



**UNIVERSITI TEKNOLOGI MARA  
FACULTY OF INFORMATION MANAGEMENT**

**INDUSTRIAL TRAINING REPORT:  
UNIVERSITI SAINS MALAYSIA(USM),  
KUBANG KERIAN, 16150 KOTA BHARU, KELANTAN**

**SPECIAL PROJECT:  
UNIVERSITI SAINS MALAYSIA INVENTORY SYSTEM**

**BY  
MUHAMAD HILMI ZAINUDDIN BINCHE RAZAK  
2016420874**

**IM245 – BACHELOR OF SCIENCE (HONS)  
INFORMATION SYSTEM MANAGEMENT  
FACULTY OF INFORMATION MANAGEMENT  
UNIVERSITI TEKNOLOGI MARA KELANTAN  
01 AUGUST 2018 – 31 DECEMBER 2018**

**INDUSTRIAL TRAINING REPORT:  
UNIVERSITI SAINS MALAYSIA(USM),**

**SPECIAL PROJECT:  
UNIVERSITI SAINS MALAYSIA INVENTORY SYSTEM**

**BY  
MUHAMAD HILMI ZAINUDDIN BIN CHE RAZAK  
2016420874**

**FACULTY SUPERVISOR:  
EN. MOHD ZAFIAN BIN MOHD ZAWAWI**

**REPORT SUBMITTED IN FULFILLMENT OF THE  
REQUIREMENT FOR THE INDUSTRIAL TRAINING  
FACULTY OF INFORMATION MANAGEMENT  
UNIVERSITI TEKNOLOGI MARA KELANTAN**

**01AUGUST 2018 – 31 DECEMBER 2018**

## DECLARATION

I hereby declare that this is my original work. I have not copied from any other student's work or from other sources. I am also declare that no part of this report has been published or submitted for publication except where due to reference or acknowledgement is made explicitly in text, nor has any part been written for me by another person. I confirm that I have read and understood the UiTM regulations with regards to plagiarism and will be penalized by the university if found guilty.

Signed by



Muhamad Hilmi Zainuddin bin Che Razak  
2016420874

Date of submission: 10<sup>th</sup> January 2019

## ABSTRACT

Industrial training an important phase of a student life. This report writing is based on industrial training which had been completed by trainee from 1 August 2018 until 31 December 2018. The trainee has undergoes 5 month of industrial training at Universiti Sains Malaysia (USM) in Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT), which have four IT section that is Pejabat Timbalan Pengarah (PTP), Technical Support, Info structure and Application. Each section has its own task to manage PPKT Health Campus. The Technical Support section is headed by Encik Azahari Omar. This section divided into two sub section which is web, multimedia, e-learning manage by Encik Nareeman Shah and asset, services desk, technical support managed by Encik Azmanzaifikar Ehsan. The technical support section serves for provides technical services, procurement, distribution and management of IT equipment. In addition, it also works as managing assets, website management and multimedia. The trainee has faced multiple types of challenges and experience during the internship period where the trainee has been given a various kind of task. The trainee was given responsibilities in PPKT where the trainee requires to develop a system. The trainee has learn a lot during the internship period, which result in better improvement in lot of aspect such as discipline, skills and knowledge.

**Keywords:** *System development, Pejabat Timbalan Pengarah, Technical Support, Info Structure, Application, web, multimedia, e-learning.*

## ACKNOWLEDGEMENT

Praise to Allah, The Almighty for giving His blessings, guidance and permission to complete this industrial training and report in fulfilment of the requirements for System Management degree programme. The time I spent as an internship student from 1st August 2018 until 31st December 2018 at Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT).

First and foremost, I am also thankful to and fortunate enough to get constant encouragement, support and guidance from my industry supervisor, Puan Zamilah binti Hussin who helped me to successfully complete my internship.

Then I would like to thank to industrial training coordinator, Madam Nurulannisa binti Abdullah who is the person in charge for internship for her valuable guidance and advice. She had always time to answer all my questions concerning my internship.

I would like to express my deep and sincere gratitude to my supervisor, Sir Mohd Zafian bin Mohd Zawawi for giving me the opportunity to do this study and providing invaluable guidance throughout this study. His dynamism, vision, sincerity and motivation have deeply inspired me. It was a great privilege and honour to work and study under his guidance.

Next, I am extremely grateful to my parents, Che Razak bin Che Yasok and Rohani binti Bakar for their love, prayers, caring and sacrifices in educating and preparing me for my future. I am extending my heartfelt thanks to my brothers and sisters for their moral support.

Finally, my thanks go to all the people who have supported me to complete the paper work directly or indirectly.

## TABLE OF CONTENT

NO	TITLE	PAGES
	<i>Declaration</i>	i
	<i>Abstract</i>	ii
	<i>Acknowledgement</i>	iii
	<i>Table of Content</i>	iv
	<i>List of Figures</i>	v
	<i>List of Tables</i>	vi
	<i>List of Appendixes</i>	vii
<b>1.0</b>	<b>Introduction</b>	
	Introduction about industrial training	1
	1.1 Background of Institution	2
2.0	Organization Information	
	2.1 Background of Department	4
	2.2 Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT)	7
<b>3.0</b>	<b>Industrial Training Activities</b>	
	3.1 Training activities	9
	3.2 Special project	16
<b>4.0</b>	<b>Industrial Training Reflection</b>	
	4.1 Application of knowledge, skills and experience in undertaking the task	31
	4.2 Personal thought and opinion	31
	4.3 Learning experience	32
	4.4 Limitation and recommendations	32
<b>5.0</b>	<b>Conclusion</b>	
	References	34
	Appendixes	35

## LIST OF FIGURE

FIGURE	PAGES
Figure 1: Universiti Sains Malaysia (USM), Logo	2
Figure 2: Universiti Sains Malaysia (USM), Brand	3
Figure 3: Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT), Logo	4
Figure 4: Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT), Organization Chart	6
Figure 5: System Development Life Cycle (SDLC)	8
Figure 6: Internship Student Arduino Project Briefing	9
Figure 7: Briefing from Network Unit	10
Figure 8: Briefing from Application Unit	11
Figure 9: Data Centre Unit Site Visit	11
Figure 10: Data Centre Unit Briefing	12
Figure 11: Exposure from Hospital Management System Unit	12
Figure 12: Briefing from Technical Support Unit	13
Figure 13: Access Door Tools from Technical Support Unit	13
Figure 14: Video Conference Tools from Communication Unit	14
Figure 15: Communication Unit Site Visit	14
Figure 16: GitLab briefing	15
Figure 17: User Manager Interface	17
Figure 18: Production Interface	18
Figure 19: Production “Add Product”	18
Figure 20: Production “Quantity Pop-up”	18
Figure 21: Production “Print Receipt”	19
Figure 22: Transaction between Store & Hospital	20
Figure 23: USM.IS Context Diagram	22
Figure 24: Data Flow Diagram USM.IS	22
Figure 25: Entity Relationship Diagram USM.IS	23
Figure 26: USM.IS Gantt chart	24
Figure 27: USM.IS Gantt chart	24
Figure 28: User Manager Button	25
Figure 29: Add User	25

<b>Figure 30: Fill the details</b>	<b>25</b>
<b>Figure 31: Save User</b>	<b>26</b>
<b>Figure 32: New users interface, deleted and edit button</b>	<b>26</b>
<b>Figure 33: Production Button</b>	<b>27</b>
<b>Figure 34: Click Production Button</b>	<b>27</b>
<b>Figure 35: Select Products</b>	<b>27</b>
<b>Figure 36: Add quantity</b>	<b>28</b>
<b>Figure 37: Balance pop-up</b>	<b>28</b>
<b>Figure 38: Product details</b>	<b>29</b>
<b>Figure 39: Save Button</b>	<b>29</b>
<b>Figure 40: Print recipe</b>	<b>30</b>



## LIST OF TABLE

<b>TABLE</b>	<b>PAGES</b>
Table 1: Laptop description	20
Table 2: Type of details	26

## **LIST OF APPENDIXES**

<b>APPENDIXES</b>	<b>PAGES</b>
Appendix A: Tatacara Pengurusan Stor (TPS) Kerajaan Bahagian Perolehan dan Pengurusan Aset (KPM)	34
Appendix B: Senarai Nama Barang Stor Guna Habis PPSK	36
Appendix C: Attendance	38
Appendix D: Picture	40
Appendix E: Log Book	42

## CHAPTER 1

### INTRODUCTION

#### **Introduction about Industrial Training**

The student who undertakes industrial training is responsible mainly to complete the project and tasks assigned by the organization within the stipulated time frame. As we know, internships provide real world experience to those looking to explore or gain relevant knowledge and skills require entering into particular career field. Internship relatively short term in nature with the primary focus on getting some on the job training and taking what's learned in the classroom and applying it to the real world.

The industrial training held for five months from 1st August 2018 until 31th December 2018, as one of the requirements for the award of Bachelor of Science Information (Hons.) System Management that student should fulfil the industrial training at Universiti Sains Malaysia (USM) Division of Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT) for 22 weeks. It is intended to provide useful knowledge and to train the students in order to prepare themselves in the real world and working environment. During the industrial training session, many principals and theory regarding organizational function are put to into effect. Most students are prepared with a structure towards learning how the organization works in real life so that the subject learned which is IMC 690 Industrial Training can be applied. Most the faculties in Universiti Teknologi Mara (UiTM) provided industrial training to the students and expose the students to the valuable experience in conducting a real experience in the industry after this.

The training is provided in order to fulfil the requirements of the IM245 program which is Bachelor of Science Information and System Management. In this training, students will be exposed to the office environment, how to handle various functions in managing information are taught. Besides that, it also is very useful in preparing the students to be industry ready professional where all the previously learned the theory will put into immediate effect. It provides insights into the intricacies involved in working in various area of the profession as well as inculcate commitment to work, apply knowledge to industrial situation, hone technical and soft skills, get acquainted with professional work environment and develop ethical values.

After training had been complete, hope the students are able to implement everything that already learnt in the industry and provide a huge contribution to the related organization. The details of the organizational structure and nature of training session will be explained in the following chapters.

### 1.1 Background of Institution



Figure 1: Universiti Sains Malaysia (USM), Logo

Established as the second university in the country in 1969, Universiti Sains Malaysia (USM) was first known as Universiti Pulau Pinang. In 1971, USM moved from its temporary premises at the Malayan Teachers' Training College, Bukit Gelugor to the present 416.6 hectare site at Minden, approximately 9.7 km from Georgetown.

USM offers courses ranging from Natural Sciences, Applied Sciences, Medical and Health Sciences, Pharmaceutical Sciences to Building Science and Technology, Social Sciences, Humanities, and Education. These are available at undergraduate and postgraduate levels to approximately 30,000 students at its 17 Academic Schools on the main campus in the island of Penang; 6 Schools at the Engineering Campus in Nibong Tebal (approximately 50km from the main campus); and 3 at the Health Campus in Kubang Kerian, Kelantan (approximately 300km from the main campus).

USM also has 17 dedicated research centres for a wide range of specialisations which include archaeology, medicine and dentistry, molecular medicine, science and technology, Islamic development and management studies, and policy research and international studies. It also provides consultancy, testing, and advisory services to the industry under the ambit of USAINS Holdings Sdn Bhd, the University's commercial arm.

Since the beginning, USM has adopted the School system rather than the traditional Faculty system to ensure that its students are multi-disciplined from their exposure to other areas of study by other Schools. It also encourages students to be active in extra-curricular activities given the myriad of clubs and societies available.

As a Research Intensive University recognised by the Ministry of Higher Education Malaysia (MOHE) in 2007, USM offers educational and research opportunities to students and staff. In 2008, USM also became the first university in the country to be selected by the Malaysian government to participate in the Accelerated Programme for Excellence (APEX), a fast-track programme that helps tertiary institutions achieve world-class status.

### 1.1.1 Vision

"Transforming Higher Education for a Sustainable Tomorrow

### 1.1.2 Mission

USM is a pioneering, Tran's disciplinary research intensive university that empowers future talents and enables the bottom billions to transform their socio-economic well-being.

