matches that data with its database ,Once the data will be matched bank approved or declined the transaction depending on the amount present in the account, if the bank approved the transaction it sends the approval to the processor and then processor generate the OTP and send the OTP on the register mobile number of the user ,the user enters the four digit password ,if the generated OTP and entered OTP will match the transaction will proceed otherwise card get rejected. When generated OTP or entered OTP will not be matched three times then that card is blocked for sometimes.

3.2.3 Flow chart of proposed system is shown in below figure:

Step 1:Start

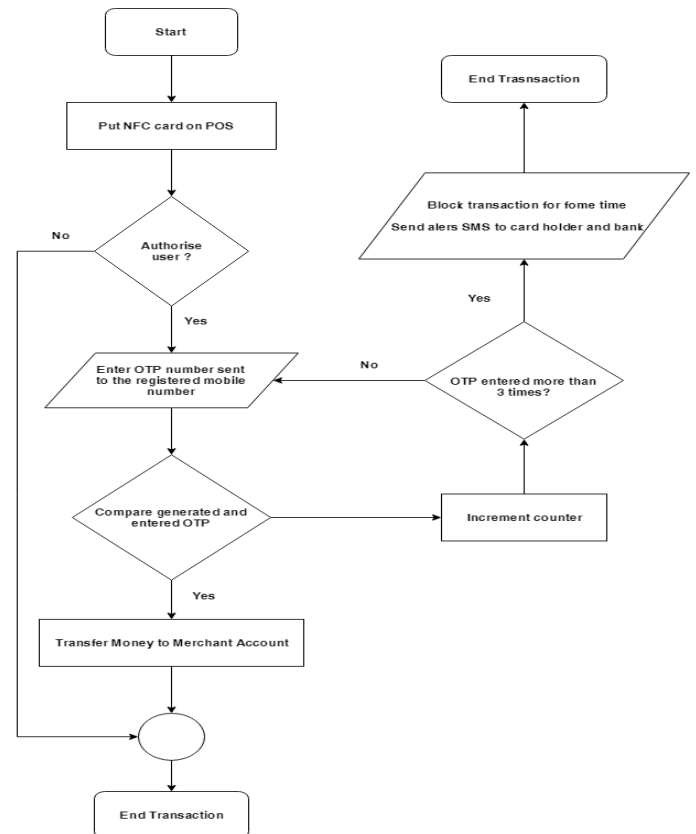
Step 2:Tap the card on POS.

Step 3:Authorise user.

Step 4:Authenticate Using OTP.

Step 5:OTP Sent to register mobile number.

Step 6:Match generated OTP and entered OTP.

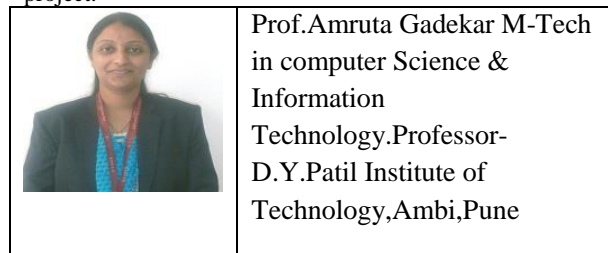


Step 7:If OTP is correct then success otherwise re-enter the OTP for three times or resend the OTP.

Step 8: If the entered OTP is still wrong for three times then card is block for some times.

4. ACKNOWLEDGMENTS

We are thankful to our beloved Professor Amruta Gadekar for their kind support. We would like to thank coordinator of project.



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Web Based Application of Bus Inspection System in Pulo Gebang Bus Station

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Abstract: Bus inspection is sequence activities to inspect administrative and technical elements for each bus that depart or exit from the bus station, which doing by the certified inspection officer / team, in order to guarantee the safety of traffic and road transport by avoiding everyone from the risk of accidents during traffic caused by humans, vehicles, roads and / or the environment [2]. The bus inspection activity in Pulo Gebang Bus Station which still uses a manual system that makes inspection files to fall apart, prone to loss or damage, difficult to find the history of bus inspection, and weak monitoring of inspection report. Based on this problem, this research is purposed to create a “Web Based Application of Bus Inspection System in Pulo Gebang Bus Station”. This application is created using the method of developing linear sequential software (waterfall). Test conducted on this system is black box testing. By implementation of this application, solve the existing problems in the bus inspection process and simplify the work of employees and leader in Pulo Gebang Bus Station.

Keywords: Research, Web, Application, Bus Inspection, Pulo Gebang Bus Station.

I. INTRODUCTION

The Pulo Gebang Bus Station Management is the technical unit of the Transportation Department of DKI Jakarta Provincial Government, which has the main task of managing the Pulo Gebang Bus Station. Its main function is to serve public vehicles for interprovince intercity transportation combined with urban transportation [7].

To be able to provide transportation services that ensure traffic safety and road transportation with the avoidance of each person from accident risks during traffic caused by humans, vehicles, roads and / or the environment [2], it is necessary to check the health of bus driver and inspect each bus that will depart or exit from the bus station by the certified inspection officer / team which at least consists of inspection officer and civil servant investigators (PPNS).

