CHAPTER 2

LITERATURE REVIEW

2.1 Definition ofcommerces

E-Commerce has its own point of view, how people give an assessment of E-commerce itself. Association for Electronic Commerce is simplified into E-Commerce which means electronic business mechanism. According to Ahmadi and Hermawan, e commerce is the buying or selling of goods and services, between individuals, companies, households, governments, and the community or other private organizations, which is applied using computer media on a network (Mubarak & Hamdani, 2008).

2.1.1 Kalakota and Whinston

According to them, the definition of E-commerce is an online shopping activity using the internet network and the transaction method is through digital money transfers. Reviewing the understanding of E-Commerce from four perspectives, namely APPLICATION OF E-COMMERCE (Alwendi, 2020).

1. From a communication perspective, E-Commerce is a process of sending goods, services, information, or payments via computers or other electronic equipment.
2. From a business process perspective, E-Commerce is an application of a technology towards the automation of business transactions and workflows.
3. Service perspective, E-Commerce is a tool that fulfills the desire of companies, management, and consumers to reduce service costs (service costs) while improving the quality of goods and increasing the speed of delivery services.
4. Online perspective, E-Commerce provides the ability to purchase and selling products or goods and information through internet services or other online means.

2.1.2 Shely Cashman

According to Laudon and Laudon (1998) E-commerce is a process of buying and selling products - products electronically by consumers and from company to company with a computer as an intermediary for business transactions. The media that can be used in e-commerce activities is the world wide web internet.

2.1.3 E-commerce business to business (B2B) This

Type of B2B business is carried out by people or parties who have mutual interests in running a business, where both know each other and know the business processes they are doing.

2.1.4 E-commerce business to consumer (B2C)

Business to customer (B2C) e-commerce It is an e-commerce model that involves business organizations as providers of e-commerce systems with their customers.

Types of B2C e-commerce are carried out by business people and consumer. E-commerce transactions occur like ordinary buying and selling. Consumers get product offers and make purchases online. This model is the dominant model in the existing types of e-commerce. This category includes retail product sales, online stores, and online services, for example, manufacturers sell products to consumers online (Windarto et al., 2016).

2.2 MSME

Law 20 of 2008 concerning Micro, Small, and Medium Enterprises. Micro, Small and Medium Enterprises (MSMEs) are business activities that are able to expand employment opportunities and provide broad economic services to the community, play a role in the process of equity and increase income society, encourage economic growth, and realize national economic stability. Micro, Small, and Medium is a business activity that is able to expand the field work and provide broad economic services to the

community, and may play a role in the process of equalization and increased revenue people, boost economic growth, and play a role in achieve national stability. In addition, Micro, Small, and Medium is one of the main pillars of the national economy that must be obtain prime opportunities, support, protection and development as widely as possible as a form of firm alignment with the group people's economic efforts, without neglecting the role of Large Enterprises and Entities State Owned Enterprises.

Micro, Small and Medium Enterprises (MSMEs) have their own laws. Law Number 20 of 2008 concerning MSMEs. Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small and Medium Enterprises was ratified by President Dr. H. Susilo Bambang Yudhoyono on July 4, 2008 in Jakarta.

Law 20/2008 concerning Micro, Small, and Medium Enterprises is promulgated in the State Gazette of the Republic of Indonesia of 2008 Number 93 and an Elucidation of Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small, and Medium Enterprises in an additional State Gazette of the Republic of Indonesia Number 4866, by Menkumham Andi Matalatta on July 4, 2008 in Jakarta. At this time in all corners of the world experiencing changes in various sectors such as technology, social, culture, education, and the economic sector. Developments in the world economy continue to experience changes that are quite very significant in various countries as well as what is happening in Indonesia, developing towards an increasingly advanced era. Currently, business organizations continue to compete not only at the local market level, but have entered the global market level. The existence of SMEs is one of the breakthroughs to improve. Economic growth in the middle - the middle of the SME business community actors is expected to be able to reduce unemployment if the fact that more and more jobs sputtered with the number of workers who have not been absorbed by growing (jogloabang.com/pustaka/uu-20-2008-usaha- micro-small-medium).

Software Methods Used

2.3 MySQL

MySQL is one type of database server that is very well known. Its popularity is due to MySQL using SQL as the base language to access its database. MySQL is free under the GNU General Public License (GPL). With this situation, you can use this software freely without having to be afraid of the existing license. MySQL is a type of RDBMS (Relational Database Management System). That is why the terms table, row, column are used in MySQL. In MySQL, a database contains one or a number of tables (Prasetyo et al., 2015).

MySQL is an open source DBMS with two licenses, namely Free Software (free software) and Shareware (proprietary software limited use). So MySQL is a free database server with the GNU General Public License (GPL) so you can use it for personal or commercial use without having to pay for an existing license.

2.3.1 Strengths and Weaknesses of MySQL

1. Supports Integration with Other Programming Languages.

   Websites or software are sometimes developed using various programming languages, so you don't have to worry about using MySQL. Therefore, MySQL can help you to develop software that is more effective and of course easier with integration between programming languages.