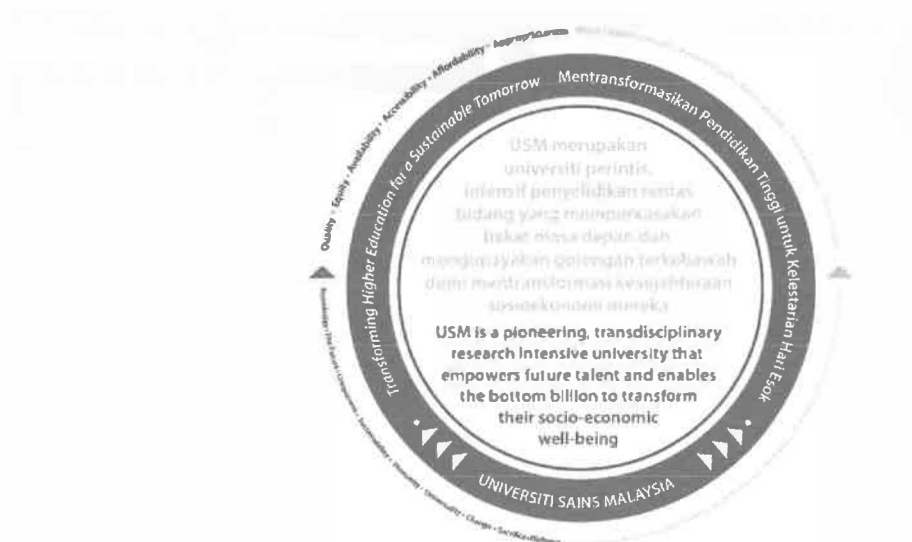


Figure 2: Universiti Sains Malaysia (USM), Brand

### 1.1.3 Value

Quality, Equality, Availability, Accessibility, Affordability, Appropriateness

### 1.1.4 Thrust

Knowledge, the Future, Uniqueness, Sustainability, Humanity, Universality, Change, Sacrifice, Wellness

## CHAPTER 2

### DEPARTMEN STRUCTURE

#### 2.1 Background of Department

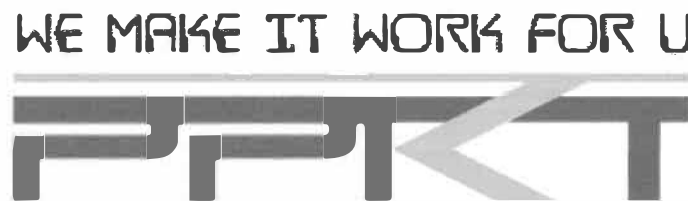


Figure 3: Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT), Logo

*Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT)* was established on 1<sup>st</sup> January 2003 with a combination of four information technology-based entities in Universiti Sains Malaysia namely Pusat Komputer, Pusat Teknologi Maklumat, Unit Sistem Maklumat Pengurusan (SISMAP) and Unit Pembangunan Teknologi Maklumat at USM main campus. PPKT official launch was officiated by Vice Chancellor, Yg Bhg Prof Dato' Dzulkifli Abd Razak on 27<sup>th</sup> August 2003. PPKT serve as a center for providing IT services in USM. USM PPKT Health Campus located at Kubang Kerian, Kota Bharu.

PPKT Health Campus now is only a change of name for Cawangan Pusat Komputer. Cawangan Pusat Komputer started with only one staff in 1986 and now continues to grow. In 1996 Cawangan Pusat Komputer started service called the Hospital Information System and also distributed PCs to all lectures, category "A" officers and departments to introduce the USMNet network services which was the core of PPKT service until now.

The Hospital Information System services was eventually taken over by the HUSM Information System Unit in 2000. The number of staffing is up to 101. The deputy director of PPKT is HJ Nik Nashron Ab. Aziz.

### 2.1.1 Mission

1. PPKT's mission is to provide quality and quality services and infrastructure of Information Technology. Coordinate processes involving academic, student, administration and management through website portals for the purpose of transfer and sharing of information in order to enhance the knowledge and expertise of Information Technology among USM citizens.
2. Guiding and being a source of inspiration to University students in the evolving flow of Information Technology. Ensuring the University's vision of becoming a premier institution of study and research will come true with Information Technology as a catalyst.
3. Build a knowledgeable and informed campus community in Information Technology. Become a referral center for Information Technology related matters. And to cultivate campus society with Information Technology.
4. Offering quality service in support of R & D activities, teaching & learning of higher education and providing innovative and creative ICT infrastructure in USM. In addition, PPKT is also an "enabler" to the science and knowledge environment.
5. Unify academic, student, administrative and management services and society through an information portal and its web-based transfer. With the establishment of PPKT will pioneer more new developments for the convenience of dealing, serving, and generating, storing and disseminating knowledge as wide as possible.

### 2.1.2 Objective

1. All applications will be reviewed and approved within 3 (three) working days from the date the completed application form is received.
2. All applications will be reviewed and approved within 3 (three) working days from the date the completed application form is received.
3. Process and send all bills and claim payments to the Treasurer's Department within three (3) days from the date of receipt of the bill.



**CARTA ORGANISASI  
PPKT Kampus Kesehatan**

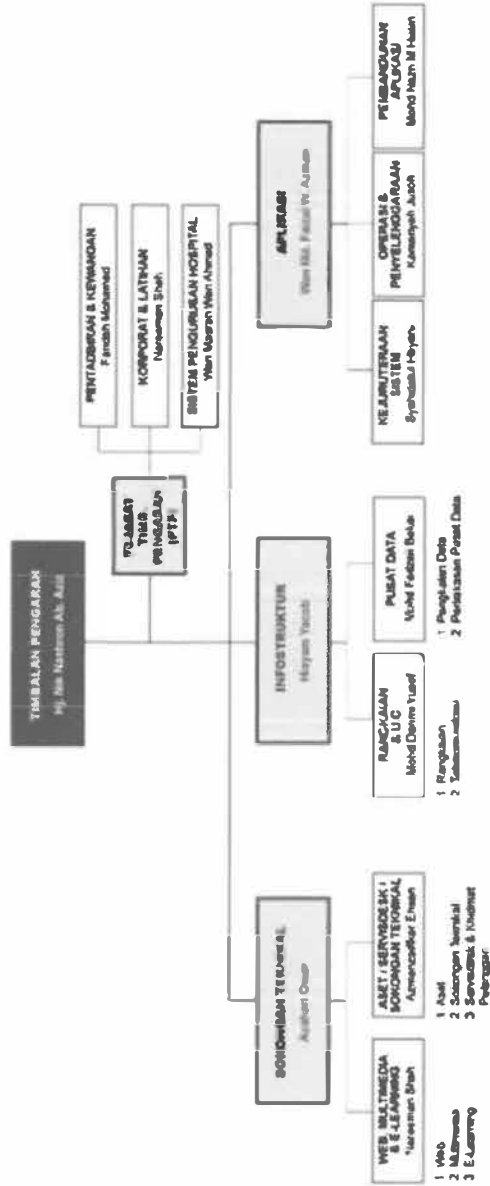


Figure 4: Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT), Organization Chart



## DEPARTMENT FUNCTION

### 2.2 Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT)

PPKT have four IT section that is Pejabat Timbalan Pengarah (PTP), Technical Support, Info structure and Application. Each section has its own task to manage PPKT Health Campus. The Technical Support section is headed by Encik Azahari Omar. This section divided into two sub section which is web, multimedia, e-learning manage by Encik Nareeman Shah and asset, services desk, technical support managed by Encik Azmanzaifikar Ehsan. The technical support section serves for provides technical services, procurement, distribution and management of IT equipment. In addition, it also works as managing assets, website management and multimedia.

Meanwhile, the Infostructure section headed by Encik Hisyam Yacob. Main services of the Infostructure section is to provide, manage and maintain technical support for network systems, IT security, telecommunications, data centers and database located at USM Health Campus. Only 4 staff involves in maintaining data centers and database based on MSSQL and MySQL for application. They also manage video live connection in USM Health Campus for in inside and also to USM Engineering Campus Pulau Pinang.

I was task to the Application section under supervision Puan Zamilah Hussin as the Information Technology Officer. Three unit in application is System Engineering, Operation and Maintenance and Application Development. Main activities in Application section is developing, maintaining and providing services support for applications at the PPKT Health Campus or by Main campus and Engineering Campus. The Application section required all staff to involve with the development activities, maintenance and application support of all time.

#### 2.2.1 Training Structure

I have undergone industrial training under the supervision of Puan Zamilah Hussin. Each task given by module through GitLab application.

#### 2.2.2 Scope of Training

My scope of training is to build a system called "Inventory System", my task is to create new version of the system that already exist. This task is given by

module, and my part is *“user manager and full production”*. Besides that, to develop this system, I was assigned to use simple PHP language.

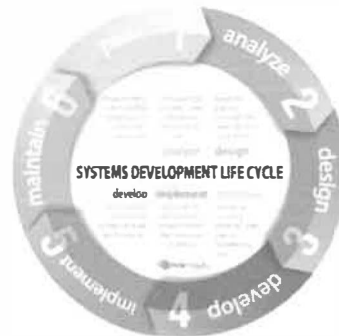


Figure 5: System Development Life Cycle (SDLC)

Figure 5 shows the SDLC model that is being used to develop the system. The system development should follow the rules of SDLC model. I have to undergone all activities in the model except the maintenance activity as I finished my training on January.

### 2.2.3 Training Objective

The training objective is to reveal towards industrial way of work, to be able work in Information System environment in a professional way, to be able to use the knowledge that gain from university and serve the industrial.

## CHAPTER 3

### INDUSTRIAL TRAINING

#### 3.1 Training Activities

IT sections talk and sharing. In this programs, each unit in PPKT show how they work, technology used, requirement to be worker and site visit. Participant have chance to visit video conference room, communication services and database center. A lot exposure to current PPKT technology in this program. This program running for 6 day in 3 week.

##### 1. Internship Student Arduino Project Briefing



Figure 6: Internship Student Arduino Project Briefing

Figure 6 shows internship student give briefing on her Arduino project in PPKT. The project is about attendant and read user card contain information include name and staff number. The system almost 90% finish and now given to other internship student because last assigned already finish internship at PPKT Health Campus.

## 2. Briefing From Network Unit

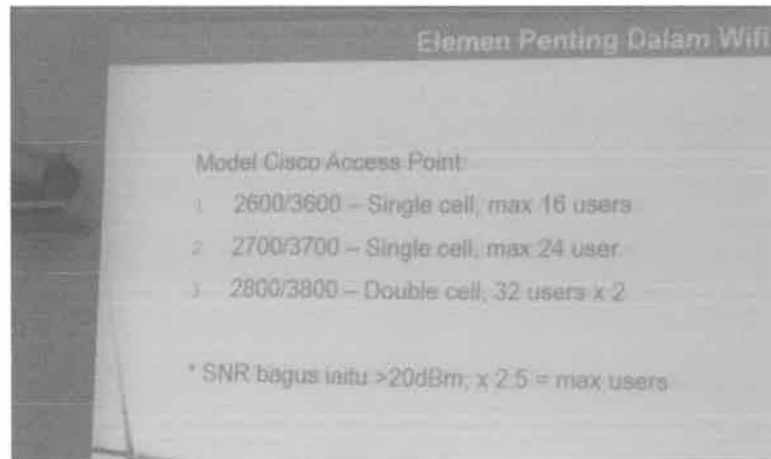


Figure 7: Briefing from Network Unit

Figure 7 shows information given from Network Unit by Encik Darimi. Currently for only 4 staff involve in network unit. In this session Encik Darimi show type of wireless connection devices and their performance for example wireless AC speed up to 1Gbps while wireless N 300Mbps, wireless G 54Mbps and wireless B as low as 11Mbps. There is also two type of frequency which is 5GHz with shorter range 115 feet and 2.4GHz up to 230 feet. All this information included in WLAN Standard: IEEE 802.11. For frequency 2.4GHz, it contain three channel that is 1, 6 and 11. While 5.0GHz contain up to 165 channel. Participant also learn about half duplex and full duplex in wireless connection.

### 3. Briefing from Application Unit



Figure 8: Briefing from Application Unit

Figure 8 shows learning session from Application Unit by Encik Wan Md. Faizal and Encik Mohd Nazri. Information provide for this session including framework used in web development such as QT, Code igniter (CI) and Ruby on Rails. There is similarity between CI and Ruby on Rails based on Model-View-Controller (MVC) in this two framework. In term of performance, Ruby on Rails slightly faster than other three framework used.

### 4. Data Centre Unit Site Visit

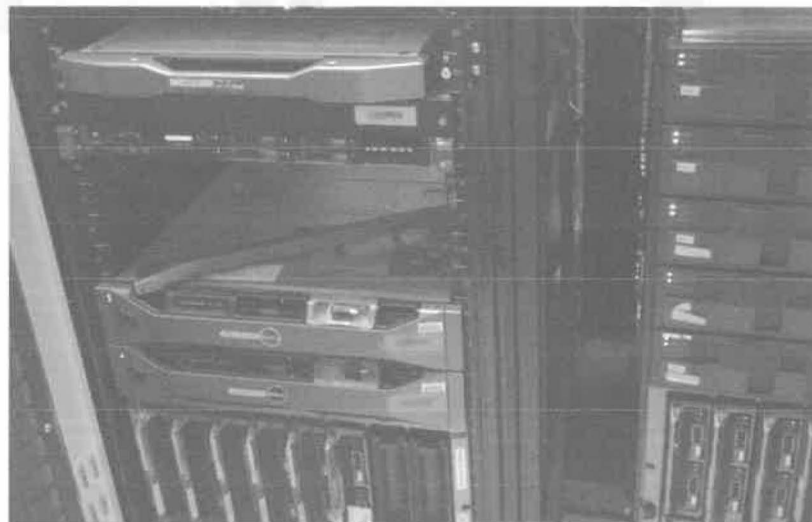


Figure 9: Data Centre Unit Site Visit

Figure 9 shows server setup in PPKT Health Campus. Participant have a chance to see up close server. Only four staff involve in maintenance up to 119 server in there.

