

DEVELOPMENT OF STANDARD VIDEO GUIDE FOR MCMC  
PROCUREMENT SYSTEMS VIA SCREENCASTING

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## **DEDICATION**

This thesis is dedicated to my husband, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my parent, who taught me that even the largest task can be accomplished if it is done one step at a time.

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## **ABSTRACT**

In Procurement Division, there are two main systems used by MCMC Staff. The systems are iProc System and MyProc System. In general, these systems require an effective self-user guide. Currently, the user guides are textual-based. From the initial findings, the frequency of receiving calls and inquiries regarding using the systems is high as the existing guides do not suffice. Hence, numerous of time is spent attending the queries. Therefore, video-based guide via screencast is foreseen as an alternative to this problem. Prior to the video implementation, research to develop a standard video guide is required. This research use both the quantitative and qualitative methods The effectiveness of the video guide is measured after the implementation. In the long run, the video guide is expected to be implemented in all systems in MCMC.

**Keywords:** procurement system, screencast, user manual, user satisfaction

## ABSTRAK

Di Bahagian Perolehan, terdapat dua sistem utama yang digunakan oleh Staf Suruhanjaya Komunikasi dan Multimedia Malaysia (SKMM). Sistem-sistem tersebut adalah Sistem iProc dan Sistem MyProc. Secara amnya, sistem ini memerlukan panduan pengguna sendiri yang berkesan. Pada masa ini, panduan pengguna adalah dalam bentuk teks. Berdasarkan penemuan awal, kekerapan menerima panggilan dan pertanyaan mengenai penggunaan sistem berkenaan adalah tinggi kerana panduan yang sedia ada tidak cukup untuk memberi penerangan yang jelas. Oleh itu, banyak masa diluahkan untuk melayani pertanyaan-pertanyaan tersebut. Oleh itu, panduan secara video melalui screencast dilihat sebagai satu alternatif untuk mengatasi masalah ini. Sebelum pelaksanaan video tersebut dilakukan, kajian untuk pembangunan video berkenaan adalah perlu. Penglibatan kaedah kuantitatif dan kualitatif diambil kira. Keberkesanan panduan video diukur selepas pelaksanaannya. Dalam jangka masa panjang, panduan secara video ini diharapkan dapat diperluas lagi kepada semua sistem di SKMM.

**Kata kunci:** sistem perolehan, screencast, manual pengguna, kepuasan pengguna

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## **LIST OF ABBREVIATIONS**

MCMC	-	Malaysian Communications and Multimedia Commission
PSD	-	Procurement Sourcing Department
SITD	-	Strategic Information Technology Division

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

When there is a system, usually it is packaged with a manual user guide. Manual user guide also referred as a technical communication document. The primary function of the manual user guide is to guide the user of a particular system on the steps how to use the system. The manual user guide could be in textual based or in video based. Some of the systems come with both types. Thus, a well-written, user-friendly product manual or user guide can make a difference towards customer's satisfaction. Basically, user documentation not only for new users. User manuals or product notes may also be used by experienced users to refresh their memory on a function they have not used in a while or to address a particular problem.

In brief, there is a paucity of academic studies comparing paper-based and video tutorials for software testing, and the results are mixed (Van Der Meij & Van Der Meij, 2014). The first was that screencasting feedback was favoured by the majority of faculty over text and speech feedback (Orlando, 2016). Hence, this research measures the effectiveness of user guide in video based by developing standard video guide via screencasting. This chapter includes the case company information, problematic situation and problem formulation, research questions, research objectives, and the research importance both from the theoretical and practical perspectives.

### 1.2 Information about the case company

Malaysian Communications and Multimedia Commission (MCMC) is a regulator in communications and multimedia industry based on the powers provided as in the Malaysian Communications and Multimedia Commission Act (1998) and the Communications and Multimedia Act (1998). Based on this Acts, implementing

and promoting the Government's national policy objectives for the communications and multimedia sector also another role to be played. Apart from that, MCMC also charged with overseeing the new regulatory framework for the converging telecommunications and broadcasting industries and on-line activities. The role was expanded in 2001 which is to include overseeing the postal service sector pursuant to the Postal Services Act 1991 and licensing of the Certification Authorities under the Digital Signature Act 1997.

