



MOBILE-BASED MANAGEMENT SYSTEM FOR ONLINE UTHM USED GOODS (SHOP1UTHM)

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ABSTRACT

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Application software is often used for end user. Application software have two types of general classes which is system software and application software. For instance, in SHOP1UTHM Facebook, the customer sometimes can be fraud by the seller because the seller does not put the exact price on the advertisement. The seller also bidding the price to the other customer in secretly ways but not in a group way. So, this project will provide a systematically and safe medium for user to sell and buy used good items via online and mobile-based management system which consist of interface and database. This mobile-based management system consists of three web application which is customer application, administration application and seller application. It's also provide new way of selling used goods items, save time and cost, provide a wider market and more interactive compared to the traditional methods. The mobile-based management system for online UTHM used goods (SHOP1UTHM) also provide customer online shopping that uses shopping basket, seller can sell their items with administrator approval, and administrative processes online. The basic main function of this system are Registration, Login, and Update Purchasing Used Goods, Online Transaction, Admin Management System and others. The customer can browse to search the used goods that they wanted by added to the shopping basket to order. The shopping basket can also increase in quantity or removal before the checkout. The administrator can manage the system by add, delete, update and remove the items and the items information. Seller can insert, update and remove the items that they want to sell. Hypertext Preprocessor (PHP), MySQL, Bootstrap and other related tools and languages were used to develop this SHOP1UTHM system with the target to provide bigger, huge and secure market for used goods selling.

1. INTRODUCTION

Used goods means an item that is being purchased again by sell or donate it to second or later end user although the items has been used. It's also can save or fulfil the purchaser budget especially the Universiti Tun Hussein Onn Malaysia (UTHM) student. University student need a lot of equipment but not affordable to buy brand new item. So, by purchase the reuse goods will help manage student budget successfully.

UTHM student usually new intake student will take the initiative by searching through the social networks such as Facebook to search anyone especially senior student who sell the used goods for affordable price [1]. There some senior student that will sell their used goods by posting the used goods picture and that they want to sell in SHOP1UTHM Facebook group page, blog or using any of the social networks available. However, they are not always available to be contact because of the busy life as a student. Plus, some of the irresponsible seller usually cheat while selling by bidding the price by personally message the buyers not in groups. This is happened because usually the seller will not insert the price of the used goods while selling the items.

Therefore, with the new website and application, the online used goods will help the senior student or anyone to sell their used goods and to help the junior student or anyone that needs to buy the used goods with integrity and systemically.

2. E-COMMERCE AND EXISTING ONLINE USED GOODS SYSTEM

EC website that based on online used goods are very common in Malaysia. There are some vendors use many creative and innovative way to develop their online used goods management website. Some use Facebook, Instagram, blogs and many more as the medium to sell their product that easy to be approach by the costumers [2]. There are also have a good EC

android application system to manage used goods items in systematically. Commonly, the transaction that involve by the other EC android application is just uses bank transfer using bank account provided in the application. The good EC android application will provide alternative and variety way of payment such as bank transfer, and various payment gateway that high in security during payment.

There are some online used goods EC consist of condition guidelines such as eBay. The condition guidelines that being used for surveying are:

NEW: The brand-new item, that unused, unopen, undamaged and have original packaging.

NEW OTHER: The items is unused and do not have any single damage or sign of wear but sell by the first user bot the manufactured vendors.

LIKE NEW: The item looks new with not damage but have been use before.

GOOD: The condition is still good although it has been used

ACCEPTABLE: The items still can be use and have only minor damage but still usable.

MANUFACTURER REFURBISHED: The used goods item has been modified, inspected, cleaned or repaired to have equality standard with the manufactures vendor and approved.

SELLER REFURBISHED: The used goods item has been modified, inspected, cleaned or repaired to have equality standard with the manufactures vendor but not approved.

USED: The used goods item has been used previously by first, second or

third use. Description and details of the items, please refer to the seller's information.

FOR PARTS OR NOT WORKING: The used good item is not fully function and for full details, please refer to the seller's information.