## 5. Data Centre Unit Briefing



Figure 10: Data Centre Unit Briefing

Figure 10 shows speech given by Encik Razmi from Data Centre Unit. This session allow participant to know about Denial-of-service attack on server. Main operating system used in Data Centre Unit is Linux

## 6. Exposure from Hospital Management System Unit



Figure 11: Exposure from Hospital Management System Unit

Figure 11 shows information sharing by Encik Wan Masran Wan Ahmad from Hospital Management System Unit. This unit exist to assist and support university aspirations in the implementation of Enterprise Architecture to transform Hospital Management System more efficient and productivity. Main idea is to combine and integrated between many system involve in hospital in to simplest form.

## 7. Briefing from Technical Support Unit



Figure 12: Briefing from Technical Support Unit

Figure 12 shows program session with Technical Support Unit. This session provide information on type of access door used in PPKT which is modular and smart lab.

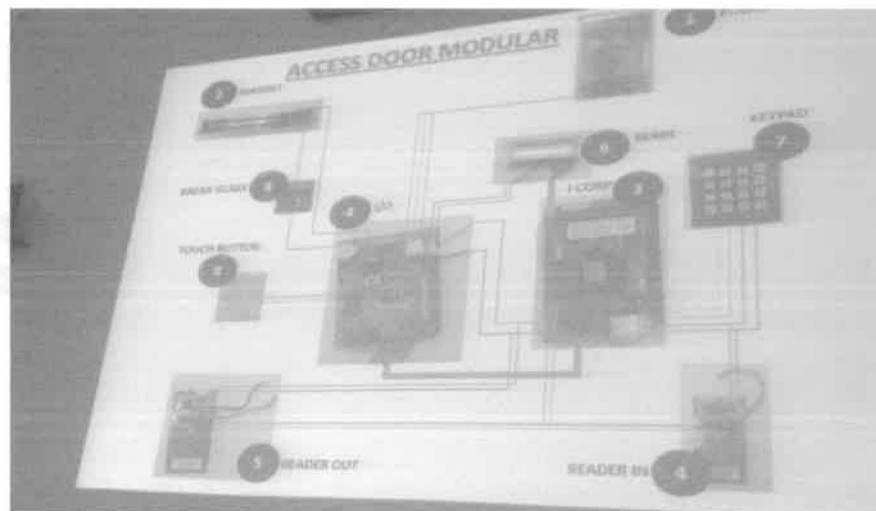


Figure 13: Access Door Tools from Technical Support Unit

Figure 13 shows access door tools provide from Technical Support Unit. This is modular type access door which one main maintenance for this unit. Only three staff involved in this unit assisted by internship student assigned for Technical Support Unit.

### 8. Video Conference Tools from Communication Unit

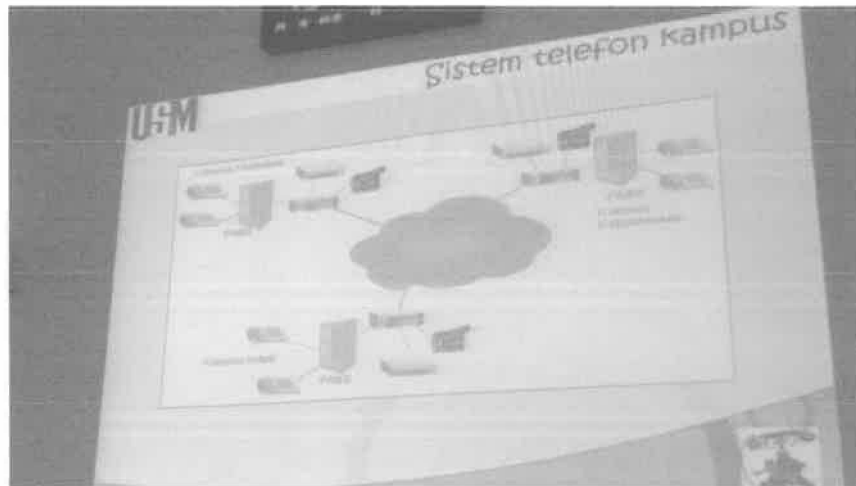


Figure 14: Video Conference Tools from Communication Unit

Figure 14 shows video conference tools used by USM Health Campus and also USM Engineer Campus at Pulau Pinang. This session provide from Communication Unit by Encik Solahasni. Hardware used for video conference including VCS which is gatekeeper, Multi Conference Unit (MCU) and endpoint. Software used is Microsoft Lync and Cisco WebEx.



Figure 15: Communication Unit Site Visit

Figure 15 shows Communication unit site visit where all telecommunication in USM maintenance here. Battery used to backup electricity if power down and this cost approximately RM1.5Bilion.



## 9. GitLab briefing

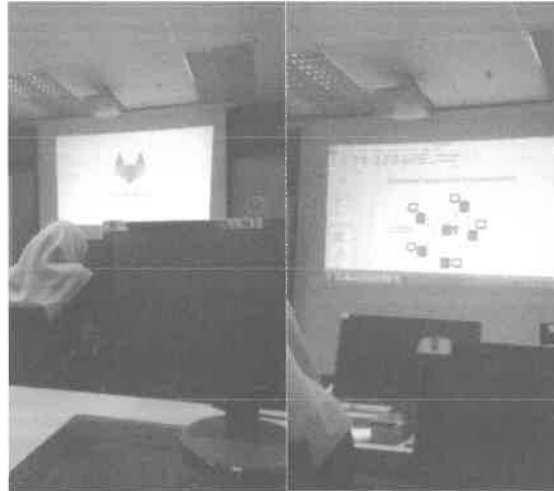


Figure 16: GitLab briefing

Figure 16 shows the presentation make by Puan Syikin about GitLab, GitLab is an open source code repository and collaborative development platform. GitLab offers a location for online code storage and collaborative development of massive software projects. The repository includes version control to enable hosting different development chains and versions, allowing users to inspect previous code and roll back to it in the event of unforeseen problems.

GitLab is a competitor to GitHub, the code repository that hosts Linus Torvalds' Linux kernel development, among many other projects. As GitLab is developed on the same Git basis of version control, it functions very similarly.

Some of GitLab's features include:

- i. LDAP integration
- ii. Open source code library
- iii. Free hosting and services
- iv. Bug tracking mechanism
- v. File editing in the web interface

GitLab supports both public and unlimited private development branches. In contrast, some competitors, such as GitHub, charge for private repositories, while others, such as Bitbucket, charge for additional users over the five allowed for free on a private repository.

### 3.2 Special Project

On 1<sup>st</sup> August, 2018 I have enrolled at the Registrar Office of Universiti Sains Malaysia Health Campus. I was assigned to Pusat Pengetahuan, Komunikasi dan Teknologi (PPKT) and under the supervision of Puan Zamilah Hussin, who is an IT officer at PPKT.

The first assignment given by Puan Zamilah Hussin is to study about “*Tatacara Pengurusan Stor (TPS) Kerajaan Bahagian Perolehan dan Pengurusan Aset, KPM*”, this TPS aims to manage the stocks covering Receipt, Record, Storage, Production, Inspection, Safety, Hygiene, Disposal, Loss and Erasure. After a few months studying this concepts of TPS, Puan Zamilah Hussin ask me to develop a new version of inventory system by using System Development Life Cycle (SDLC) model, the system is divided into two module, first module is “**addition**” and second module is “**production**”, by this two module given, **I was assigned to finish the second module and one function from first module**. By using my creativity and knowledge, I manage to determine how the system works based on categories given and was accepted by Puan Zamilah Hussin. The users involved with this system is Admin and User, the language used to develop this system is PHP.

#### 3.2.1 Summary of the Universiti Sains Malaysia Inventory System (USM.IS)

USM.IS is the system that will monitor and record all transaction about addition and production of goods that involving in store management. The users that involved with this system is two, which is Admin and User. For the first user, they are allowed to monitor all system functions, this user also responsible to add new products, keep supplier records, determine types of items by category and determine the user for this system. In addition, the functions that have in Admin interface is Products, Categories, Suppliers, and User Manager.

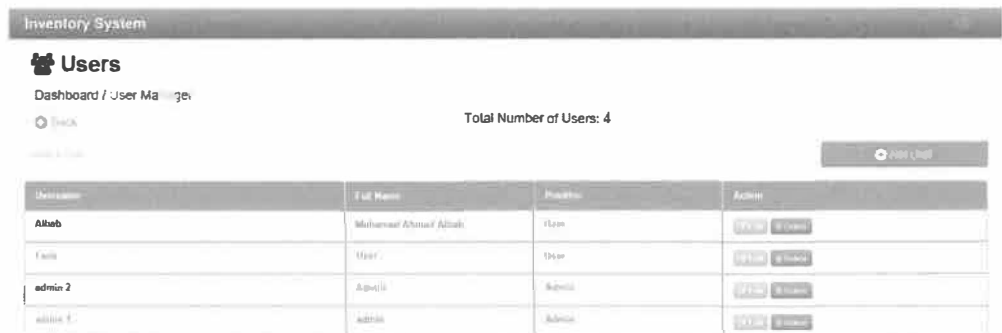
For the second user, they only can use this system for production only. Besides that, this user only can be determine by the Admin only that will give the “id” and “password” to login into this system, this steps is taken in order to control the security of the system, this user also will be selected based on their duty and responsibility in the institution, which mean not all staff can use this system. The items in this system will be divided into three (3) categories, which is, Expired Dated, Glassware, and Laboratory. All this items is used by hospital

management to carry out their duties, currently there are 470 list of the items should be included in this system.

### 3.2.2 Task divided by Module

#### 1. User Manager (First Module)

Before I complete all second module, I was assigned to finish one of the functions from the first module which is “Add User”, this function only can be used by Admin only which empowered to control and monitor all the system, this function enable the “Admin” to create a new accounts for another users either to add another “Admin” or to add another “User”. This system only can be used by two users only, which is “Admin” that control the system and used all functions that have inside the first module and second module, and “User” that only can used the second module only.



Username	Full Name	Position	Action
Altab	Muharrar Ahmad Altab	User	View Edit
Fadh	User	User	View Edit
admin 2	Admin	Admin	View Edit
admin 1	Admin	Admin	View Edit

Figure 17: User Manager Interface

#### 2. Production (Second Module)

This Second Module will be used by “User” for production of goods from the store and enable them to see the latest quantity of goods and also enable them to print the transaction receipt.



Figure 18: Production Interface



Figure 19: Production "Add Product"



Figure 20: Production "Quantity Pop-up"

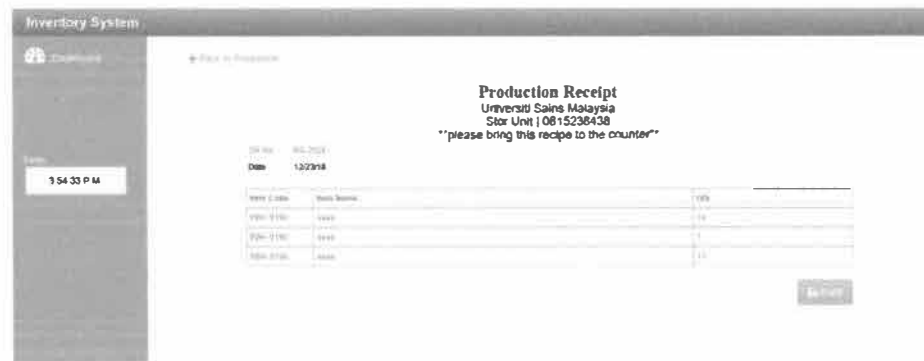


Figure 21: Production “Print Receipt”

### 3.2.3 Objective

#### 1. Avoids Stock-Outs

Making sure that user have access to products when they need or want them.

#### 2. Avoid Excess Inventory

Optimized inventory control actually balances a fine line between too much and too little. In fact, a main reason companies have gone to just-in-time systems and advanced software solutions is to avoid having excess inventory while trying to meet demand.

#### 3. Move Goods Efficiently

Efficiency in inventory means the ability to quickly receive and store products as they come in and retrieve and ship when they go out.

### 3.2.4 Scope

USM.IS, was develop for Hospital used. This system allows them to access the information about quantity of products that related to the prescribed category such as Expired Dated, Glassware, and Laboratory. The system focus on two users only, which is “Admin” that maintains the store management in terms of stock control, stock storage, stock distribution and others. Meanwhile, the second user called “User” will used this system for production only.

