FSKKP INVENTORY SYSTEM USING BLOCKCHAIN TECHNOLOGY

NURFAZLIYANA BINTI ARSHAD

Bachelor of Computer science
(System Computer & Networking)

UNIVERSITI MALAYSIA PAHANG

Universiti Malaysia PAHANG
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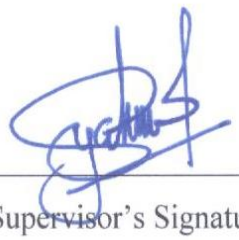
I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the Degree of Computer Science (Computer System & Networking) with Honours.



(Supervisor's Signature)

Full Name : EN. SYAHRULANUAR BIN NGAH

Position : LECTURER

Date : 10 JANUARY 2019

(Co-supervisor's Signature)

Full Name :

Position :

Date :

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at University Malaysia Pahang or any other institutions.

(Student's Signature)

Full Name : NURFAZLIYANA BINTI ARSHAD

ID Number : CA15141

Date : 10 JANUARY 2019

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ABSTRAK

FSKKP sistem inventori yang menggunakan Teknologi Rantaian Blok dibangunkan kepada Fakulti Sistem Komputer dan Kejuruteraan Perisian. Sistem yang dicadangkan ini akan digunapakai oleh kakitangan fakulti sebagai satu pentadbiran untuk masukkan semua maklumat inventori. Beberapa masalah berlaku apabila had ruang menyimpan terlalu sedikit dan sangat terhad. Pentadbir sukar mengesan satu inventori apabila ia rosak. Pemasalahan ini juga melibatkan tahap keselamatan sesuatu inventori. Objektif untuk menyelesaikan masalah ini ialah untuk belajar tahap keselamatan menggunakan Teknologi Rantai Blok. Kemudian, matlamat lain adalah untuk membina sistem inventori FSKKP menggunakan Teknologi Rantai Blok. Selain itu, matlamat lain adalah untuk menilai kewujudan Teknologi Rantaian Blok di dalam inventori. Menggunakan kaedah dalam memajukan sistem ini menggunakan ‘System tekologi Development Life Cycle’ (SDLC) sebagai satu kaedah, kerana kaedah ini mempunyai fasa fleksibel yang mana boleh membuat perubahan atau sebarang peningkatan kepada sistem semasa fasa pembangunan. Sebagai tambahan, sistem mesti dilakukan dalam masa yang singkat iaitu dalam tempoh enam bulan. Kaedah ini ialah kaedah terbaik digunakan untuk projek. Hasil keputusan, sistem ini ialah satu kelebihan kepada fakulti bantuan itu mengurangkan kadar kehilangan data sesuatu inventori.

ABSTRACT

FSKKP inventory system using Blockchain Technology is developed for Faculty of Computer Systems and Software Engineering. This proposed system will be used by the staff faculty as an admin and key in all the information of an inventory. The few problems occur when the limitation of space to keep the document because of increasing the device in FSKKP. The administrator difficult to trace an inventory when it lost or device was brake out. The problem also involves the lack of security appliance. The objective occurs to solve the problem in current system, which is to study the security level of Block chain technology work. Then, other objective is to develop FSKKP inventory system using Block chain technology. Other objective is to evaluate the Blockchain Technology occurs. Method used in developing this system is using System Development Life Cycle (SDLC) as a methodology because this method has flexible phase which the developer can make a change or any improvement to the system during the development phase. In addition, the system has to be done in a short period of time; within six months. This method is the best method to be used for the project. As a conclusion, this system is an advantage to the faculty that help to reduce the loosing data of an inventory.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

FSKKP	Faculty of Computer Systems & Software Engineering
HTML	Hypertext Markup Language
IMB	Inventory Management Barcode
MYSQL	My Structured Query Language
PHP	Personal Home Page
RFID	Radio Frequency Identification
SDLC	System Development Life Cycle

CHAPTER 1

INTRODUCTION

1.1 Introduction

Block chain technology was developed as part of the digital currency bitcoin. But bitcoin and block chain are not the same. Block chain can support multiple applications, and it is already used for peer-to-peer payment services, supply chain tracking and more. A block chain is a record of transaction that can be a movement like money, inventory or safe data. This security block was design to add, remove or modify to store information in a way that makes it almost impossible to change the record of data without being detected by others user. Block chain replace these centralized systems with decentralized people where authentication comes from multiple user consents.(wikipedia, 2018)

Meanwhile, the block chain technology as a foundation for distributed ledgers offers an innovative platform for a new decentralized and transparent transaction mechanism in industries and businesses. The inherited characteristics of this technology enhance trust through transparency and traceability within any transaction of data, goods, and financial resources. Despite initial doubts about this technology, recently governments and large corporations have investigated to adopt and improve this technology in various domains of applications, from finance, social and legal industries to design, manufacturing and supply chain networks. In this article, the authors review the current status of this technology and some of its applications.

Therefore, the FSKKP inventory system using Block chain technology was applied. Where is to trace the record of an inventory so the data that save in the ledger can be display. So this way will reduce the technical error in order to prevent

when involving a lot of data. The data that save in the block chain very secure because the only person that have the permission can access the system.

1.2 Problem Statement

The development of this thesis is taken after during some research of few problems occur when the limitation of space to keep the document because of increasing the device in FSKKP. This may be a many work and it not secure because some data will be place in the unauthorized area. A challenge faces by FSKKP is went handling maintenance for device inventory. The data may lose and they need to trace back data that lost because of the space limit.

Secondly, it is very difficult for administrator to trace an inventory when it lost or device was brake out. That is because usually the data will be check just a few months and only when the end of the years coming the loss of device just can be trace on that time. The cost of device is too expensive and it should not be lost and should be monitor every day. In other opinion when the device was breakout so the admin can easily contact the vendor and just state which model and what quantity that want to use, so in this way can reduce the waste of the unused device.

Thirdly, the reorder of an inventory just be assuming and it does not accurate value and time, and last but not least, the lack of security apply for traditional documentation also will facing many errors. For example, when the admin want to continue the contracts they just can re order the device that really use to the FSKKP. This will also help the financial in FSKKP when they do not waste the money to unnecessary device. By the way the traditional used in store data of the inventory is not efficiency now and it not logger valid to use in z generations.

1.3 Objectives

i. To study the security level of Block chain technology work

ii. To develop FSKKP inventory system using Block chain technology.

iii. To evaluate the Block Chain Technology in inventory system.

1.4 Scope of Project

i. To identify the relation between objective and Block Chain Technology.
ii. The user scope including staff and admin of Faculty of Computer Science & Software Engineering.
iii. The staff admin only can have the password of the system.

1.5 Significant

i. This project can make the inventory in Faculty System Computer & Software Engineering work systematic.
ii. The project will let the data secure with confidential integrity and availability.

1.6 Thesis Organization

This thesis consists of five chapters, which is chapter 1, discuss on the introduction of research that proposed. This chapter contain of problem statement, objective of research, and scope that involved. Meanwhile, chapter 2 cover on Literature Review, that contain of discussion of existing problem or solution that can be adapt in the propose system. Moreover, the methodology that applied to this proposes system will be covered in chapter 3. This chapter approach on technique, methodology model, hardware and software requirement that will be used to complete the system. Furthermore, chapter 4 will shows the result of on implementation, testing of the project and Result of the system. Last but not least, Chapter 5 includes the conclusion of the project.

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