Table 1 shows the comparison of similar online used goods management system, such as Lowyat, Mudah.my and Lelong. There are used to compare with Ecommerce System for developing a well-managed new website.

Most of the system do not provide shipping basket except for Lelong website. Other than that, quick search, registration and advertisement at the front are all being provided by the system except for Lowyat website. Payment and Login interface are included in all website. Lastly, seller account is not provided in every suggested website.

Table 1: Comparison of Timetable Scheduling System

System \ Features	Lowyat	Lelong	Mudah.my	Mobile-based management system for online UTHM used goods (SHOP1UTHM)
Shipping Basket	Not Provided	Provided	Not Provided	Provided
Quick Search	Not Provided	Provided	Provided	Provided
Payment Page	Provided	Provided	Provided	Provided
Registration	Not Provided	Provided	Provided	Provided
Login	Provided	Provided	Provided	Provided
Seller Account	Not Provided	Provided	Not Provided	Provided
Advertisement in front	Not Provided	Provided	Provided	Provided

3. METHODOLOGY

The development of the website is using the system development life cycle which containing planning, analysis, design and implementing of the systems. The analysis, design and implementing phases are done at the same time to develop swiftly and get responds and comments that allows creating a better website in the process [3]. Object-oriented programming language has four (4) general concepts which are encapsulation, inheritance, polymorphism and late binding. Object-Oriented technique is use as the process in developing the new Online UTHM used book Bookstore. Object-Oriented is a set of tools and methods that enable software engineers to build reliable, user friendly, maintainable, well documented and reusable software systems that fulfills the requirements of its users [4]. Below is the diagram that showing the model that use in this website:

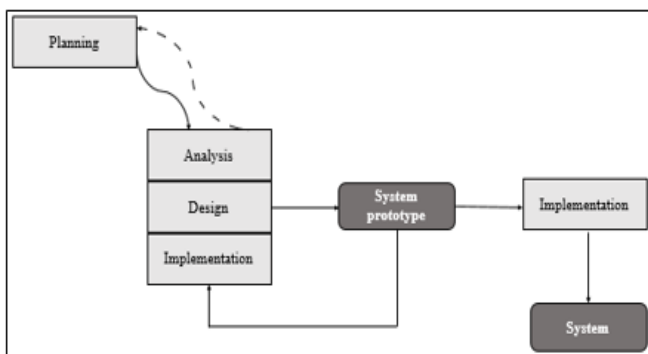


Figure 1: System Prototyping

Planning phase research have been done to find the problem faced by the user. The problem identified is how to solve the situation, student struggle to find any other student that can sell their used item for a cheaper price. Next problem has been pinned up is, senior student and anyone usually sell their used item without put the information of the seller, used goods in detail. After that, the next problem is student that selling their used goods will not always have free time to manage the sales of their items. Therefore, several solutions have been found that can be used in this shop1uthm application to end the problem faced by the user.

Shop1uthm application also can be used as a business organization for vendor, seller or customer that want to advertise their business that can save environment by advertisement that not using paper material. Analysis phase for the system requirement and design will be proceed discuses. After the research on collect the information about the problem

faced by the user at the planning phase, the next activity is to merge the problem faced by the user to the system develop so can help reduce and easier the problem faced by the user.

After the collection of information, a survey has been done by implement the system to the user with provide the laptop and smartphone for the user to test the prototype. The user can test the prototype by test at the web-based system on desktop and hybrid application on smartphone which is known as shop1uthm application. By doing this testing, the feedback forms the user will be recorded and the feedback will help improve the system during development. The feedback information that have will give a make the system more clearly picture.

Lastly, the most basic thing during developing the system are the hardware and software analysis. During the process of this application, the suggestion of hardware and software requirement in this Online UTHM reuse Goods Android Application are as being list out at the following section.

The selected diagram that have been choose as the design of this system is Data Flow Diagram (DFD). DFD is used to preceding and leading up to the main part to give a full visualization of the data processing system. The business activities are listed as the beginning of the DFD process (externa entities, data flows, processes and data stores). DFD method that involved are context Diagram, Data Flow Diagram Zero Level (DFD Level 0), Data Flow Diagram One Level (DFD Level 1), Entity-Relationship Diagram (ERD) and Flow Chart.