For Admin, they will be given the authorities to add another users to use this system which is “Admin” and “User”. Besides that, this system cannot be used

by all staff, only selected staff only will be given authorities to access and used this system, only staff that are chosen by institution only will be given “id” and “password” by Admin that control this system. The transaction of this system will be fully used by store management and hospital management only.



Figure 22: Transaction between Store & Hospital

### 3.2.5 Hardware and Software Description

#### 3.1.5.1 Hardware

##### 1. Laptop

HP Laptop 14-bs0xx		
Device name	:	LAPTOP – J68PKKMQ
Processor	:	Intel® Core™ i3-6006U CPU @ 2.00GHz 1.99GHz
Installed RAM	:	4.00 GB (3.89 GB usable)
System type	:	64-bit operating system, x64-based processor

Table 1: Laptop description

### 3.2.5.2 Software

#### 1. Software

- **Wamp Server 2.0**

Wamp Server is a Windows web development environment. It allows creating web applications with Apache2, PHP and a MySQL database. Alongside, Php MyAdmin allows managing easily the databases. The function by using this software is as the temporary server for the system which is only for simulation not the actual system.

- **PHP**

PHP is general-purpose server-side scripting language originally designed for web development, to produce dynamic web pages. It is one of the first developed server-side scripting languages to be embedded into an HTML source document, rather than calling an external file to process data.

- **Adobe Dreamweaver CS6**

Adobe Dreamweaver CS6 is the industry-leading web development tool, enabling users to efficiently design, develop and maintain standards-based websites and applications. Adobe Dreamweaver is available for both OS X platform and Windows. Recent versions have improved support for Web technologies such as CSS, JavaScript, and various server-side scripting languages and frameworks including ASP, ColdFusion, and PHP.

### 3.2.6 Context Diagram

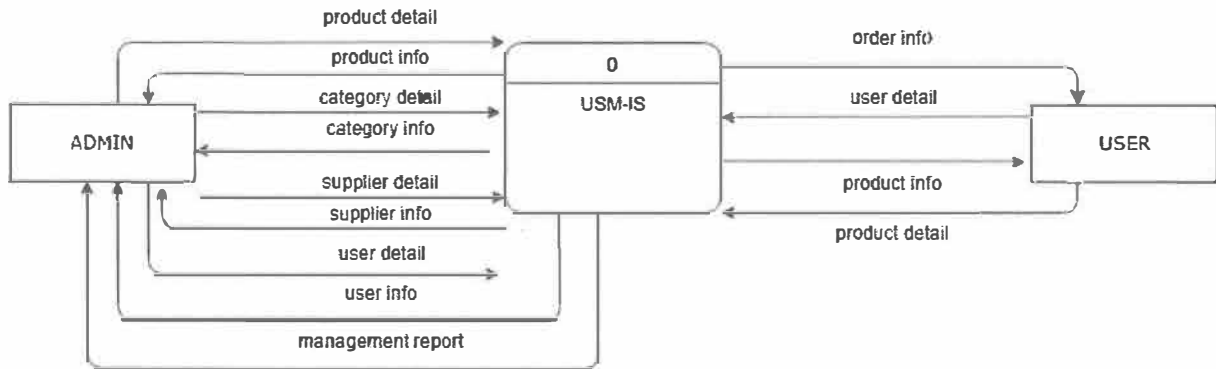


Figure 23: USM.IS Context Diagram

### 3.2.7 Data Flow Diagram

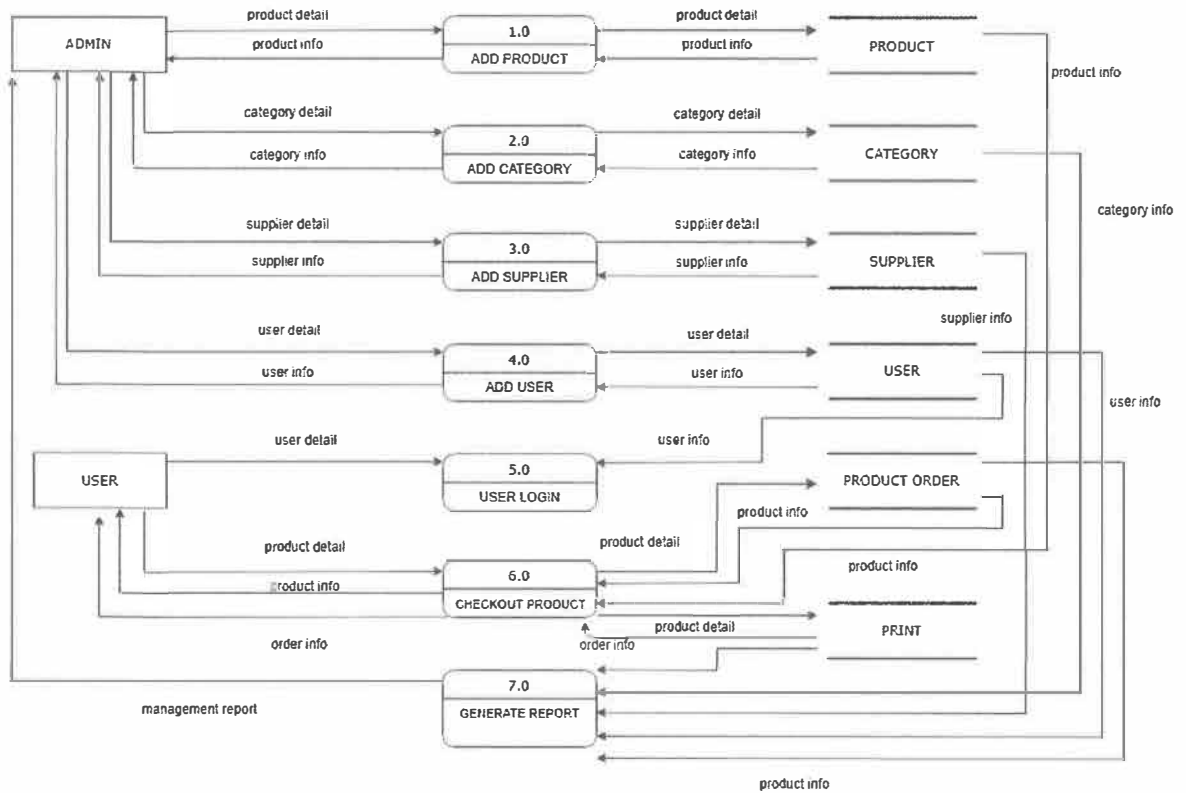


Figure 24: Data Flow Diagram USM.IS



### 3.2.8 Entity Relationship Diagram

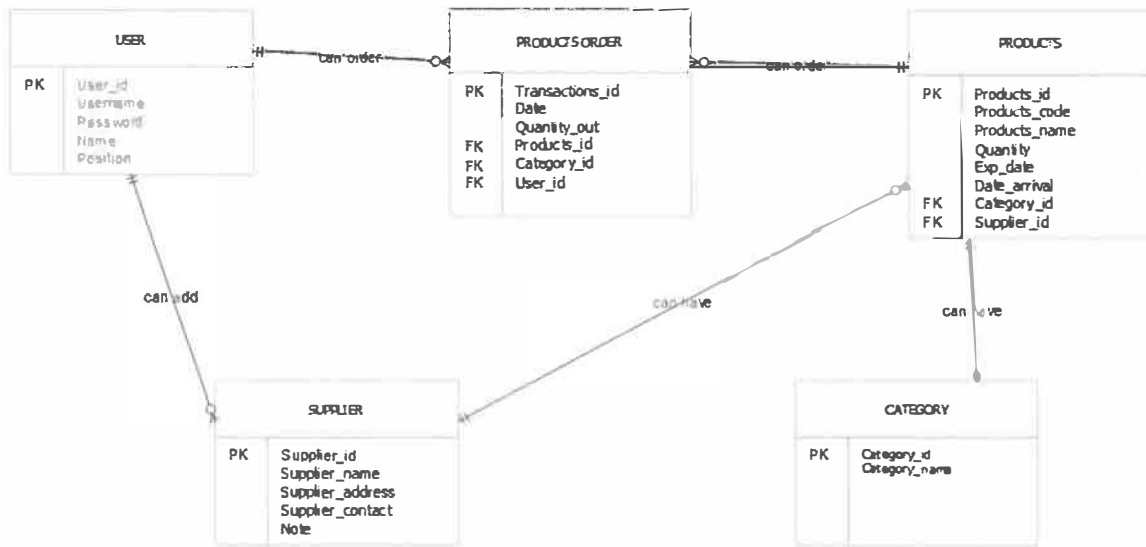


Figure 25: Entity Relationship Diagram USM.IS

### 3.2.9 USM.IS Gantt chart

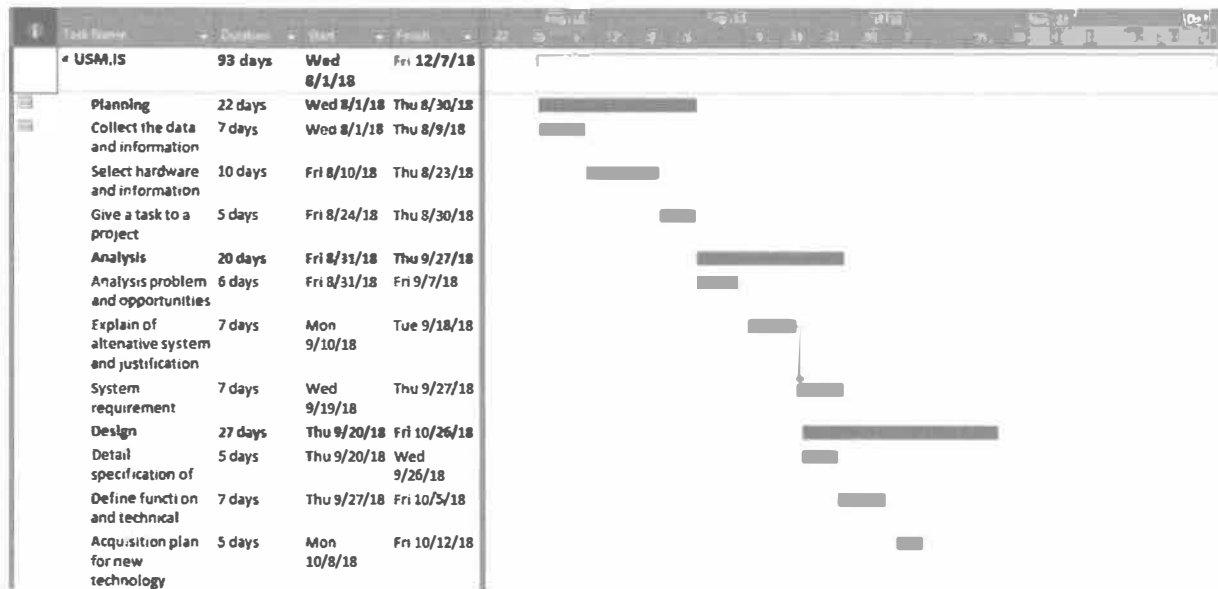


Figure 26: USM.IS Gantt chart



Figure 27: USM.IS Gantt chart

## USER MANUAL

### 3.2.9 Module 1: Add Manager (Admin)



Figure 28: User Manager Button

Figure 14 shows the User Manager Button that used to add new users.

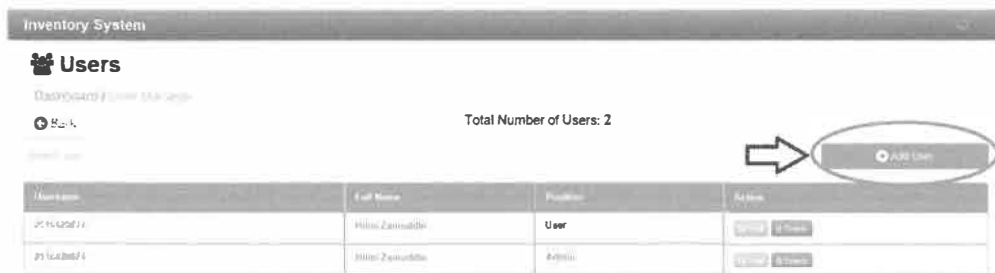


Figure 29: Add User

Step 1: Click “Add User” to add new users for this system

**+ Add User**

Full Name :  1

Username :  2

Password :  3

Position :   ←

Figure 30: Fill the details

Step 2: After click “Add User”, then you must fill the details that required by the system.

1	:	Name of the user
2	:	USM identification number (ID)
3	:	Last 4 digit of user Identification Card (IC) numbers
User Admin	:	Choose position for the new user

Table 2: Type of details



Figure 31: Save User

Step 3: After fill the details that required, please click “Save User” to add the details to database.

