

## MOBILE-BASED SOCIAL NETWORK APP FOR PERSONAL BUSINESS TRANSACTIONS

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### Abstract

*Mobile-Based Social Network APP for Personal Business Transactions (MSNPBT) was developed to help Malaysian citizens to handle unwanted items conveniently. Nowadays, the number of consumers in Malaysia are increasing rapidly. Besides, there are getting more advertisers who often persuade people to buy unnecessary products. As a result, Malaysian citizens have faced several difficulties in handling unused items. For instance, there are a lot of used items in their houses which are not disposed. MSNPBT is an easy-to-use mobile application for making second-hand items selling transactions. This project incorporated the utilization of social network and e-commerce to know the identities of sellers including profiles, occupations, education, status, locations, and feedbacks before making the transactions. Furthermore, buyers can participate in a forum provided with the sellers. On the other hand, data mining technique is used for implementing product recommendation in order to enable users to save more time when they are searching the products. Therefore, users are able to make conversations and to keep in touch between buyers and sellers, as well as to search the products that they need. Among the available software, Android Studio was chosen to develop the project. Furthermore, Java programming was used as the programming language whereas phpMyAdmin was used as the database management system.*

**Keywords:** Mobile, Android, Second-used Items, Data Mining

### 1.0 Introduction

Many people have a lot of unused items lying around their house that are currently in use whether second hand or handmade items that we have not disposed of yet. This is a major compelling factor that has brought to many users. Hence, users stand a good chance of having a successful transaction. Furthermore, problems that arise can be posted in the forum and every user play an important role in replying and helping out others. In addition, as the population of Malaysia increase, larger bulk would be produced due to the strong economic growth. Siti Aisyah Saat (2013) mentioned solid waste production was related to the economic status of the country and the lifestyle of its population and it would affect the management style of the waste generated. Besides, waste generation increase due to demand of Citizen in order to achieve higher quality of lifestyle. On the other hand, skills and knowledge of solid waste management in Malaysia is poor. Mohd Dinie and Mashitah (2012) highlighted that Malaysia was not capable of planning, designing, contrasting and managing of solid waste management facilities and services due to inadequate technical capabilities and poor operated facilities.

E-commerce is growing rapidly. Since online marketplaces are providing lower entry barrier for users, this has become the popular choice for sellers or retailers to start their e-commerce journey (Wong, CK., 2013). In this case, data mining is becoming a very significant role in some areas like product searching and recommendation. There are many websites that used data mining for e-commerce such as Amazon, e-bay, and other e-commerce sites. Data mining is very useful in helping customers to find the best results for them. Besides, data mining provides a good recommendation that can save hours of time searching and delights customers.

There are few factors of contributing social network marketing such as the relationship. According to James et al (2012), the relationship between personal and business are built on trust. Existing forum within social networking would enhance relationship between seller and buyer. James et al (2012) also stated that listening is a primary component in building trust with customer. Most of customers want to be heard and understood.

Therefore, this project targets an easy-to-use mobile application for a transaction of second-hand home. This project also requires knowledge in database management, data mining, and mobile apps development. The advantage of android mobile apps because it is free to use and available OS.

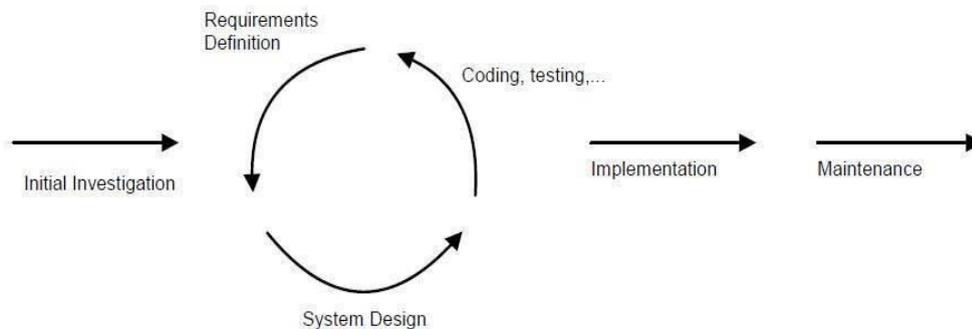
Besides that, this project helps people to know the way to handle their old items. Hence, a mobile-based social network for the transactions of those old items are very important to everyone.