2. Doesn't Require Big RAM.

   MySQL can be installed on servers with small specifications. So no need to worry if you only have a server with a capacity of 1 GB because you can still use MySQL as your database.

3. Supports Multi-User.

MySQL can be used by multiple users at the same time without crashing or stopping working. You can use this when working on a team project so that the entire team can work at the same time without having to wait for other users to finish.

4. It is Open Source

MySQL is a free database management system. Even though it's free, it doesn't mean that this database has bad performance. Moreover, the free license used is GPL under oracle management so the quality is good. In addition, you also don't have to worry if there is a problem because there are many communities and documentation that discuss MySQL.

5. Flexible Table Structure.

MySQL has a table structure that is easy to use and flexible. For example, when MySQL processes ALTER TABLE and so on. When compared to other databases such as Oracle and PostgreSQL, MySQL is relatively easier.

2.3.2 Disadvantages of MySQL

1. Less Suitable for Game and Mobile Applications

You who want to develop game applications or mobile devices, it is better if you consider again if you want to use MySQL. Most game and mobile application developers don't use it because this system management database is still not good enough to use for the application system.

2. Difficult to Manage Large Databases

If you want to develop applications or systems in a company with a large enough database, it is better if you use a database management system other than MySQL. MySQL was developed so friendly with devices with lower specifications, that is why MySQL does not have a complete feature like any other application .

3. Technical Support Less Good

Open source nature is sometimes made the application does not provide adequate technical support. MySQL technical support is claimed to be not good. This makes it difficult for users. When users experience problems related to the operation of the software and require technical support assistance.

2.4 Android Operating System

2.4.1 Android

Android is an operating system for mobile phones based on Linux (Nasrudin Safaat H., 2011, p.1). Android provides an open platform for developers to create their own applicationsthat include an operating system, middleware and applications..

Android provides an open platform for developers to create their applications. Initially, *Google*Inc.Purchased Android *Inc.*, a newcomer who makes software for mobile phones. The advantages of android are; Complete Platform (Maulana et al., 2011).

• Provide useful tools to build an application which can then be further developed by developers. Open Source Platform

• Easy to develop by developers because it is open. Free Platform

• Developers can freely develop, distribute and trade the Android operating system without having to pay royalties to get a license.

There are also advantages of Android as follows:

1. Openness of Android and free development without being charged for the system because it is based on Linux and open source, the manufacture of the device likes this because it can build a platform that suits the desiredwithout having to pay royalty. For a while software development likes because Android can be used as a device or without being bound by any vendor.
2. The architecture of components on Android is inspired by internet mashup technology, in an application that is used by other applications it can even be

replaced with other components that are in accordance with the application to be developed.

3. There is a lot of service support, it's easy to use various kinds of application services, the use of 8 location search services,*SQL databases*, and the use of maps for all of them are embedded in Android, making it easy to access in application development on Android.

2.5 App Inventor

App Inventor is an open source web application originally developed by Google, then currently managed by the *Massachusetts Institute of Technology* (MIT). Usually users use App Inventor to program computers and create software applications for the Android operating system.

2.6 Entity Relationship Diagram (ERD)

Entity Relationship Diagram (ERD) ERD is a model to explain the relationship between data in the database based on basic data objects that have relationships between relationships (Irawan, 2016).

Entity Relationship Diagram or entity relationship diagram is a data model in the form of graphical notation in conceptual data modeling that describes the relationship between the store. The data model itself is a set of methods, tools for describing data that are related to each other, their semantics, and consistency constraints.

The data model consists of an entity relationship model and a relational model. Entity relationship diagrams were invented by Peter Chen in the book *Entity Relational Model-Toward a Unified of Data*. Chen tried to formulate the basics of the model and after that it was developed and modified by Chen and many other experts.

2.7 Software Development Methods Software

prototyping (*softwarePrototyping*) or life cycle using *Prototyping (life cycle*

using Prototyping) is one of the system life cycle methods based on the concept of a*working* model, the goal is to develop the model into a final system. This means that the system will be developed faster than traditional methods and costs will be lower. Characteristics that can distinguish this method is sisem development*(systemdevelopers),*the client and the user can see and conducting experiments with a variety of computer systems since the start of the development process