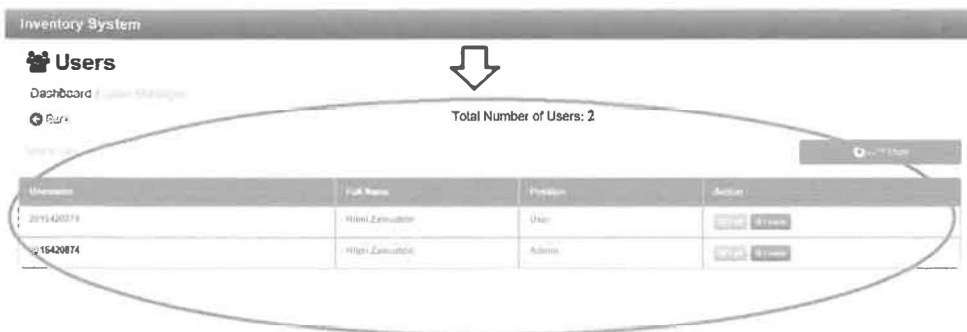


Figure 32: New users interface, deleted and edit button

Step 4: The details about new user will be show at the system, Admin also can “Edit” or “Delete” the user details.

### 3.2.10 Module 2: Production (User/Admin)



Figure 33: Production Button



Figure 34: Click Production Button

Step 1: Click "Production" icon to use this function.

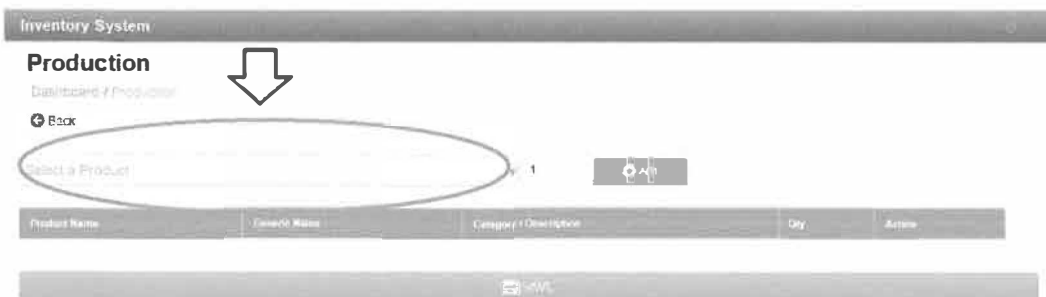


Figure 35: Select Products

Step 2: This interface will appear after you click "Production" icon, then select which product you want, the product name will appear.

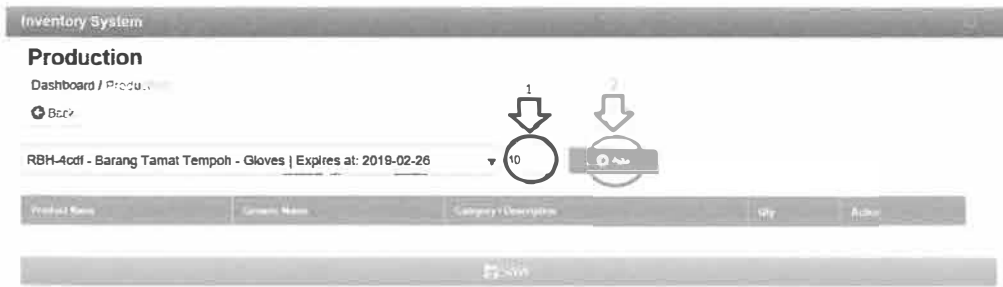


Figure 36: Add quantity

Step 3: After you select the product you want, then add quantity for the product, and click “Add” to send the details to database.



Figure 37: Balance pop-up

Step 4: The pop-up will show you the current balance of product, then just click “OK”

The screenshot shows the 'Inventory System' interface with the 'Production' section. A dropdown menu is set to 'Select a Product'. Below it is a table with the following data:

Product Name	Generic Name	Category / Description	Qty	Action
RSH Acdf	Barang Tamat Tempoh	Gilwek	10	Cancel

Below the table is a 'SAVE' button. A red circle highlights the 'SAVE' button, and a red arrow points to it from the right. Another red arrow points down to the 'SAVE' button from above.

Figure 38: Product details

Step 5: The product details will be show at the interface based on product name, generic name, category, and quantity. Then click save for next steps.

The screenshot shows the same 'Inventory System' interface as Figure 38, but with a modal dialog box titled 'Staff Name' overlaid. The dialog contains a text input field labeled 'Enter Name' and a 'Save' button. A red arrow points from the 'Select a Product' dropdown to the 'Enter Name' field. Another red arrow points from the 'Save' button in the dialog to the 'SAVE' button on the page below. The table below the dialog shows the same data as in Figure 38, but the 'Qty' column now contains the value '2'.

Figure 39: Save Button

Step 6: Please fill your name first, then click “Save” to get the recipe.

Inventory System

Dashboard

← Back to Production

**Production Receipt**  
Universiti Sains Malaysia  
Stor Unit | 0815238438  
\*\*please bring this recipe to the counter\*\*

OR No.: RS-00502  
Date: 01/03/19

Item Code	Item Name	Qty
REH-4cct	Gloves	10

9:07:57 P.M

Print

Figure 40: Print recipe

Step 7: The recipe will show as below, to print the recipe, you just need to click  
“Print”



## CHAPTER 4

### CONCLUSION

#### 4.1 Application of knowledge, skills and experience in undertaking the task

These challenges were related to industrial training in PPKT Health Campus. First, adopting to the working environment. Due to the fact that trainee was new in the organization, it took some time to get used and cope with the working environment. The trainee was not used to this culture and society this was a big challenge. Therefore, in the first days of internship the student did not have much to do and had to be sit and the day ends without having much to do this was a challenge because it made trainee so idle and bored for the first weeks in the organization. Fortunately, after that day I tried to communicate, and I can cope with the situation and help by the supervisor who provided a schedule of duties to the trainee.

Other than that, I have difficulties at first to understanding the flow of framework system that I am required to build. The task given to me have different understanding from my previous learn. This was solved by the supervisor who gave the trainee an opportunity to ask anything wasn't clear and allow the trainee to look upon the file that is related to the system that will be build. That guidance helped the trainee understand what to do.

While developing the system, I have difficulties on the error and the interface of the system. This was solved by discussing with Puan Zamilah Hussin and she gave me idea and solution. For the interface, I study how the existing system looks like. This give me briefly idea how "Inventory System" system looks like.

#### 4.2 Personal thoughts and opinion

PPKT Health Campus have provided such a pleasant opportunity for me to undergo industrial training. By training under PPKT, a lot of knowledge and experience can be gained and built. Moreover, this organization is suitable for undergraduate students who will work soon or further their study in many field and who those passion in learn how real business works. From this industrial training, the trainee can improve their computer science skills and also can increase the oil and plantation knowledge. Besides, I also can train myself to be good in attitude while doing my work. In addition, I have learnt how important IT department in one organization to run smoothly. The task assigned is to fulfil what is specified in the Bachelor of

Information Science (HONS.) Information System Management. All programming and development of this system are constantly reviewed and monitored by Puan Zamilah Hussin. This system's information and database is stored on the health campus USM server.

### **4.3 Learning Experience**

There is a lot of learning experience that I have received. I have experienced industrial way of working environment. Thus, I learnt to be in a good attitude while performing the industrial training. I also learnt that different industry has different way of working as the experience that I have gathered being shared among other trainee from different department and different company. I have experienced the technologies use in industry and how different organization could be invited and joint together with PPKT Health Campus to solve problem and work together.

I also have opportunity to join in training and exposure to different section up close and other information. Thus, I have experienced how to present and deal with different type of career in future.

My involvement in the work of upgrading, modifying, testing and controlling the system also included in this department. The designated "Inventory System" involves artificial intelligence applications for health-based Universiti Sains Malaysia (USM).

### **4.4 Limitations and Recommendations**

Organization should provide enough device such as computers for trainee so that trainee can use the company device and does not have to bring their own computer. This will be unfortunate for trainee who does not have any laptop to bring. Thus, providing sufficient device would be the best way to improve productivities. Other than that, organization should allow the trainee to involve with more discussion, meetings or seminar that can be joined by trainee. This will give the trainee the exposure how industrial works. Last but not least, organization should consider on giving allowances to trainee to boost the working spirit and help out the trainee as the petrol cost and toll fare is higher in Kuala Lumpur.

University should provide shorter time for internship from 5 months to 3 months so that the student can find job quicker before the graduation. It is great that university has provide the guidance and constant supervision to ensure the student excel in their training. The university

should continue with internship program, this is because it helps to prepare the students for their careers in future and also enable the students to practice the theoretical knowledge obtained during class be exercised practically. It also helps to develop students understanding of work ethics, employment demands, responsibilities and opportunities.

## REFERENCES

Main Frontpage Module. (n.d.). Retrieved January 9, 2019, from <http://www.kk.usm.my/index.php/en/>

(n.d.). Retrieved January 9, 2019, from <http://www.ppkt.kk.usm.my/v5/>

(n.d.). Retrieved January 9, 2019, from <http://sppa-hq.moh.gov.my/portalSpa/xlogin.cfm>

# APPENDIX A

**TATACARA PENGURUSAN STOR  
(TPS) KERAJAAN BAHAGIAN  
PEROLEHAN DAN PENGURUSAN  
ASET (KPM)**



# **Tatacara Pengurusan Stor Kerajaan**

## **1Pekeliling Perbendaharaan AM 6.1**

Bahagian Perolehan dan Pengurusan Aset, KPM

# **Tatacara Pengurusan Stor**

**KP 6.1/2013 – Pendahuluan**

**KP 6.2/2013 – Penerimaan**

**KP 6.3/2013 – Merekod Stok**

**KP 6.4/2013 - Penyimpanan**

**KP 6.5/2013 - Pengeluaran**

**KP 6.6/2013 – Pemeriksaan**

**KP 6.7/2013 – Keselamatan dan Kebersihan**

**KP 6.8/2013 – Pelupusan**

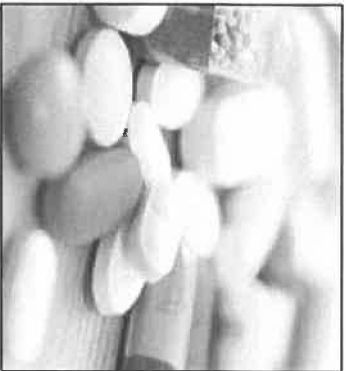
**KP 6.9/2013 – Kehilangan dan Hapuskira**



# SContoh Stok



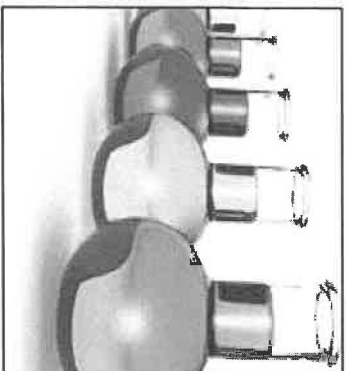
Bekalan  
Pejabat



Ubat-ubatan



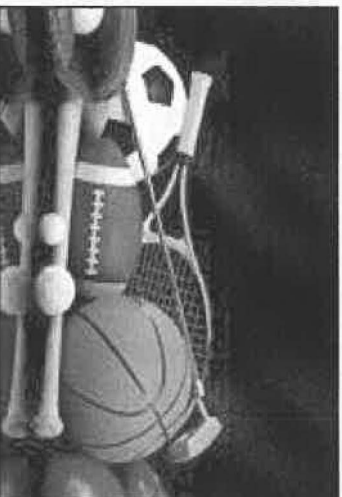
Alat Ganti



Makmal



Dapur



Sukan



Pertanian

# Kategori Stor Kerajaan

**STOR PUSAT**

**STOR UTAMA**

**STOR UNIT**

# Kategori Stor Kerajaan

## STOR UTAMA

Menyedia, mengurus dan membekal barang kepada Stor Unit

Membuat perolehan sendiri dan membekal terus kepada pelanggan akhir.

Stor yang mempunyai peruntukan berdasarkan aktiviti dalam **Belanja Mengurus Tahunan** walaupun bukan bertaraf PTJ / Pusat Kos.

# Kategori Stor Kerajaan

## STOR UNIT

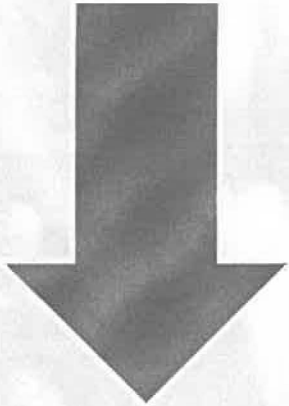
Stor yang menyimpan dan membekal barang-barang untuk keperluan jangka pendek atau guna terus bagi tujuan operasi dan penyelenggaraan kepada pelanggan akhir.