Several problems were identified among Malaysian citizens in handling numerous old items or used items. They need to spend some time to look for their consumers. Citizens also found some difficulties in searching and identifying the information of the sellers. Moreover, it was found that social network websites lack of the function in categorizing all information of posted old items.

## **2.0 Methodology**

Prototyping techniques is a system development methodology to support this project. Prototyping is an iterative framework which is not standalone and complete development methodology. It attempts to reduce inherent project risk by breaking a project into smaller segments and providing more ease-of-change during the development process. Thus, this methodology is chosen to avoid any mistake or problem occur at the final stage.

## Prototyping



**Figure 1: Prototyping Life Cycle (Long, 2012)**

Besides that, there are several situations contributed of choosing this prototyping life cycle. First, MSNPBT system is a project of developing an online system requiring extensive user dialog. The second situation is this project requires a large number of users, interrelationships, and functions. As customers' requirements change frequently, the functional requirements may be changed significantly. Thus, we chose this life cycle because of prototyping model is easily identify confusing or difficult functions and missing functionality. Furthermore, it may generate a specification for a production application and encourage innovation and flexible design.

### 3.0 Results

By using this mobile app, users can post and sell their unwanted item with details for promoting to the public. As login with a Facebook account, identity seller can be determined like profile, education, status, and feedback, that information made buyers more confident to make the transaction process with them. Therefore, sellers can sell their unwanted items easily since the buyer has identified the seller's background.

Besides that, buyers can direct keep in touch with sellers by conducting a private conversation. Buyer able to ask more information from seller and seller can response quickly to the buyer so buyer receives the message in a real-time.

Finally, buyers can find the recommended items based on the range of their age and gender. Different range of age will have their different favourites. Therefore, we have used data mining techniques to list out the popular used items to each buyer.

### 4.0 Discussion

This section will discuss the system limitation and suggestion of future improvement.

## 4.1 System Weakness

This system is a mobile based system that helps citizens for selling their second-hand items. However, there are few problems encountered when developing the system. First of all, one of the problems faced is the data mining implementation part. This is because of limitation capacity in server 000webhost (free server) which only provides 1.5 GB available. Since the low capacity was provided, the huge number of the dataset cannot be imported and used for data mining implementation.

Secondly, there is some difficulty on implementing the message chat feature. There is not much documentation in this area. Luckily, by spending a lot of time in the forum and code sample provided, I managed to implement it in the system.

## 4.2 Suggestion for Future Improvement

Since this system has some limitation, future improvements are needed in order to make this system more robust. Below are some of my suggestions:

- Add a rating feature for Sellers  
Buyer able to rate the seller in terms of the star depends on the trustworthy seller. Rating is a very useful feature that allows buyers view the sellers' ranking before accessing their Facebook profile and personal status.
- Add a push notification feature  
By adding push notification, they can receive any notification in real time so that they don't need to keep checking whether they got any message.
- Implement data mining with concern age and overall transaction  
As long as this system is used by many users, there will be a lot of transaction dataset and item dataset. With that huge number of the dataset, the system might list out some items that aren't user need. Data mining is required to calculate the high probability what items are users needed according to a range of age. Besides that, app able to provide some suggestion based on the overall transaction.
- Allow for sharing to Facebook  
Currently, the system only promotes items within the app's users. Therefore, only this app's users could see the promoted items. The system might be able to add an alternative way for promoting second-hand items by sharing into Facebook. Besides

that, an additional method can be done by sharing to user's friend list from Facebook.

## **5.0 Conclusion**

In conclusion, this project starts from identifying problem background, then move to requirements elicitation and followed by system analysis and design. The user interfaces had been successfully developed and the system also can be fully functions. Besides that, the system testing is carried out to make sure it is free from any error. Finally, Mobile-Based Social Network Personal Business Transactions system was developed for helping citizen to be familiar with promoting and selling their second-hand items.

## **References**

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