### **1.2.1 Background of MCMC**

MCMC was established on 1 November 1998. Establishing a communications and multimedia industry that is competitive, efficient and increasingly self-regulating, generating growth to meet the economic and social needs of Malaysia is the vision of MCMC. There are five of MCMC missions which are committed to promoting access to communications and multimedia services, ensuring consumers enjoy choice and a satisfactory level of services at affordable prices, providing transparent regulatory processes to facilitate fair competition and efficiency in the industry, ensuring best use of spectrum and number resources and consulting regularly with consumers and service providers and facilitating industry collaboration.

The headquarters of MCMC is located in Cyberjaya. Currently, there are 5 clusters, 23 Divisions and 20 of MCMC State Offices all over Malaysia. Overall structure in MCMC can illustrated as per organisation chart as follows:



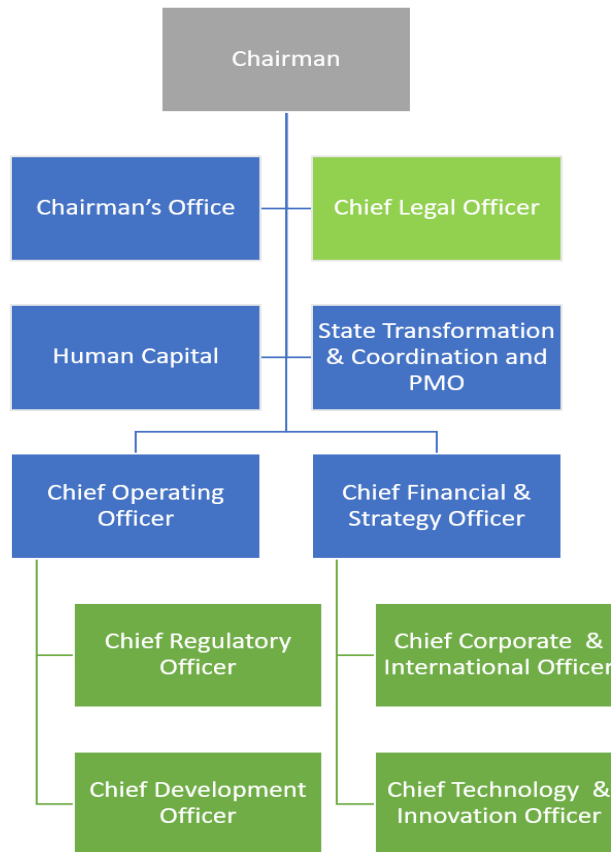


Figure 1.1 MCMC Overall Organisational Chart

### 1.2.2 Digitalisation in MCMC practice

MCMC can be considered towards in digitalising all the operational activities. Every division has their own system whether for internal use or external use. Strategic Information Technology Division (SITD) is the division that responsible to monitor and facilitate systems in MCMC. Based on input from the SITD staff, there are around 60 active systems that being used in MCMC. Majority of the systems are for internal use and maintained by the appointed vendors/ consultants. Every system comes with user manual and mostly are in textual based. This study will focus on the manual user guide of iProcurement system that being used by Procurement Division. iProcurement is a request module that is submitted electronically. It's a web-based system that allows requestors to generate requisitions, monitor their status, and receive issued orders. It also has a built-in online shopping application for efficient self-service requisitioning. This system used by staff from Procurement Sourcing

Department as the administrator or buyer. This system also used by the Purchase Requisition Requestor who are consist of representative from every division in MCMC. There are 190 purchase requisition requestor that able to access the system. Majority of the purchase requisition requestors are from support staff level. They have been assigned to request for any purchase for their department or division. Some of the interfaces of the system are as follows:

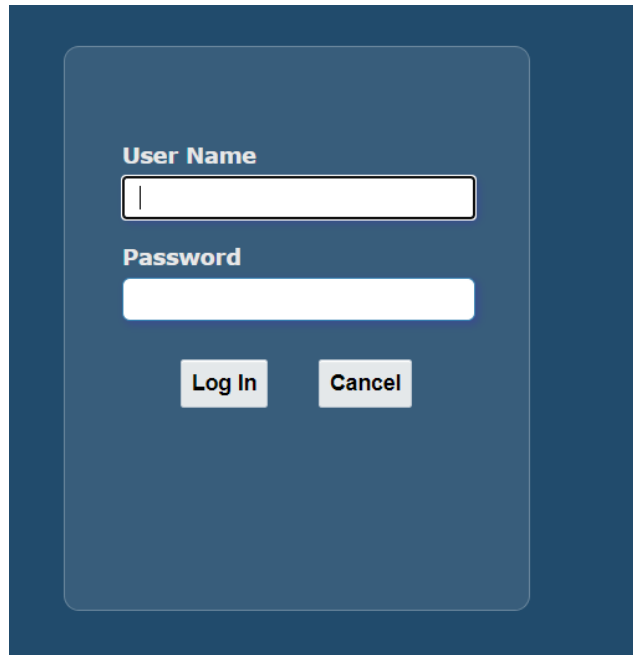


Figure 1.2 Login Page

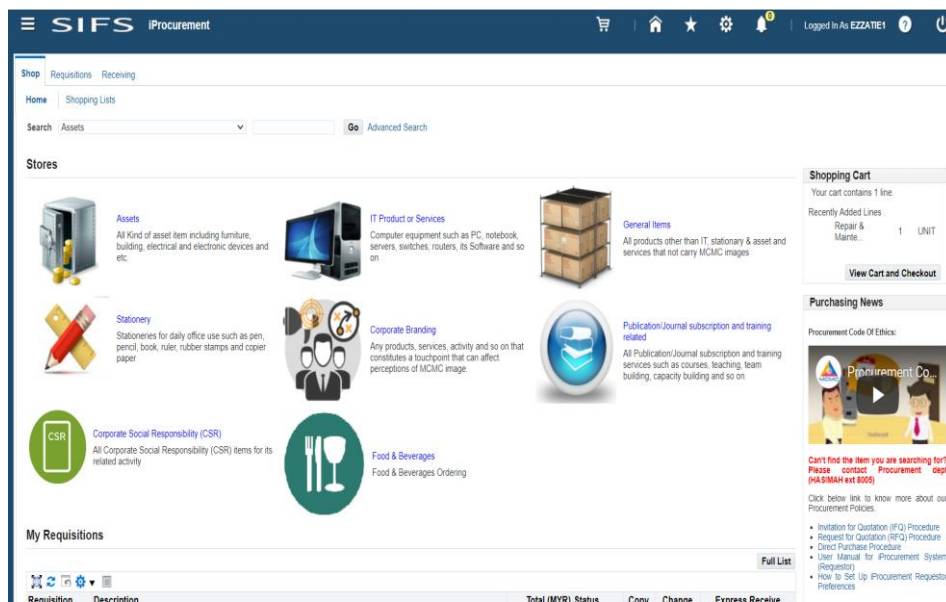


Figure 1.3 Built-in Online Shopping Application

### 1.2.3 Procurement Division in MCMC

As of now, Procurement Division in MCMC is the responsible division that will conduct all procurement activities. This division is located at level 15, MCMC Tower 1, Cyberjaya. The total manpower is 24 people and led by the Head of Procurement Division. The department that actively utilizing the iProcurement system is Procurement Sourcing. The organizational chart is a per below:

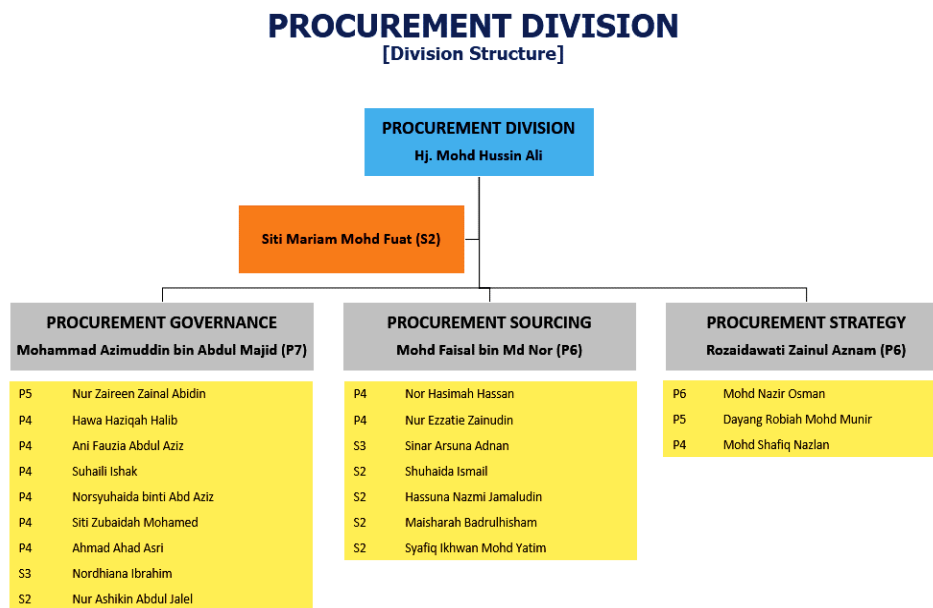


Figure 1.4 Procurement Division Organisational Chart

This study will focus on the user manual guide for iProcurement System as one of the main system for MCMC Procurement Division. The scope of the research study will be focused to the MCMC Procurement Sourcing Department Staff and the Purchase Requisition (PR) Requestors. This department consists of seven staffs that led by one director. The intervention will be implemented and used by MCMC Procurement Sourcing and PR Requestors.

### 1.3 Problematic situation and problem formulation

Digitalisation is set to accelerate in Malaysia, forcing industries to align while they map a potential course for Internet access. A huge number of systems being developed to automate all the manual process. However, in terms of developing a user friendly system seems challenging. The bad consequence is that, the system will

not be used effectively by the users. Thus, a comprehensive and understandable system guide shall be developed together with the systems. A user-friendly hardware computer or machine interface is one that is easy to use. It is "user-friendly," in the sense that it is simple to read and comprehend.

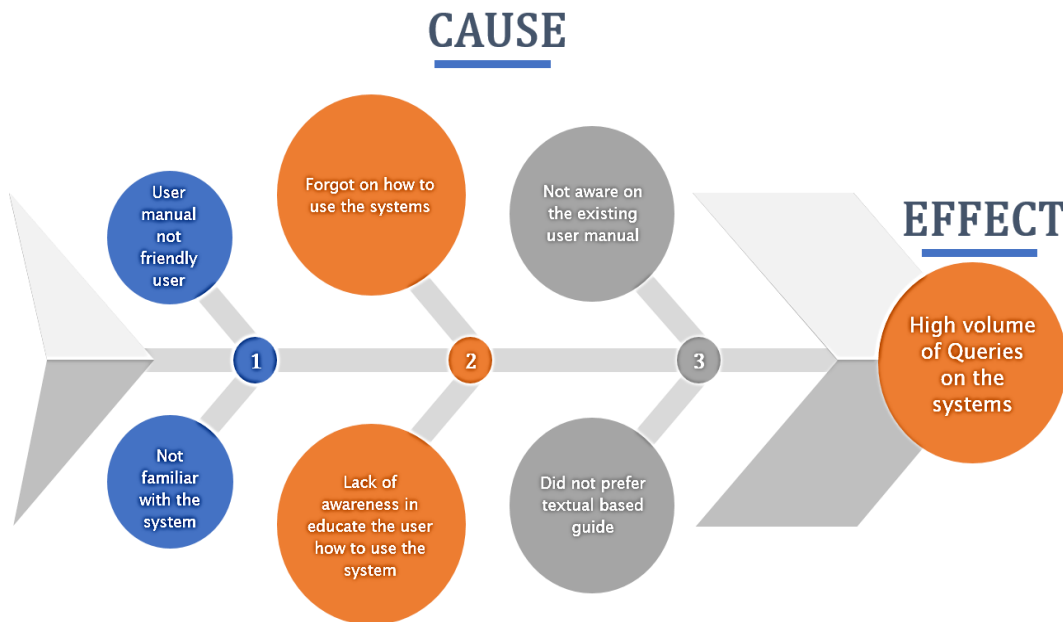


Figure 1.5 Cause on the high volume of queries in using iProcurement System

Approximately, in average, the total hours spent by PSD to attend queries is 1.25 hours per week, and this brought to around 65 hours for the whole one year. The causes on the high volumes of queries from the user of iProcurement system can be summarized as in Figure 1.5. For instance, the queries were arising due to the existing user manual is not friendly and the user found it as difficult to understand. In addition, if the system seldomly used by the users, they will tend to face difficulty in using the systems and forget how to use as the user guide is not clear and quite challenging to understand. There are efforts from Procurement Division of organizing talks about using the systems, however this seems not effective as the frequency of queries are still high. Some of them even did not aware of the existence of user manual guide. Thus the objective to educate the users via this method is not successful.