Stor Unit hendaklah mendapatkan bekalan daripada Stor Pusat dan Stor Utama serta tidak membuat perolehan sendiri.

Permohonan stok daripada pelanggan akhir kepada Stor Unit hendaklah menggunakan Borang Permohonan Stok.

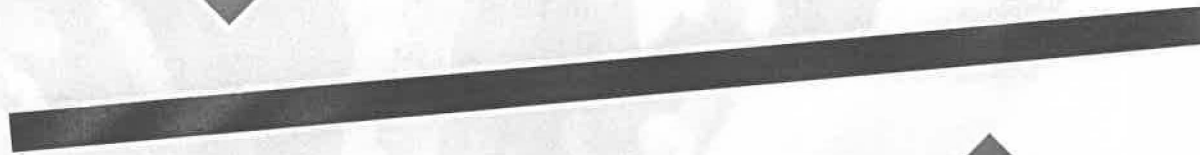
Antara contoh Stor Unit ialah stor pejabat, cawangan, bahagian, bengkel, wad, makmal, dapur, dispensari, domestik, sekolah dan unit-unit kecil

# Objektif / Asas Pengurusan Stor



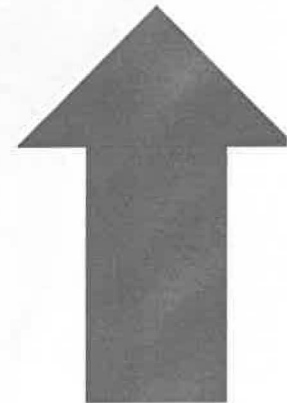
## Pengurusan Stor

- Stok sentiasa ada
- Menepati kehendak pelanggan



## Kawalan Stok

- Stok boleh diguna
- Kaedah penjagaan & penyelenggaraan yang sempurna



# Fungsi Stor

## Pembungkusan

- Bungkus dan hantar stok kepada pelanggan

## Pemeriksaan

- Stok dalam simpanan
- Kelemahan / usang / terlebih dll

## 3K

- Pastikan keselamatan, kebersihan & keceriaan

## Pelupusan

- Tindakan pelupusan dilaksanakan
- Stok usang/obsolete, rosak, expired, melebihi keperluan & elak pembaziran

## Hapuskira

- Dilaksanakan mengikut peraturan
- Untuk stok yang hilang

# Objektif Pengurusan Kawalan Stok

- 1 Ketidadaan stok dapat dielakkan dan keperluan pemesan dapat dipenuhi.
- 2 Penggunaan modal yang lebih ekonomik serta kurangnya terikat dalam bentuk stok.
- 3 Penggunaan modal yang lebih ekonomik serta kurangnya terikat dalam bentuk stok
- 4 Stok yang tidak bergerak, tamat tempoh penggunaan, rosak dan usang dapat dikurangkan
- 5 Ruang simpanan dapat dioptimumkan

# Penambahan Item Katalog



Katalog disediakan oleh semua stor :

Diedarkan kepada pemesan bagi tujuan pemesanan stok

Menyeragamkan barang-barang yang disimpan supaya penjenisan barang-barang yang serupa dapat dikurangkan



Barang-barang baharu yang hendak dimasukkan ke dalam katalog hanya boleh dilakukan setelah mendapat kelulusan Pegawai Katalog/Stor dan kelulusan daripada Pegawai Pelulus

Permohonan menggunakan borang Penambahan Barang (KEW.PS-6) bagi Kem/Jab yang belum menggunakan Sistem Pengurusan Stor (SPS) Perbendaharaan Malaysia



# Pengurusan Stor

## Kumpulan Stok

Dilaksanakan oleh Stor Pusat /Utama

Kump. A (30 %) stok yang disimpan yang mempunyai nilai pembelian tahunan tertinggi. Kump. B (70 %) stok bakinya

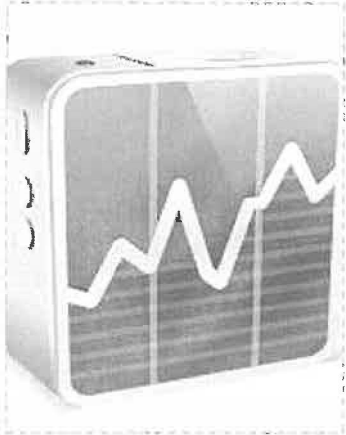
Kew.PS-7 – Penentuan Kumpulan Stok

Senarai ikut nilai pembelian untuk tempoh dua tahun

Kajian pembahagian kumpulan dibuat pada setiap awal tahun

Tumpuan lebih diberi kepada stok Kump. A untuk elak stok bernilai tinggi disimpan secara berlebihan

# Prestasi Stor



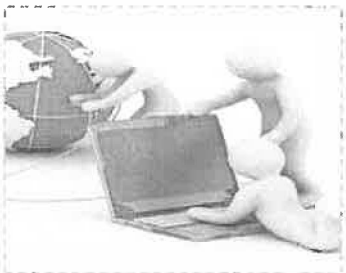
## Kadar Pusingan Stok

- Pengiraan setiap suku tahun & tahunan
- Perlu capai sekurang-kurangnya **2 kadar pusingan**
- Lebih tinggi lebih bagus
- Kajian semula kalau tidak aktif (untuk elak *usang/obsolete*)
- Stok pembangunan/projek khas tidak diambilkira



## Paras Simpanan

- Petunjuk pengurusan stor yang baik.
- Stok tidak melebihi paras simpanan.
- Kecuali keperluan darurat spt vaksin ular.



## Paras Perkhidmatan

- Stor memenuhi semua pesanan.
- Stor mencapai paras perkhidmatan yang baik

# **Prosedur Pengelolaan Stok**

**KP 6.1/2013 – Pendahuluan**

**KP 6.2/2013 – Penerimaan**

**KP 6.3/2013 – Merekod Stok**

**KP 6.4/2013 - Penyimpanan**

**KP 6.5/2013 - Pengeluaran**

**KP 6.6/2013 – Pemeriksaan**

**KP 6.7/2013 – Keselamatan dan Kebersihan**

**KP 6.8/2013 – Pelupusan**

**KP 6.9/2013 – Kehilangan dan Hapuskira**

# Penerimaan Daripada Pembekal



Barangan diterima berserta LO / Inbois / Dokumen Kontrak dll

Diperiksa, diukur, ditimbang oleh Pegawai Penerima dengan serta merta



Pengesahan penerimaan dalam pada dokumen rasmi

Pengesahan bersyarat jika tidak berkesempatan. Cop "diterima dengan syarat ....."



Isi Kew.PS-1

Isi Kew.PS-2 (2 salinan) jika ada perselisihan ( sesalanan simpanan dan sesalanan kepada pembekal)



# Penerimaan Di Luar Kawasan Stor

**Pelaksanaan  
dalam situasi  
berikut:**

1. Ukuran atau keadaan fizikal barang tidak sesuai diserahkan di kawasan stor; dan
2. Mengikut syarat penyerahan barang yang dipersetujui seperti ditapak projek dan sebagainya.

# Utama

- ✓ Barangan diterima berserta Senarai Pembungkusan dan Salinan Borang Pesanan dan Pengeluaran Stok (Stor Utama & Unit)
- ✓ Diperiksa dan disahkan barang diterima adalah seperti yang dipesan
- ✓ Jika ada perselisihan rujuk kepada stor pengeluar dengan serta merta

# Penerima

Direkodkan semula dalam Kad Kawalan Stok dan Kad Petak asal sebagai barang belum guna

Bagi stok separa guna hendaklah direkod dalam borang yang disediakan oleh Stor bagi tujuan kawalan Keluar-Masuk

# Penyimpanan



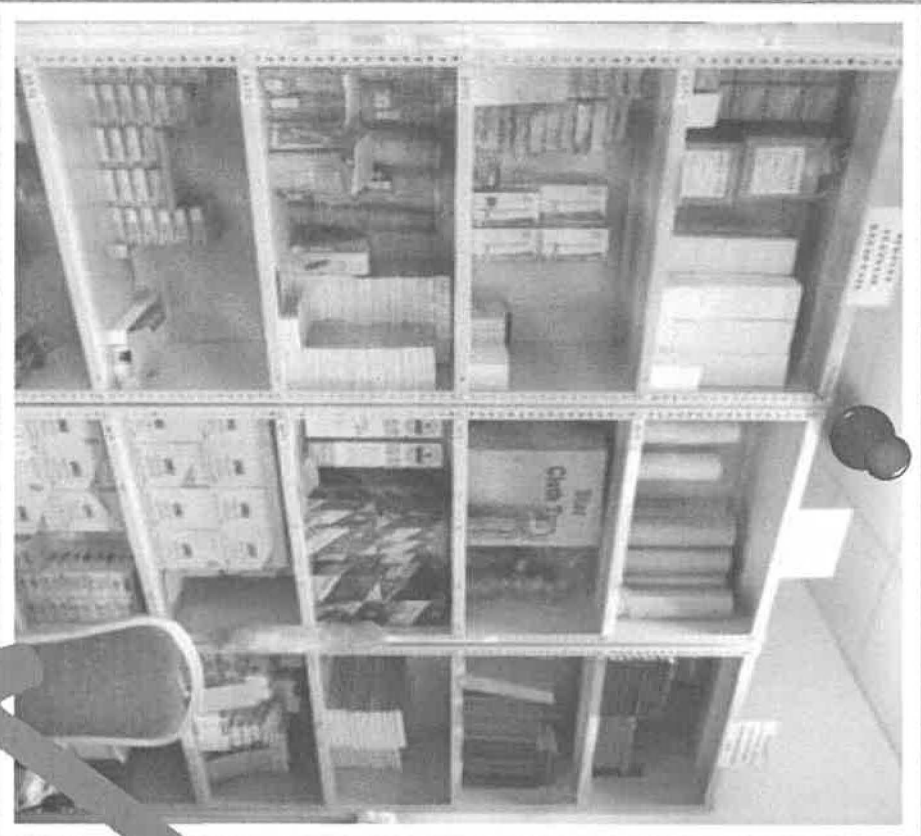
## Stok bertarikh luput

- Pembekal perlu label tarikh luput (catat pada bekas/kotak supaya mudah dilihat)
- Rekod pada kad petak warna merah jambu
- Amalan Masuk Dulu Keluar Dulu (MDKD)
- Jika MDKD tidak dapat diamalkan guna label MDKD (Kew.PS-8)
- Senarai stok bertarikh luput (KEW.PS-9) disediakan oleh Pegawai Stor dengan merekodkan kuantiti stok bertarikh luput dalam bulan yang sama
- KEW.PS-9 dikemaskini enam bulan sebelum tamat tarikh luput
- Jika tidak dapat dihabiskan perlu ambil tindakan berikut:
  - Maklumkan kepada stok pusat/utama untuk agih kepada stor lain
  - Laksanakan pengeluaran bagi tujuan yang berkaitan spt latihan, pembangunan dll
  - Pulangkan kepada pembekal (rujuk perjanjian jika ada)
  - Laksana pelupusan



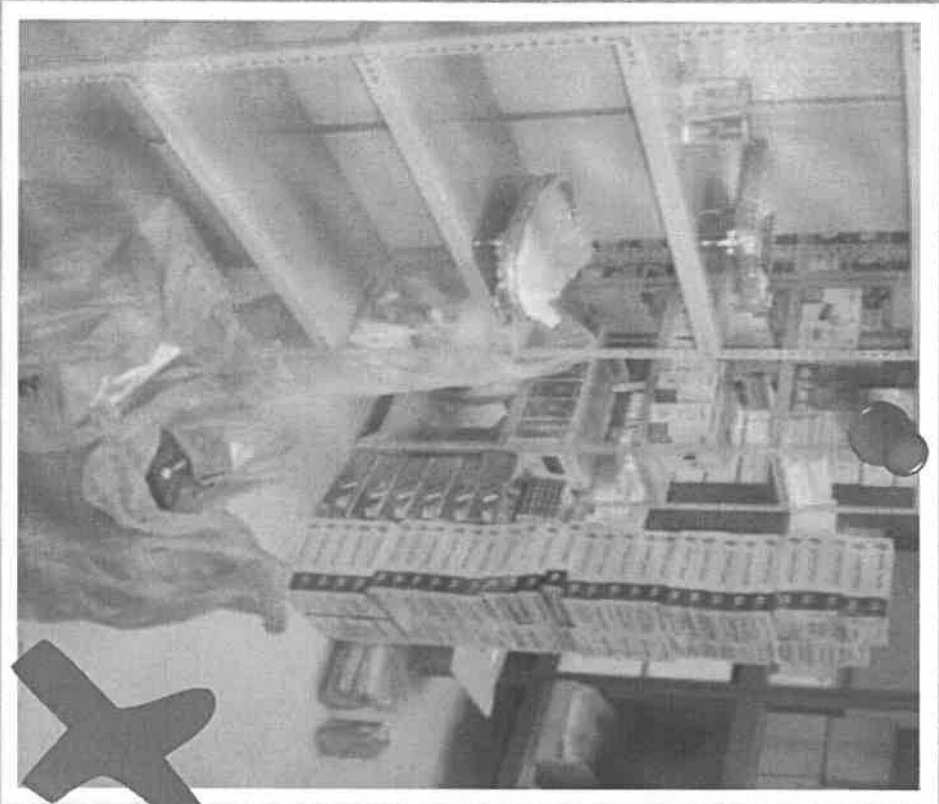
# Sympati

## Stok Tersusun & Ada Pengendalian



Penyimpanan

# Stok Tidak Tersusun & Tiada Pengenalan



# **Kebenaran Pengeluaran**



**Kebenaran oleh Pegawai Pelulus  
atau Pegawai diberi kuasa secara  
bertulis oleh Ketua Jabatan**

## **Guna sistem Masuk-Dahulu-Keluar-Dahulu (MDKD)**

- ✓ Elak pengeluaran tanpa kebenaran
- ✓ Pengeluaran tidak ikut kuantiti kelulusan
- ✓ Stok lama tersimpan dan tidak dikeluarkan