Shop1uthm application also included the database which is MySQL and PHP as the storing the data information in the system. The chosen language and software as the database because MySQL is stable management system and database that suitable and firm with the PHP Scripting Language.

During this implementation phase, all of the data obtain from the planning, analysis and design phase will be put into the platform used which is Bracket using the scripting language PHP that are for platform for client-server side. This marks the beginning of the construction of the system in reality. All the modules will be developed as how it has been design in the phases before. In this phase, all of the chosen hardware and software will be used.

4. DEVELOPMENT AND IMPLEMENTATION

The development of Online UTHM used goods website is something new that no one has developed before in the UTHM. Online UTHM used goods is an e-commerce website that enables students to sell or buy used goods by university students. The system is enhancing basic e-commerce parts such as shopping basket, checkout, catalogue and others. The ERD shows the data available in each of the table and its relationship. The ERD of the system is illustrated in Figure 1.

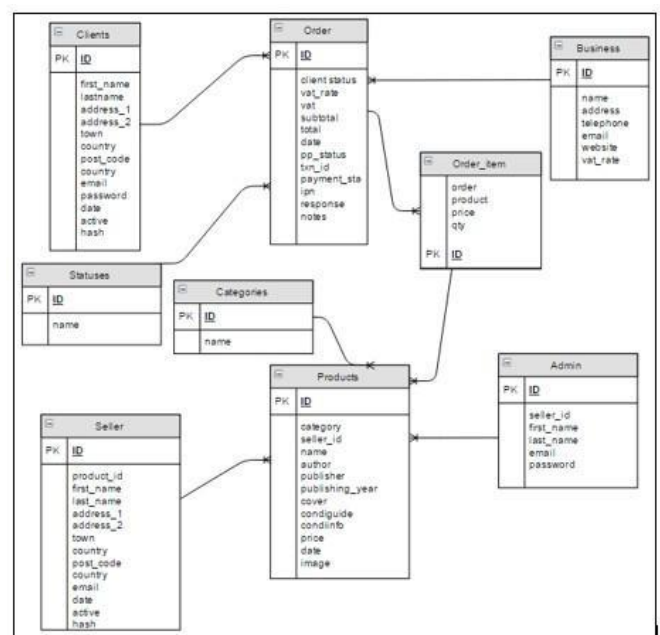


Figure 2: ERD of Online UTHM used goods website

Process of development in Online UTHM used goods website involving five major processes which is; installation of the software, the connection between database and development of customer module, development of admin module and development of seller module.

In this study, the system is focusing more on building a used goods e-commerce website. The development of the module is focusing on the three-main module the customer, admin and seller. The first step after develop database is creating login and registration interface for the customer. Figure 2 is showing the interface of the registration as well as the login for the customer.

Figure 3: Registration for User

Figure 4: Interface of customer login.

Before login customer can still enter products into the basket however when they click checkout, they will be redirect to the login/registration

page. After login, customer can continue to purchase or checkout and these are the interface of the shopping basket, checkout page, order summary page and payment page.

Product	Price	Quantity	Sub-total	Action
Kalut	5.9	1	5.9	[+][−][X]
Sejor	15.9	2	31.8	[+][−][X]
Buku	8.9	3	26.7	[+][−][X]

Cart Totals	
Items:	5
Shipping and Handling:	Free Shipping
Order Total:	64.4

Figure 5: Interface of checkout

5. CONCLUSION

In conclusion, it is hoped that the website is able to help students that want to buy cheaper items and also help student to make extra money by selling their used goods. Hopefully this new website can help students to search the used goods easily and for the students to easily sell their used goods. In future, this website can be further enhanced by using single login method for all the users. So, there will be fewer pages used. Also, adding more payment options so that customers can feel much comfortable to use the website for purchasing. As well as making the website becomes more responsive as there are many types of device that can be used to surf the Internet. Finally, the website is an e-commerce based website that will provide the basic part of e-commerce. Hence, Online UTHM used goods is one of the solution and hoped the website can provide more function as an e-commerce website compared to the existing system.

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