At this time the inspection officer is still doing inspections manually by fill the inspection points into the inspection form, after the officer has finished inspecting, the form recapitulation of the bus inspection is rather longer because have to unite the forms from several officers who can different locations and have no a special officer to recapitulate bus inspection results, so the Head of Management difficult to know the results of detailed bus inspections every day.

Other weaknesses are in the filing system of the inspection form because the forms are stored in the file cabinet without put a label with date and not separate where the passed inspection or failed inspection, it causes the files mixed, so if one day the inspection history is needed, officer will be difficult to find the bus inspection history, and the large number of inspection forms causes the files prone to lost / damaged.

Based on these problems, the right solution to solve the problem in the Pulo Gebang Bus Station is to create a "Web Based Application of Bus Inspection System in Pulo Gebang Bus Station".

II. RESEARCH METHOD

The location of research is in the Pulo Gebang Bus Station, at Jalan Seajar Tol Sisi Timur KM.2 Pulo Gebang, Jakarta, Indonesia.

Supporting tools used in this research are hardware (personal computer) with the specifications of the Intel core-i5 Processor 3.20 GHz, 4 GB DDR-3 SDRAM RAM, 500 GB SATA Hard Drive 7200 rpm, Windows 10 64 bit Operating System and software used are XAMPP Control Panel version 3.2.2, PhpMyAdmin, MySQL database, Google Chrome browser, Sublime Text 3 text editor, Microsoft Office Word 2016 and Microsoft Office Visio 2016.

The data collection techniques used are:

1. Library Study
Data was collected by studying, researching, and examining various literature from the library that are sourced from books, scientific journals, internet sites, and other reading related to the research conducted.
2. Field Study
Field study is a technique of collecting data by research and direct field survey of the research object. Field studies in this research at the Pulo Gebang Bus Station, are:
 - a. Interview
Interview is a technique to get answers from respondents by unilaterally questioning [1]. In this research, interview was conducted to the leader and several employees of the Pulo Gebang Bus Station according to the topic of the problem so it can get information and about the process of bus inspection.
 - b. Observation
Observation is a technique to get information by conducting careful observations and systematic recording [1]. In this research, observation was conducted by doing survey to the inspection activity and studying the flow of inspection process in the Pulo Gebang Bus Station.

The system development method used is the waterfall method. The stages of the waterfall method are: analisis, design, coding & testing, implementation, and maintenance [8].

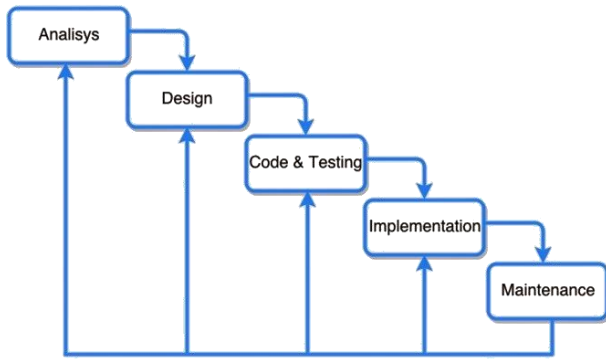


Fig 1. The waterfall stages

The stages of the waterfall method are explained as follows:

- a. Analysis
Analysis is the first step to determine the design of application systems needed by the user to manage the website.
- b. Design
The documentation produced from this system design stage includes: Use Case Diagrams, Activity Diagrams, Sequence Diagrams, and Class Diagrams.
- c. Coding & Testing.
Coding is writing the translation of system design that has been made into the form of commands understood by computers using programming languages. The programming language used is PHP with Codeigniter framework. Testing is to make sure all input output processes from the possibility of an error and a bug. So it can be immediately known and made improvements to the writing of the program code. Testing method used is Blackbox testing.
- d. Implementation
The implementation of the application is the last stage where the developer implements an application that has been completed and tested before.
- e. Maintenance
This step occurs after installation, and involves making modifications to the system or an individual component to alter attributes or improve performance. These modifications arise either due to change requests initiated by the customer, or defects uncovered during live use of the system. Client is provided with regular maintenance and support for the developed software.

III. LITERATURE REVIEW

The literature review method is a series of activities relating to the method of collecting data, reading and recording, and managing research materials [12]. Some related research are explained in the table below:

Table 1. Related research

Researcher	Samsinar, Lis Suryadi
Journal Title	Desain Sistem Informasi Pengujian Kendaraan Bermotor Pada UPT. PKB Kendaraan Khusus Cilincing
Journal Published	Seminar Nasional Sistem Informasi Indonesia (SESINDO), 22 September 2014 [10]
Conclusion	Conclusion: With the implementation of a computerized system can minimize