# Permohonan Stok

- 1 Pesanan stok kepada stor utama yang bekalkan terus kepada pelanggan dan stor unit guna KEW.PS-11
- 2 Disediakan dalam 2 salinan
- 3 1 salinan simpanan pemohon dan 1 salinan kemukakan kepada stor unit
- 4 Tindakan perlu diambil bila terima KEW.PS-11
  - i. Daftarkan dan beri no. permohonan
  - ii. Tentukan kuantiti pengeluaran
  - iii. Dapatkan kelulusan pengeluaran
  - iv. Catat pengeluaran pada kad petak
  - v. Keluarkan stok

# Pengeluaran Stok

Stok hanya boleh dikeluarkan atas pesanan dengan Kebenaran Pegawai Pelulus yang diberi kuasa secara bertulis oleh Ketua Jabatan

Pegawai Pelulus hendaklah menurunkan tandatangan dan tarikh di KEW.PS-10 atau KEW.PS-11

Stok yang dikeluarkan hendaklah mengikut kuantiti yang diluluskan

# Kawalan Retail Masuk Barang Guna Habis

- Barang guna habis bagi tujuan guna sama disimpan di lokasi tertentu selepas digunakan*
- Sediakan borang kawalan dalaman*
- Jika tidak diperlukan tetapi masih ada nilai jualan boleh buat jualan sisa stok atau barang terpakai*

# Penyimpanan



## Penyimpanan dadah merbahaya, racun dan bahan psikotropik

- Patuhi peraturan penyimpanan di bawah Akta Dadah Berbahaya 1952 dan Peraturan Racun 1952 dan Peraturan Bahan Psikotropik 1989



## Penyimpanan stok unsur keselamatan

- Senjata atau peta-peta
- Patuhi Peraturan Keselamatan yang ditetapkan



## Stok mudah terjejas akibat hawa panas dan lembap

- Simpan ditempat bersesuaian (bilik hawa dingin / bilik nyah lembapan)

# di Tempat Pendaratan

Bungkusan barang tidak mempunyai tanda rosak atau terusik

Jika terdapat tanda maka hendaklah dibuka serta merta di hadapan agen / wakil penghantaran serta dibandingkan dengan butir-butir yang terdapat dalam inbois atau nota hantaran / pembungkusan

Sekiranya berlaku kerosakan / kehilangan / tidak cukup bekal ke atas konsainan maka sijil / perakuan kerosakan hendaklah diperolehi daripada pembekal





# Prosedur Pengelolaan Stok

KP 6.1/2013 – Pendahuluan

KP 6.2/2013 – Penerimaan

KP 6.3/2013 – Merekod Stok

KP 6.4/2013 - Penyimpanan

KP 6.5/2013 - Pengeluaran

KP 6.6/2013 – Pemeriksaan

KP 6.7/2013 – Keselamatan dan Kebersihan

KP 6.8/2013 – Pelupusan

KP 6.9/2013 – Kehilangan dan Hapuskira

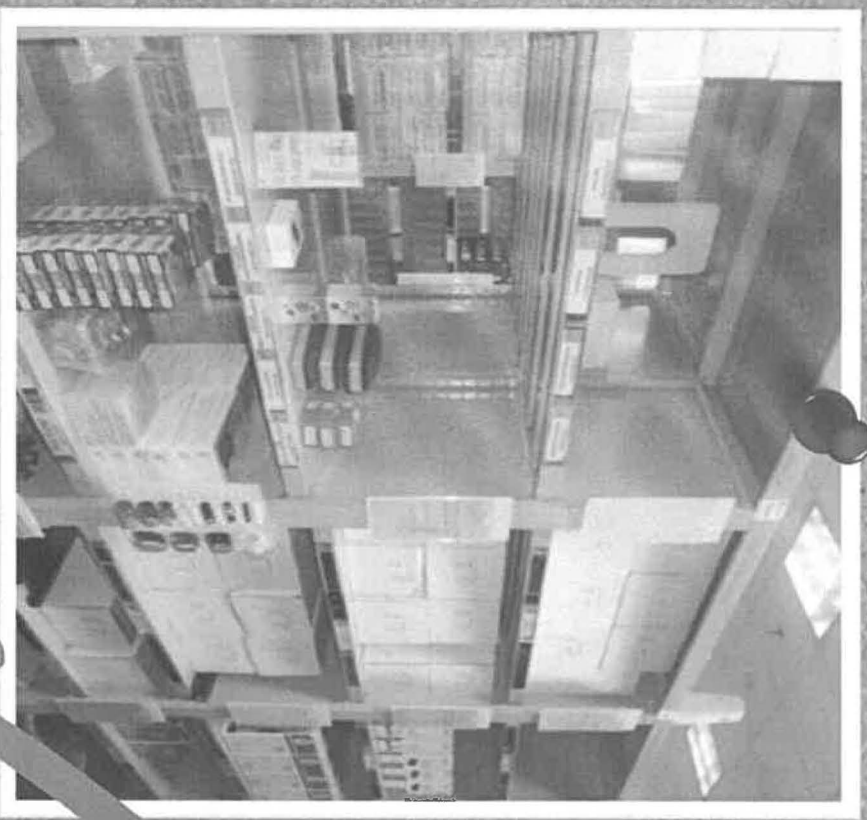
# Keperluan Kerja Melalui Sistem Elektronik

Semua Kem/Jab  
hendaklah  
menggunakan Sistem  
Pengurusan Stor (SPS)  
yang telah dibangunkan  
oleh Perbendaharaan  
Malaysia

Borang Laporan  
Terimaan Barang-Barang  
**KEW.PS-2** & Borang  
Permohonan Stok  
**KEW.PS-11** hendaklah  
dicetak dan  
ditandatangani oleh  
Pegawai yang  
Bertanggungjawab

Borang-borang lain  
boleh dicetak mengikut  
keperluan

# Kew.PS-4 - Disimpan Bersama Stok



**new.PS-4 - Tidak Disimpan Bersama Stok**



# **Tatacara Pengurusan Stor**

**KP 6.1/2013 – Pendahuluan**

**KP 6.2/2013 – Penerimaan**

**KP 6.3/2013 – Merekod Stok**

**KP 6.4/2013 - Penyimpanan**

**KP 6.5/2013 - Pengeluaran**

**KP 6.6/2013 – Pemeriksaan**

**KP 6.7/2013 – Keselamatan dan Kebersihan**

**KP 6.8/2013 – Pelupusan**

**KP 6.9/2013 – Kehilangan dan Hapuskira**

# Penyimpanan



## Penyimpanan

- Amalan Masuk Dulu Keluar Dulu (MDKD)
- Tempat simpanan ambil kira jenis stok
  - Bilik hawa dingin
  - Bilik bersiling
  - Ruang kering dan ada laluan angin
- Ruang penyimpanan perlu dibahagi mengikut seksyen / baris / rak / tingkat / petak
- Stok yang memerlukan cara simpanan khas hendaklah dipatuhi / dipenuhi kehendaknya

# **Produk Hasilan Stok**

**Direkod secara  
berasingan**

**Jika hendak dijual perlu  
kelulusan Ketua  
Jabatan**

**Harga ditetapkan oleh  
Jabatan**

**Hasil jualan dikredit  
dalam hasil Kerajaan**



# Jenis Pemeriksaan

Pemeriksaan  
Stor

Pengiraan  
Stok

Pemeriksaan  
Stok

Verifikasi  
Stor



# Pemeriksaan Stok

## Soalan

## Jawapan

Di mana dilaksana ?

- Stor Pusat
- Stor Utama

Bila ?

- Sekali setahun mulai 1 Oktober
- Pemeriksaan terhadap semua stok

Tanggungjawab siapa ?

- Pegawai Pemeriksa yang dilantik oleh Ketua Jabatan
- Pegawai tidak kena mengena dengan stor

Apa perlu dibuat ?

- Guna Kew.PS-14 – Laporan Pemeriksaan / Verifikasi Stor
- Kew.PS-14 disemak dan disahkan oleh pegawai Pemverifikasi Stor
- Buat garisan merah pada akhir transaksi di Kad Kawalan Stok (tandatangan & tarikh Pegawai Pemeriksa)

Ingat !!!

- Tiada transaksi waktu pemeriksaan
- Boleh dengan kebenaran Pegawai Pemeriksa

# Pelarasan Stok

## Soalan

## Jawapan

Pelarasan Stok ?

- Tindakan pembetulan akibat kesilapan kiraan

Bila ?

- Selepas Pemeriksaan Stor dan Verifikasi Stor dilaksanakan

Tanggungjawab siapa ?

- Pegawai Stor

Kuasa Melulus

- Ketua Jabatan

Borang Diguna

- Kew.PS-17 – Penyata Pelarasan Stok

Apa perlu buat ?

- Transaksi di ruang Terima – stok terlebih (KKS-Bhgn B)
- Transaksi di ruang Keluar – stok berkurang
- Catat di Kad Petak
- Tandatangan dan tarikh

# Tujuan

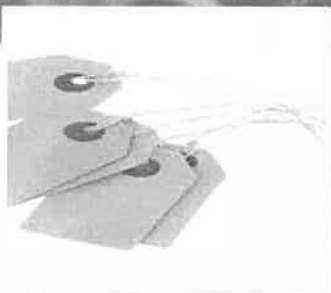


KEEP CALM  
&  
FOLLOW  
THE RULES

Patuhi Arahan Keselamatan



Suasana stor yang kondusif



Pelabelan yang jelas &  
mudah difahami

# Pelupusan Stok

Dilaksanakan pada stok yang usang, rosak, *expired*, tidak boleh diguna, tidak diperlukan dll

Laksana berdasarkan syor Pegawai Pemeriksa atau Pemverifikasi Stok

Mematuhi peraturan berkuatkuasa dalam Tatacara Pengurusan Aset Alih Kerajaan

Lembaga Pemeriksa Pelupusan Stok guna Lembaga Pemeriksa Pelupusan Aset Alih Kerajaan sedia ada

Guna KEW.PS-19 yang disediakan oleh Pegawai Stor

Catat keadaan stok serta syor kaedah pelupusan yang sesuai

Kuasa melulus ikut akta sedang berkuatkuasa

Pegawai stor kemaskini rekod KKS dan KP

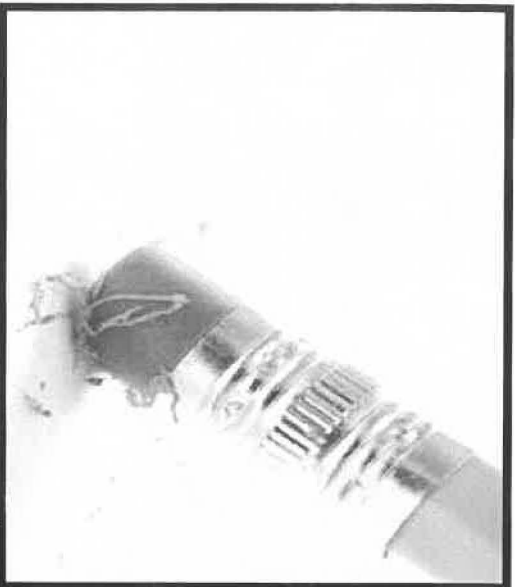
Perakuan Pelupusan tidak diperlukan



Dilaporkan dalam KEW.PS-20

# **Japus Kira Kehilangan Stok**

---




Dilaksana bila berlaku kecurian,  
kebakaran, bencana alam, kesusutan  
dan seumpamanya

Perlu mematuhi peraturan ditetapkan  
dalam Tatacara Pengurusan Aset Alih  
Kerajaan