Based on observations, the fastest way that they will take is by contacting Procurement Sourcing Department. Most of them will make phone call directly, email and also through WhatsApp application. For example, iProcurement Systems will be

used by the PR Requestor if they had any request to purchase for their respective department or division. Based on experience, the highest users for this system are from Strategic Information Technology Division and Property and Administration Division. This is due to these two divisions involved a lot in MCMC projects.

Moreover, the updated user manual also is needed as the systems might be enhanced or upgraded. Thus, similarly the user manual also needs to be updated from time to time according to the latest system. For instance, iProcurement System will be upgraded in April 2021. Hence, the most recent user manual is needed to guide the user.

There are sixty (60) pages in one single document for the textual based user manual. Basically, the user would need to search and scroll down in the thick document to find the particular step that they need to refer. This can be time consuming and ineffective way to find the solution. Thus, by splitting the guide into part by part is looks more convenience and easy for referencing.

The seamlessness of using any systems can be measured from the feedback that gathered from the system's user. As principle, by having clear guide will lead the user to use the system correctly. Hence, the development of system guide is very crucial to make sure every party able to use the system effectively.

## **1.4 Research Questions and Research Objective**

### **1.4.1 Research Questions**

1. What are the issues with the existing user manual of Procurement Systems in MCMC?
2. What intervention should be implemented to improve the current user manual?
3. What is the effectiveness of the intervention implemented?

### **1.4.2 Research Objectives**

1. To determine the issues of the current user manual of Procurement Systems

in MCMC

2. To develop user manual of Procurement Systems in MCMC via screencasting methodology
3. To measure the effectiveness of user manual by using screencasting

### **1.5 Researcher's Role**

This action research project will help the Procurement Division in improving and providing an effective user manual guide to the user of iProcurement system and also will help the Procurement Sourcing Department to manage the queries much better. In this study, the researcher plays an important role to investigate what is the root cause of this issue, to define the best solution and to measure on the effectiveness of the solution taken.

### **1.6 Importance of the proposed research**

This study will significantly produce the best approach to be used for user manual system guide for iProcurement system in MCMC.

#### **1.6.1 Theoretical**

Based on analysis made under keyword screencast and effectiveness in Web of Science Website through UTM Library, there are 19 research have been conducted that related to the effectiveness of screencast method in the past 5 years. The visualization of the data is a below:

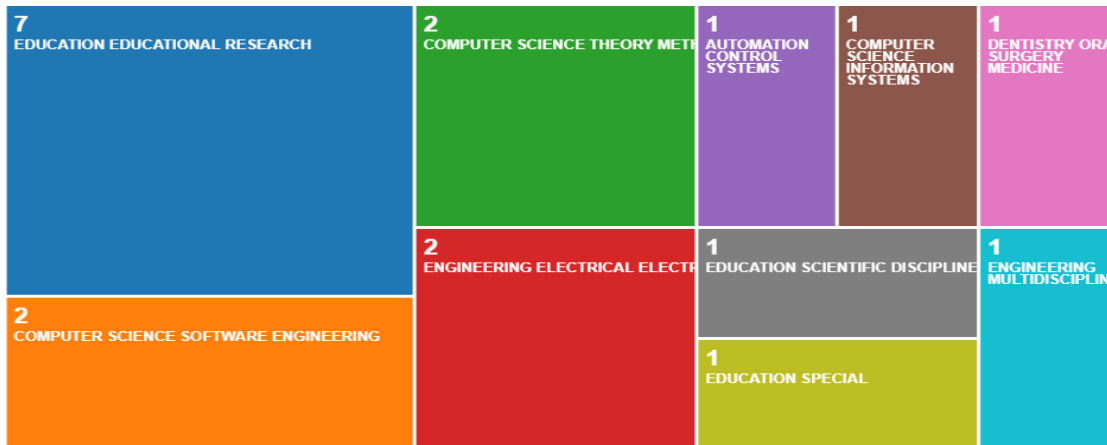


Figure 1.6 Tree Map Topic On Screencast and Effectiveness

Based on the tree map above, the majority of the research are under Education Educational field whereby, none are related to management area. Hence, this showed that this research area still few for under management and there is a gap that needed to be filled.