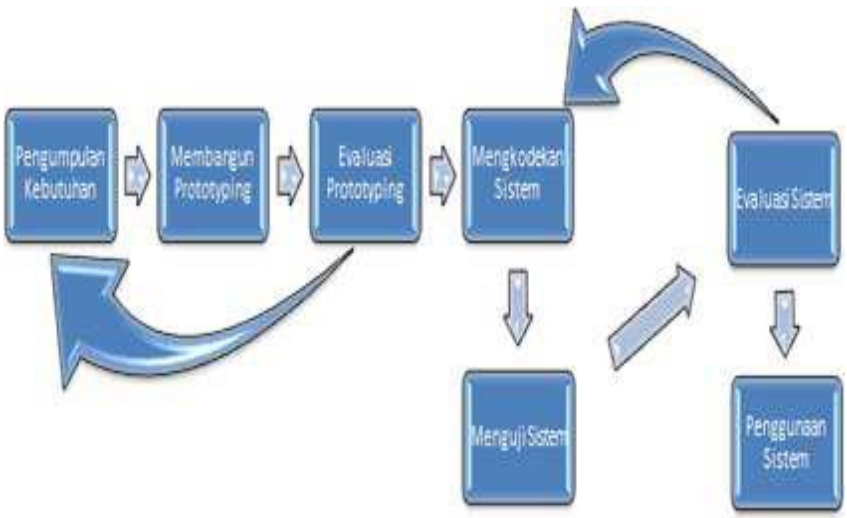
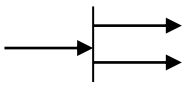


Figure Lambel 2.1 : Flowchart of prototype method (Suyanto, 2007)

2.8. Activity Diagram

diagram or activity diagram describes the workflow (workflow) or activities of a system or business process or menu that is in the software. (Sukamto and Salahuddin, 2013:161)

Table No 2.1 Activity Diagram

Symbol	**Description**
	Start Point Describes the beginning of the activity.
	End Point Describes the end of the activity.
	Activity Describes a process or business activity.
	Fork Describes an activity that begins with an activity and is followed by two or more activities to be done
	Decision Describes a decision or choice
	State Transition Describes the flow of control between states.
	Activities carried out by the system, activities usually begin with a verb.

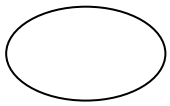
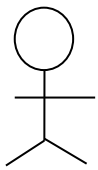
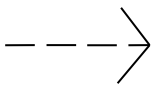
2.9 Use Case Diagrams

According to Rosa and Salahudin use case diagrams do not explain in detail about the use of each use case, but only provide a brief description of the relationship between use cases, actors, and systems. Through use case diagrams we can find out what functions exist in the system (Rosa Salahudin, 2011: 130).

The naming requirement for the use case diagram itself is that the name is defined as simply as possible so that it can be understood. There are two main things in use cases, namely defining what is called an actor and use case.

a. Use cases are functionality provided by the system as units that exchange messages between units or actors.
b. An actor is a person or other system that interacts with the system to be created, so even though the symbol of an actor is an image of a person, the actor is not necessarily a person.

Table No. 2.2 Use Case diagram

Symbol	Description
Use Case 	Use case is the functionality provided system as interchangeable units messages between units or actors. Usually use case given a name using the word work at the beginning of a use case name phrase
Actor / Actoractor 	Anis a person, process, or other system that interact with the information system that will created, so even though the symbol for actor is pictures of people, but actors are not necessarily person. Usually the name of the child tor is called use a noun at the beginning of a name phrase actor
Association/association	Association is communication between actor and use cases that participate in use case diagrams or use cases that have interactions with actor. Association is a symbol that used to connect links between elements.
Extend / extend 	An additional use case relationship to a use case where the added use case can stand itself even without that additional use case. Direction the arrow points to the use case that added

2.10 Related Research

In this study the authors obtained reviews from various sources from previous studies related to making applications and their benefits:

Table No. 2.3 Related Research.

No	**Name**	**Title**	**Known**	**Description**
1	Septi Listiani	DESIGN APPLICATION FOR *MOBILEE COMMERCE* BASED ON ANDROID Information Systems, Computer Science Faculty of the University of Dian Nuswantoro	2016	In the design build this application using the database storage and E-commerce
2	Jos Forman Tompoh	Design Booking Application Menu Foods Restaurants Based Android, Steven R. Sentinuwo Alicia AE Sinsuw Informatics Engineering Sam Ratulangi University Manado E-journal of Informatics Engineering, Vol 9, No 1, October 2016,	20 16	The design of this application aims to make it easier for users to find and determine the animal of their choice.
3	Intan Oktaviani	GOAT SALES AND AQIQAH ORDERING INFORMATION SYSTEMS BASED ON *E COMMERCE* AT UKM Hasanah INFORMA Polytechnic Indonusa Surakarta ISSN : 2442-7942 Vol. 3 Number 2 of 2017	20 17	The bolted system does not only sell aqiqah animals but also provides direct slaughtering services and information services to facilitate transactions in the implementation of Aqiqah for people who want to carry out Aqiqah.

4	Roswita Hafni, Ahmad Rozali	ANALYSIS OF MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMEs) ON LABOR ABSORPTION IN INDONESIA Vol 15, No 2 (2015) > Hafni	2015	Analysis of MSMEs and absorption of work Tensgs
5	Ellen Bolman Pullins	Use of social media, digital, and traditional communication tools that integrated into international SME B2B sales processes	2020	Understand how these communication tools are used by the sales function in the business-to-business (B2B) market.