	administrative process errors or the occurrence of human error and simplify the work. Advantages: The administration process is computerized Weaknesses: Still desktop based, not web-based so that it cannot be accessed anywhere, and this system is still general for periodic inspection vehicles not specifically for bus inspection.
Researcher	Mohammad Rosul, Yudie Irawan
Journal Title	Sistem Informasi Pengujian Kendaraan Bermotor Dinas Perhubungan Komunikasi Dan Informatika Kabupaten Kudus
Journal Published	Prosiding SNATIF Ke -1 Tahun 2014 [9]
Conclusion	Conclusion: The study produced a Motorized Vehicle Testing Information System application program that has a main menu module consisting of files (log out and exit), master data (applicant data, vehicle data, levy data, vehicle type data and user data), testing, payment and report. Advantages: The administration process is computerized Weaknesses: still desktop base using VB.net, not web-based so that they cannot be accessed anywhere, and this system is still general for periodic inspection vehicles not specifically for bus inspection.
Researcher	Nurhayati, Budi Serasi Ginting
Journal Title	Perancangan Sistem Informasi Pengujian Kendaraan Bermotor Pada Dinas Perhubungan Kabupaten Langkat
Journal Published	KAPUTAMA, Vol.7 No.2, Januari 2014 [6]
Conclusion	Conclusion: With a system designed this can help people or owners of vehicles for registration administration processes, vehicle data stored in the database, can present vehicle data that has been tested if data search is needed. and others can be handled faster. Advantages: This application is web-based Weaknesses: The interface of the application is less user friendly and still uses PHP native, and the system is still general for periodic inspection vehicles not specifically for bus inspection.

IV. RESULT AND DISCUSSION

4.1 Running System Analysis

Analysis of the running system is by making an activity diagram of the bus inspection process, as illustrated below:

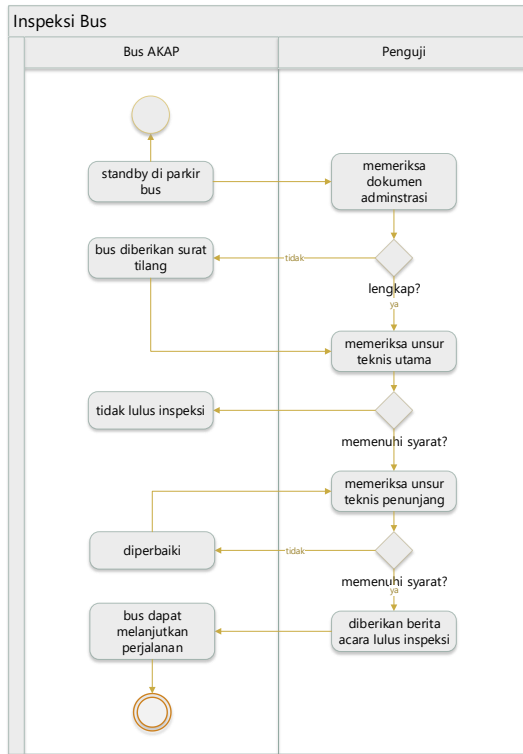


Fig 2. Activity diagram of the bus inspection process

The activity diagram of the bus inspection process is explained as follows:

1. The bus parking in parking area.
2. The officer checks the administrative document of the bus.
3. If the administration of the bus is incomplete, the Civil Servant Investigator (PPNS) give the violation letter, but the bus can still allow to take bus inspection.
4. The officer inspects the main technical element of the bus, consist of lighting systems, braking systems, vehicle bodies, tires, speed gauges, safety belt equipment, wipers and emergency response equipment.
5. If the inspection of main technical element is passed, the officer continues to inspects the supporting elements of the bus, consist of additional lighting systems, vehicle body parts, seating capacity, and other equipment.
6. If there is one or some parts of the supporting elements of the bus are not completed, the bus inspection is still passed with recommendation to complete the supporting element and the bus is permitted to enter the departure area of Pulo Gebang Bus Station.
7. The officer records the result of bus inspections into the bus inspection book.

4.2 Identification of problems

Table 2. Identification of problems with PIECES Method

No	PIECES	Running System	Proposed System
1	Performance	The inspection officer is still doing inspections manually so its rather longer.	Bus inspection is doing by input data into the application so it will be stored in the database.

2	Information	Bus inspection results were recorded manually so the bus inspection data cannot be presented well	Bus inspection data can be seen directly in the application, and the bus inspection report can be created automatically
3	Economics	The use of paper and stationary on every bus inspection causing need more inspection cost	Bus inspections conducted by input data into the application so that reduce the cost
4	Control	Leaders cannot perform control or monitoring of bus inspections because the inspection officer did not make a report	Leaders can directly control or monitor the bus inspection process in the application
5	Efficiency	Bus inspections results were recorded manually to the report.	The application simplify the process of inputting and reporting of inspection results.
6	Service	Bus inspection process is complicated because the officer should always borrow an administrative documents of each busses even though the bus had been recorded.	The officer no need to borrow the administrative documents because the data was stored in the application database, so the process is easier

4.3 Proposed System Design

After analyzing the running system and identifying problems so the next step is proposing the system design as needed in making web-based application. In this proposed system, the modeling language used is the Unified Modeling Language (UML).