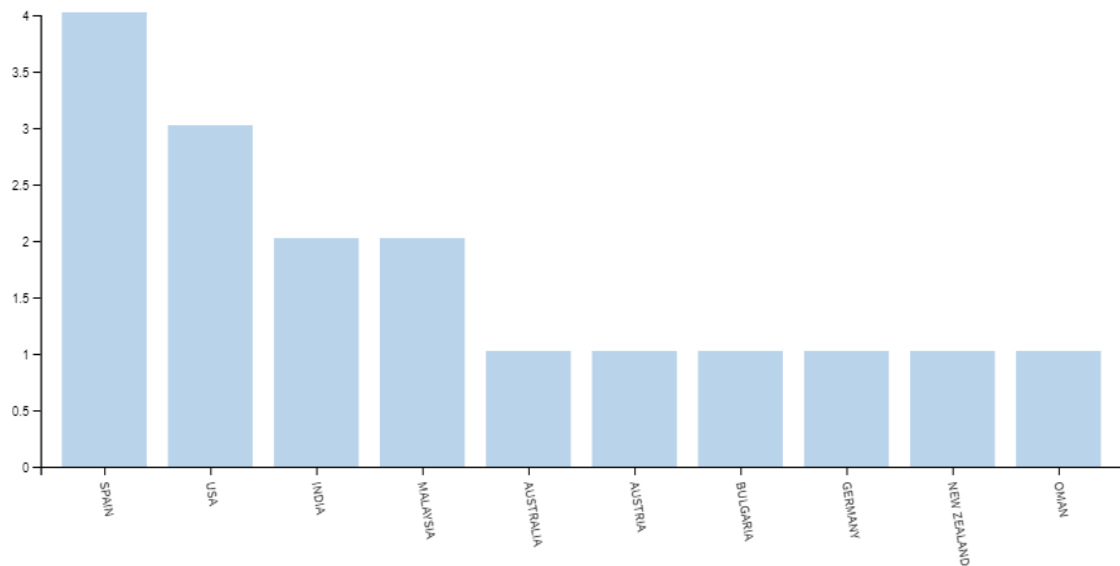


Figure 1.7 Visualisation of Bar Graph from Web of Science on the Number of Research conducted by Country Related to Screencast and Effectiveness Topic

By referring Figure 1.7, it showed the list of country that have conducted research that related to screencast and effectiveness in past 5 years. Based on the graph, the highest country that have conducted the research are researchers from Spain. In Malaysia, there are 2 research that been conducted and from review, both studies are

regarding using screencast to improve the learning approach. Hence, this signals that the study towards improving the user manual guide by screencast is very significant as of now there are no such research have been conducted. Furthermore, this study foresees will help Malaysia to increase the number of research that related to the screencast and its effectiveness.

Many studies highlighted that screencast method is one of the effective methods to be used for learning purpose. This means, the student will tend to use this approach in the learning process and it will help them better to understand the lesson. Thus, this research also can be beneficial to the future researchers to come out with advantages of using screencast as the method to deliver any lesson or knowledge.

### **1.6.2 Practical**

Based on the practical terms, user manual guide is one of the important part in developing any systems. This means the user manual guide would need to be designed as easy as possible and to be understood from the user perspectives. Basically, there two common ways to produce the user manual which are in textual based or video form.

The fundamental of this research is to transform the current form of user manual guide of iProcurement System into video form by screencast method. This transformation would help to increase the understanding of user to use the system and also will eventually help to reduce the number of enquiries. Screencast method will visualize the actual steps that need to be followed and how to use any particular functions in the system. By splitting the video in parts which according to the functions in the system will help the user to pick which part they desired. This is totally opposite to the current textual based, all of the tutorials are kept in a single document that will consume more time for reference.

Besides that, this research will benefit other agencies or organisations on the best approach to guide user using a system. Moreover, screencast application is free and built in function in Microsoft Windows 10.



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