4.4 Use Case Diagram

Use case diagram describes the interaction between users and systems or applications [3]. There are two actors in the proposed use case diagram, are Leader as Admin and Officer as User:

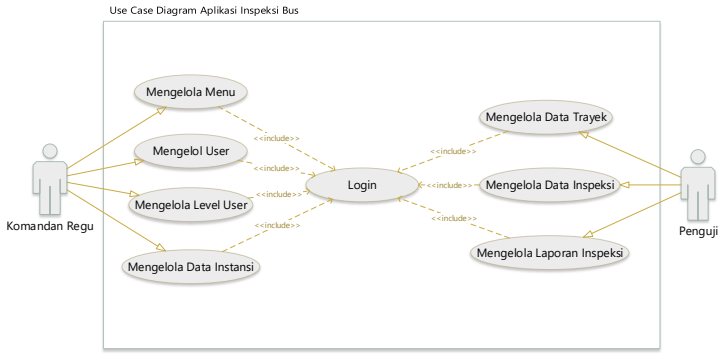


Fig 3. Use case diagram of the application

In figure of use case diagram above, there are two actors, Leader as Admin and Officer as Inspector. Identification of actor is explained in the table below:

Table 3. Identification of actor

No	Actor name	Description
1	Leader	The leader is an actor who has the authority to manage menus, manage users, manage user levels and manage agency data. Leader has the right to full access to the application
2	Officer	The officer are actors given access rights by the leader primarily to manage bus route data, and manage bus inspection data and manage bus inspection reports

Table 4. The description of use case diagram

No	Name Use Case	Description	Actor
1	Login	The application display the first login page, leader and officer input email and password in the fields, if account correct the system will display the dashboard of application	Leader / Officer, System
2	Manage Menus	The application will display the menus data, Leader can create, update and delete menus data.	Leader, System
3	Manage Users	The application will display the users data, Leader can create, update and delete users data.	Leader, System
4	Manage User Level	The application will display the user levels data, Leader can create, update and delete user levels data, and grant permission to the officer in accordance with user level	Leader, System
5	Manage Agency Data	The application will display the agency data to be header of reports, Leader update the agency data.	Leader, System
6	Manage Bus Route Data	The application will display the bus route data, Officer can create, update and delete bus route data.	Officer, System
7	Manage Inspection Data	The application will display the bus inspections data, Officer can create, update and delete	Officer, System

		bus bus inspection data.	
8	Print inspection reports	The application will display the report of inspections data according to inspection periode.	Officer, System

The use case scenario aims to explain the actor actions with the activities of the proposed system. Some of use case scenario of the application are explained in the table below:

Table 5. Use case scenario of manage inspection

Use case name	Manage inspection data
Description	Officer can create, update and delete bus inspection data
Actor	Officer
Initial condition	Once logged in, the actor opens manage inspection page
Main scenario	
Actor Action	System Reaction
1. Select manage inspection menu	1. Display manage inspection page
2. Input the inspection data by filling out the inspection data form	2. Display input form of inspection data
3. Update the inspection data	3. Save inspection data into the database (tbl_rampcek)
4. Delete the inspection data	4. Display the inspection data on manage inspection page
Alternative scenario	-
Final condition	The inspection data successfully saved and appear in the manage inspection data page

Table 6. Use case scenario of print inspection report

Use case name	Print inspection report
Description	Print inspection report into PDF file
Actor	Officer
Initial condition	Once logged in, the actor opens inspection report page
Main scenario	
Actor Action	System Reaction
1. Select inspection reports menu	1. Display inspection report page
2. Choose the period of inpection report	2. Display inspection report data based on the selected period
3. Print inspection report into a pdf file	3. Generate Pdf file of inspection reports
Alternative scenario	-
Final condition	Display inspection report based on the selected period and generate Pdf file

4.5 Activity Diagram

Activity diagram is an activity flow diagram in the system that is being designed, which will be used by the application system created [3]. Some of activity diagram of the application are shown below:

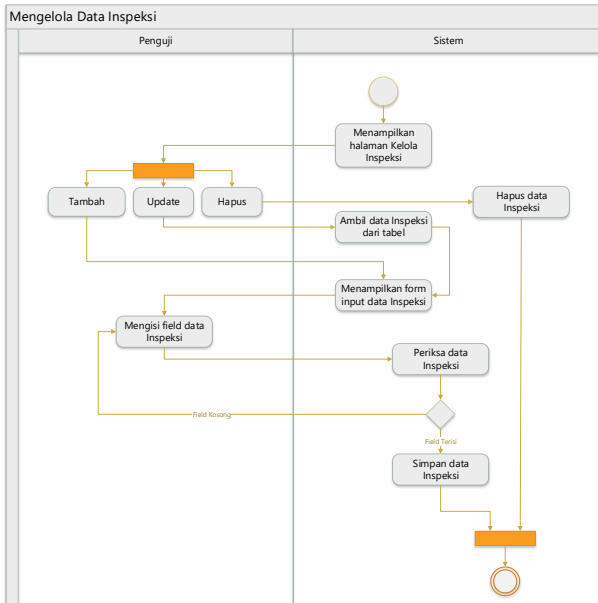


Fig 4. Activity diagram of manage inspection data

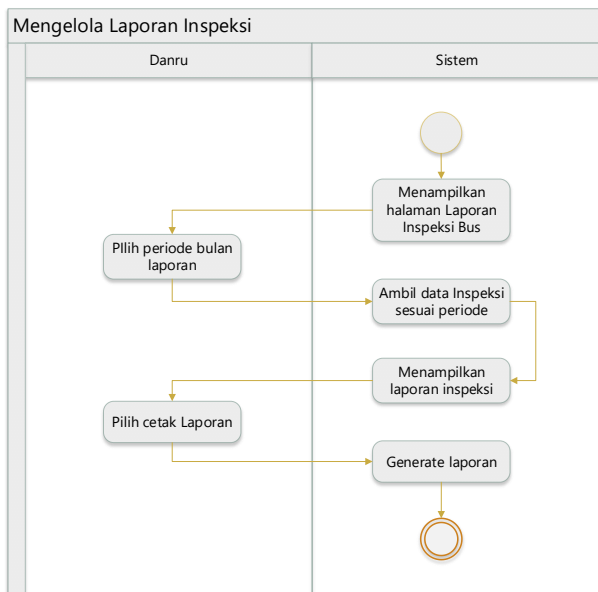


Fig 5. Activity diagram of print inspection report

4.6 Sequence Diagram

Sequence Diagram is a diagram that is associated with use cases where sequence diagrams show what stages should occur in a use case [3]. Some of sequence diagram of the application are shown below:

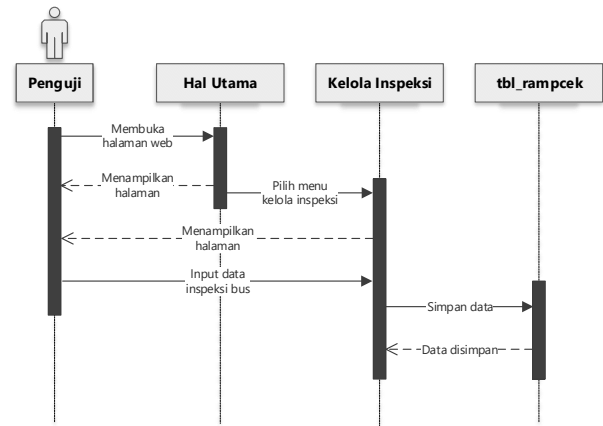


Fig 6. Sequence diagram of manage inspection data

The sequence diagram of manage inspection data is explained as follows:

After logging in and the system display dashboard page, Officer select the “manage inspection” menu, then the system will display a bus inspection data, if the user clicks add then the form will display an inspection form that will be inputted by the user, after the user inputs the data, it will be stored by the system into the database, then the system will return to the inspection data page.

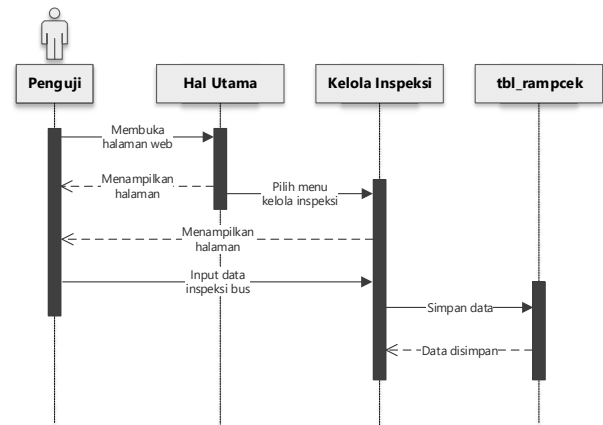


Fig 7. Sequence diagram of print inspection report

The sequence diagram of print inspection report is explained as follows:

After logging in and the system display dashboard page, Officer select the "inspection report" menu, then the system will display the report page. Officer determine the reporting month period, then the system will retrieve data from the database and will generate a report.

4.7 Class Diagram

Designing database specifications is a step to map the conceptual model to the database model that will be used [3]. The design of the bus inspection application database is described in the UML Class Diagram model. The class diagram of the application is shown below:

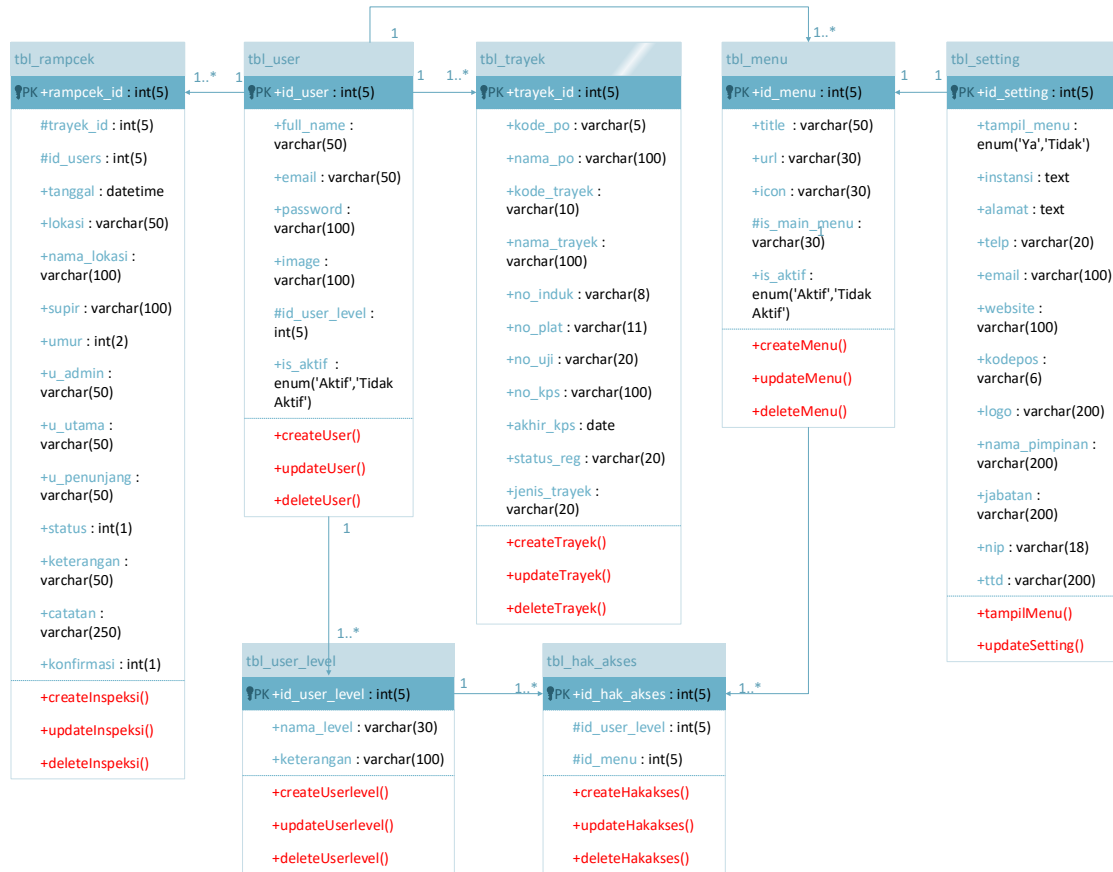


Fig 8. Class diagram of the application

The explanation of Table tbl_rampcek according to class diagram above:

Table 7. Table tbl_rampcek (bus inspection)

Table Name		tbl_rampcek		
No	Field Name	Type of Data	Lenght	Description
1	rampcek_id	integer	5	Primary Key, Auto Increment
2	trayek_id	integer	5	Foreign Key with tbl_trayek
3	id_users	integer	5	Foreign Key with tbl_user
4	tanggal	datetime		Date of input inspection data
4	lokasi	varchar	50	Inspection Location
5	nama_lokasi	varchar	100	Inspection Location Name
6	supir	varchar	100	Bus driver name
7	umur	int	2	Bus driver age
8	u_admin	varchar	50	Administrative elements inspection results
9	u_utama	date	50	Technical elements inspection results
10	u_penunjang	varchar	50	Supporting elements inspection results

11	status	int	1	Inspection Result (Passed or Failed)
12	keterangan	varchar	50	Description of Inspection
13	catatan	varchar	250	Additional Notes
14	konfirmasi	int	1	Confirmation

4.8 User Interface Design

User Interface design is to create a page display that will be used by the user to interact with the system using the interface on the computer screen. User interface design of this application is web-based using the PHP programming language with the Code Igniter framework. Some of user interface designs of the application are shown below:

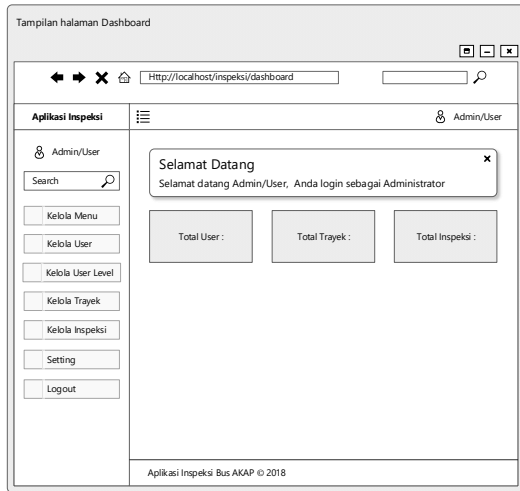


Fig 9. User Interface of dashboard

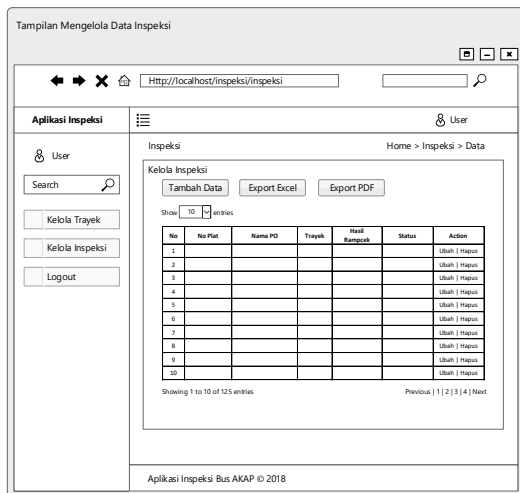


Fig 10. User Interface of manage inspection data

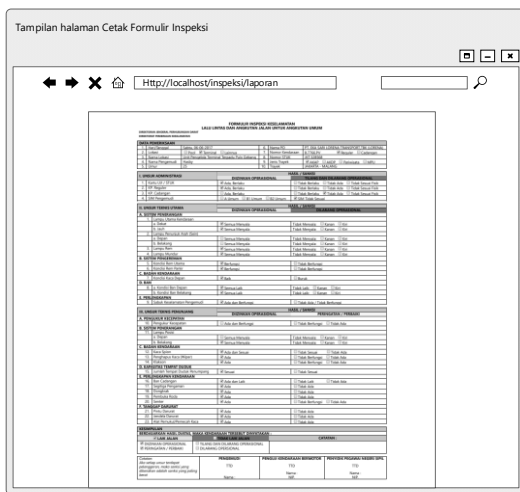


Fig 11. User Interface of bus inspection report

testing of application systems that are intended to analyze the results of the test, whether the results are as planned. Some of implementation of database and user interface are shown below:

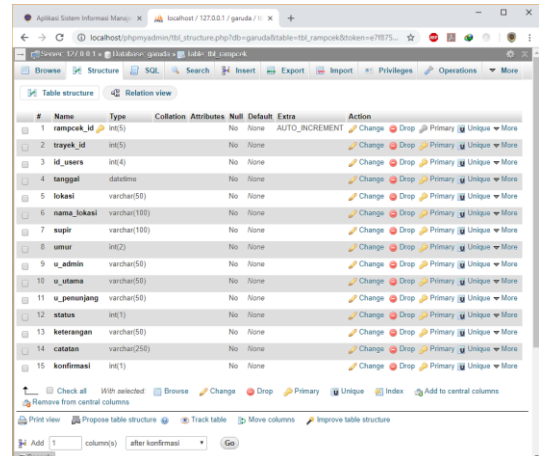


Fig 12. Implementation of inspection database (tbl_rampcek)

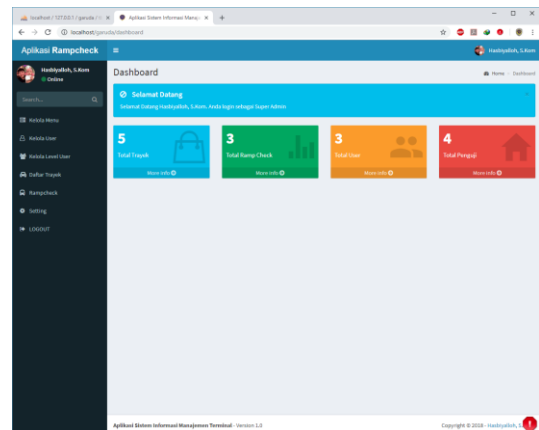


Fig 13. Implementation of Dashboard page

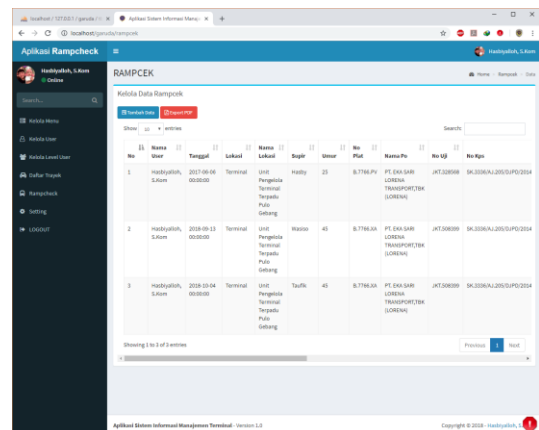


Fig 14. Implementation of Inspection data page

4.9 Implementation

The implementation is the stage where the system begins to be made using information that has been collected [3] at the implementation of information that has been previously collected is applied using a programming language and also besides that the implementation stage also discusses the

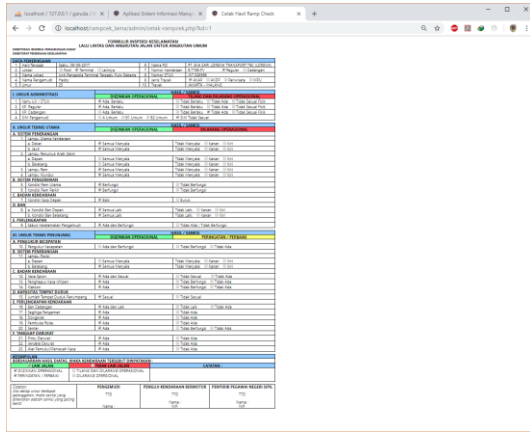


Fig 15. Implementation of Inspection report page

V. CONCLUSION

Conclusion of this research are:

1. Running system of bus inspection in the Pulo Gebang Bus Station still uses manual system that makes inspection files to fall apart, prone to loss or damage, difficult to find the history of bus inspection, and weak monitoring of inspection report.
2. By implementing the application, solve the existing problems in the bus inspection process by make it easier to input inspection data, print inspection reports, finding inspection history and simplify the work of employees and leaders in Pulo Gebang Bus Station.

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Location Based Reminder System with Remote Request

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Abstract: We all being human usually forget some things which we have to get from other. In such a case, this application will be useful to remember the things. Location-based alarm using GPS is an attempt to add an alarm facility for mobiles, based on the location of the device and to set a to-do list that is the task to be performed. The location-based alarm will give you an alert and a notification when you reach your desired destination. Moreover, we are up with a dynamic approach of remote handling for reminder system. We have put forth an idea where in user can connect and handle each other's reminder system. Hence when you forget of setting reminder itself, your connected friend may set it for you.

Keywords: GPS (Global Positioning System), LBS (Location Based Services), Location Based Reminder System

1. INTRODUCTION

Technology and its future developments are basically the approaches to finding ways to make life easier. A good product is judged by its simplicity, practicality, and functionality. Mobile information and communication technology determine society and behaviors' since it represents an element of individual quality and a way of communicating and doing business. The potential of hardware is such that it's difficult to make a proper use of it. By adapting to the users' requirements through improvement in the software side, hardware's capacity can be justified for a bit. The mobile applications focus on the technology, hence they are developed for certain purpose or for special technologies. The main aim of location-based services is to notify the customer of particular things based on their current location. We as human beings have a tendency to often forget things hence some of the important work to be done remains incomplete. We have location-based services at our disposal to overcome this shortcoming. However, some of the current location based services fall short on some part as they do not efficiently use the information; services are provided to the customer irrespective of their intention and current location. Thus, to overcome such situation we have proposed a location-based reminder system. This project is similar to an alarm, but the main and the most important difference is that it is not just a time alarm or task reminder but a location prompt. It comes with a provision of setting an alarm for a particular plan. The location-based alarm is a GPS based alarm, If a reminder is set for a particular locale, it will prompt with notification once it detects you are within the user-defined range from the destination. The users' current location will be saved in terms of longitudes and latitudes. The reminder will work when the user gets closer to the location. This location-based alarm is useful for the traveling salespersons and passengers traveling in trains/buses. It is not an easy task to remember of all task and optimal routs for a traveling salesperson. So by using this application, he can set an alarm

to the places, where he needs to go. It works wonders as you will be given a reminder to do/buy things at the exact location rather than keep the reminder on all day. Here also a new additional functionality is provided; setting of the radius. If the user chooses 500 m as the radius, then the alarm will go off when the user is in the proximity of the set location but 500 m meters away from it.

2. ANDROID SYSTEM: OVERVIEW

Android is an operating system basically for smart phones based on a modified version of Linux. Android OS is a stack of software components having five main sections and four main layers:

2.1 Linux Kernel

Linux Kernel is at the bottom of the layers with approximately 115 patches providing a level of abstraction between the device hardware and containing all the essential hardware drivers like camera, keypad, display etc. The kernel handles networking and a vast array of device drivers.

2.2 Libraries

Libraries including open-source Web browser engine WebKit and several android libraries : android.app, android.content, android.database, android.opengl, android.os, android.text, android.view, android.widget and android.webkit.

2.3 Android Run-time

It provides a key component called (DVM) Dalvik Virtual Machine which is a kind of (JVM) Java Virtual Machine specially designed and optimized for Android.

2.4 Application Framework

It provides many higher-level services to applications including: Activity Manager controlling all aspects of lifecycle and activity stack; Content Providers allowing publishing and sharing of data; Resource Manager providing an access to non-code embedded resources; Notifications Manager displaying alerts and notifications;

View System which is an extensible set of views to create application UI.

2.5 Application

All the Android applications are present and installed on this layer only.

3. IMPLEMENTATION

This application includes five modules:

3.1 Geo-Fencing Model

In the Geo-fencing model the GPS system is used for getting the current location and also the location for which the alarm is to be set. **Google Server** is a web mapping service application and technology provided by Google, that powers many map-based services, including the Google Maps website and maps embedded on third-party websites via the Google Maps API. There is a provision of street maps along with route planner for various traveling modes (walking, two-wheeler, four-wheeler, public transportation) including a locator for urban businesses in numerous countries around the world. **Google Maps for Mobile** introduced a Java application called Google Maps for Mobile, intended to run on any Android-based phone or mobile device. Many of the web-based site's features are provided in the application. The software looks up the location of the cell site using a database of known wireless networks and site.

3.2 Set Reminder for Location and Task

The user location is taken as input as soon as the location alert setting system is desired to be activated.. This reminder system monitors the mobile screen in consistency. The moment user gets within the radius of 500 meters, the reminder rings. The default radius range will be set to 500 meters that can be changed according to the users' desire. Not only the alarm, but its description and route map to the destination location is also provided.

3.3 Set Timer Alarm

In this module the timer is used to set an alarm that if the user wish to set a location for a particular time, then in this case the timer alarm is also set for that location.

3.4 Remote Alarm

In this module the user can set an alarm remotely on someone else mobile by whom the user is authorized for an access to this reminder system. This allows the user to remember his clerk, co-partners or friends for some getting some particular things

4. CONCLUSION

In this study, we have discussed and explored how we can optimally use the location-based services in our daily life. Location-based reminder system provides an efficient and user-friendly service to its user. In this location based alarm system based on the location of the mobile devices, the user will automatically get the notification in relevant situations allowing them easily to activate or deactivate the alarm system. Till now there were so many applications for reminding the work schedule which is working based on the alarm. But in our application, we have introduced a new thought for reminding the daily work remotely to another user if we authorized by that user.

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