**Kecuali Kekurangan Stok Bernilai Rendah**






**Unit Pengurusan Aset Alih  
Bahagian Perolehan dan Pengurusan Aset  
Kementerian Pendidikan Malaysia  
Aras 5, Blok E2, Kompleks E  
Pusat Pentadbiran Kerajaan Persekutuan  
62604 Putrajaya**



**[marianis.din@moe.gov.my](mailto:marianis.din@moe.gov.my)  
[nurhayati.sebli@moe.gov.my](mailto:nurhayati.sebli@moe.gov.my)  
[nizarudin@moe.gov.my](mailto:nizarudin@moe.gov.my)  
[syuhaida.safian@moe.gov.my](mailto:syuhaida.safian@moe.gov.my)  
[mnoor.roslan@moe.gov.my](mailto:mnoor.roslan@moe.gov.my)**



**Tel : 03 – 88849400  
03 – 88846834  
03 – 88846873  
03 – 88846836  
03 – 8884 6846  
Fax : 03 – 88846824**



**BORANG LAPORAN TERIMAAN BARANG-BARANG**  
(Disediakan dalam 2 salinan oleh Pegawai Penerima)

Nama dan Alamat Pembekal/ Agen Penghantaran	No. dan Tarikh Pesanan Kerajaan	Butir-Butir Pengangkutan	Butir-Butir Penghantaran	Butir-Butir Bungkusan	No. Ruj. Penerimaan

No. Kod	Perihal Barang	Kuantiti				Sebab-Sebab Penolakan	Harga (RM)	
		Dipesan	Diterima	Kurang/ Lebih	Ditolak		Seunit	Jumlah

Pegawai Penerima	Akuan Terima Pembekal/ Agen Penghantaran
..... Nama: Jawatan: Tarikh: Cap Jabatan:	Disahkan barang-barang ini diterima untuk tindakan atas sebab-sebab berikut:  <input type="checkbox"/> Kuantiti Ditolak <input type="checkbox"/> Kuantiti Kurang <input type="checkbox"/> Kuantiti Lebih  ..... Nama: Tarikh: Cap Syarikat:

Salinan 1 – Kepada Pembekal/ Agen Penghantaran

Salinan 2 – Untuk simpanan Stor

**BAHAGIAN B****Transaksi Stok**

Tarikh	No. PK/ BTB/ BPPS/ BPS	Terima Daripada/ Keluar Kepada	TERIMAAN			KELUARAN		BAKI		Tanda Tangan Pegawai Stor
			Kuantiti	Senang (RM)	Jumlah (RM)	Kuantiti	Jumlah (RM)	Kuantiti	Jumlah (RM)	
			Baki dibawa ke hadapan.....							

**Nota:**  
PK = Pesanan Kerajinan  
BTB = Borang Terimaan Barang-barang  
BPPS = Borang Pesanan Pengeluaran Stok  
BPS = Borang Permohonan Stok



LAMPIRAN C  
KEW.PS-5

**SENARAI DAFTAR KAD KAWALAN STOK**

<b>Bil.</b>	<b>No. Kad</b>	<b>No. Kod</b>	<b>Perihal Stok</b>	<b>Tandatangan Pegawai Stor Dan Tarikh</b>

## LAMPIRAN B

KEW.PS-7

## PENENTUAN KUMPULAN STOK

Seksyen ^:

Bil.	No. Kod	Perihal Stok	Jumlah Nilai Pembelian Bagi 2 Tahun Lepas		Purata Nilai Pembelian [ a+b ] ÷ 2  (c)	Peratusan [ c÷Σ ] x 100 (%)  (d)	Kumpulan Barang A atau B
			20 ..... (RM) (a)	20.... (RM) (b)			
$\Sigma$ = JUMLAH KESELURUHAN						Catatan: Kumpulan A = 30% Kumpulan B = 70%	

\*Seksyen stok seperti Seksyen Alat Tulis, Elektrik, Alat Ganti, Makmal, Bahan Kimia dan Ubat-Ubatan

**LAMPIRAN B  
KEW.PS-9**

**SENARAI STOK BERTARIKH LUPUT**

Kementerian/Jabatan:

Kategori Stor:

Bulan:

Bil.	Perihal Stok	No. Kod	Lokasi Stok	Kuantiti Terimaan	Tarikh Luput	Baki Stok Bagi 6 Bulan Sebelum Tamat Tempoh Luput *(Kuantiti dan tarikh kemaskini)						Catatan
						6 bulan	5 bulan	4 bulan	3 bulan	2 bulan	1 bulan	

\* Dikemaskini kuantiti dan tarikh oleh Pegawai Stor dalam bulan yang sama

LAMPIRAN B  
KEW.PS-11

No. Permohonan : .....

BORANG PERMOHONAN STOK

Bil.	Permohonan			Pegawai Pelulus		
	Perihal Stok	Kuantiti Dipesan	Catatan	Kuantiti Diluluskan	Baki Kuantiti Dipesan	Catatan
..... (Tandatangan Pemohon) Nama : Jawatan : Tarikh :				<b>Kelulusan:</b> Permohonan diluluskan/ tidak diluluskan* ..... (Tandatangan Pegawai Pelulus) Nama : Jawatan : Tarikh :		

\* sila potong yang berkenaan

<b>Kemaskini Rekod:</b> Stok telah dikeluarkan dan direkod di Kad Petak No ..... ..... (Tandatangan Pegawai Stor) Nama : Jawatan : Tarikh :	<b>Perakuan Penerimaan:</b> Disahkan bahawa stok yang diluluskan telah diterima. ..... (Tandatangan Pemohon/ Wakil) Nama : Jawatan : Tarikh :
---	---

LAPORAN KEDUDUKAN STOK TAHUN .....

KEMENTERIAN/JABATAN  
KATEGORI STOR

TAHUN SEMASA	KEDUDUKAN STOK								KADAR PUSINGAN STOK
	Sedia Ada		Penerimaan		Pengeluaran		Stok Semasa		
	Bilangan Stok	Jumlah Nilai Stok (RM)	Bilangan Stok	Jumlah Nilai Stok (RM)	Bilangan Stok	Jumlah Nilai Stok (RM)	Bilangan Stok	Jumlah Nilai Stok (RM)	
(i)	(a)	(ii)	(b)	(iii)	(c)	(i+ii)-(iii)	d = (a+b)-(c)	$\frac{c}{[(a + d) \div 2]}$	
Baki Bawa Hadapan	Baki Stok Akhir Tahun .....								
Suku Tahun Pertama									
Suku Tahun Kedua									
Suku Tahun Ketiga									
Suku Tahun Keempat									
Nilai Tahunan							Kadar Pusingan Stok Tahunan adalah:		

Disediakan Oleh:

.....  
(Tandatangan Pegawai Stor)

Nama:

Jawatan:

Tarikh:

Cap Kementerian/Jabatan:

Diperakukan oleh:

.....  
(Tandatangan Ketua Jabatan)

Nama:

Jawatan:

Tarikh:

Cap Kementerian/Jabatan:

## LAPORAN TAHUNAN KESELURUHAN PENGURUSAN STOR TAHUN .....

Kementerian/ Jabatan:  
Kategori Stor:

Bil	Pemverifikasi	Penemuan dan Ulasan	Syor Pemverifikasi	Pengesahan dan Syor Penambahbaikan Oleh Ketua Jabatan
1.	Organisasi Stor			
2.	Keselamatan/ Kebersihan			
3.	Kawalan Stok			
4.	Proses Penerimaan			
5.	Penyelenggaraan Rekod			
6.	Proses Penyimpanan			
7.	Proses Pengeluaran			
8.	Proses Pelupusan			

Bil	Pemverifikasi	Penemuan dan Ulasan	Syor Pemverifikasi	Pengesahan dan Syor Penambahbaikan Oleh Ketua Jabatan
9.	Proses Hapus Kira			
10.	Hasil Pengiraan/ Pemeriksaan/ Verifikasi			
11.	Nilai Keseluruhan Stok Disimpan (RM)			
12.	Lain-lain Penemuan			

Disediakan Oleh Pegawai Pemverifikasi Stor:

.....  
Nama Pemverifikasi 1:

Jawatan:

Jabatan:

Tarikh Lantikan:

Tarikh Verifikasi:

.....  
Nama Pemverifikasi 2:

Jawatan:

Jabatan:

Tarikh Lantikan:

Tarikh Verifikasi:

Ulasan Ketua Jabatan:

.....  
(Tandatangan Ketua Jabatan)  
Nama :  
Jawatan:  
Tarikh:  
Cap Kementerian/ Jabatan:

PENYATA PELARASAN STOK

Kementerian/ Jabatan:  
Kategori Stor:

Bil.	Perihal Stok	No. Kad Kawalan Stok	Tarikh Penemuan (Pengiraan/ Pemeriksaan/ Verifikasi)	Harga Seunit (RM)	Kekurangan		Lebihan		Justifikasi Stok Pengiraan
					Kuantiti	Nilai (RM)	Kuantiti	Nilai (RM)	

Disediakan oleh:

.....  
(Tandatangan Pegawai Stor)

Nama:

Jawatan:

Jabatan:

Tarikh:

(DILULUSKAN/ TIDAK DILULUSKAN)\*

.....  
(Tandatangan Ketua Jabatan)

Nama:

Jawatan:

Jabatan:

Tarikh:

\* Sila mengisi yang berkenaan

**LAMPIRAN A  
KEW.PS-19**

**LAPORAN LEMBAGA PEMERIKSA PELUPUSAN STOK**

Kementerian/ Jabatan:  
Kategori Stok:

Bil.	No. Kod	Perihal Stok	Tarikh Terima	Tempoh Simpanan	Kuantiti	Nilai Perolehan (RM)		Justifikasi Pelupusan	Syor Kaedah Pelupusan
						Seunit	Jumlah		
<b>JUMLAH:</b>									

<p><b>Pegawai Pemeriksa 1:</b></p> <p>.....</p> <p>Nama: Jawatan: Jabatan: Tarikh:</p>	<p><b>Pegawai Pemeriksa 2:</b></p> <p>.....</p> <p>Nama: Jawatan: Jabatan: Tarikh:</p>	<p><b>Keputusan Kuasa Melulus:</b></p> <p>Diluluskan pelupusan stok yang disenaraikan mengikut kaedah berikut:-</p> <p>.....</p> <p>.....</p> <p><b>Tandatangan:</b></p> <p>Nama: Jawatan: Tarikh: Cap Jabatan:</p>
--	--	---

Nota: Ruang Tandatangan boleh di lampiran terakhir.





**LAMPIRAN A  
KEW.PS-21**

**LAPORAN HAPUS KIRA KEKURANGAN STOK**

Kementerian/ Jabatan:

Bif.	No. Kad Kawalan Stok	Perihal Stok	Perihal Kehilangan			Catatan	
			Kuantiti	Nilai Perolehan (RM)			Justifikasi
				Seunit	Jumlah		
<b>Jumlah</b>							

<p><b>Disediakan oleh Pegawai Stor:</b></p> <p>.....</p> <p><b>Nama:</b> <b>Jawatan:</b> <b>Jabatan:</b> <b>Tarikh:</b></p>	<p><b>Disahkan oleh Ketua Jabatan:</b></p> <p>.....</p> <p><b>Nama:</b> <b>Jawatan:</b> <b>Jabatan:</b> <b>Tarikh:</b></p>	<p><b>Keputusan Kuasa Melulus:</b> Diluluskan/Tidak Diluluskan*</p> <p>.....</p> <p><b>Nama:</b> <b>Jawatan:</b> <b>Tarikh:</b> <b>Cap Kementerian/Jabatan:</b></p>
---	--	---

\* Sila potong yang berkenaan

## APPENDIX B

# **SENARAI NAMA BARANG STOR GUNA HABIS PPSK**

Senarai Barang Stor Guna Habis PPSK

Untuk kategori Barang Makmal, Glassware dan Expired Date sahaja

Bil.	Nama Jenerik	Jenama	Spesifikasi	No. Kod Item/Saiz
1	Alcohol Swab	Hospitech	Paper+70% alcohol	50 g/m <sup>2</sup> thin type
2	Aplicator stik		Wooden	
3	Autoclave tape	HmBG	Cellotape	19mm x 50m
4	A 4 Sticker		Paper	
5	A 4 Laminating Film	Astar	Plastik	220 x 307mm
6	A 3 Laminating Film	Astar CBE	Plastik Plastik	303 x 426mm 307 x 432mm
7	Aluminium foil	Diamond	Aluminium	7.6m x 30.4cm (25 SQ.FT) 7.6m x 45cm (37.5 SQ.FT)
8	Biohazard plastic bag	Radicare	Plastic – yellow	100 L
9	Biohazard plastic bag	Radicare	Plastic - yellow	30 L
10	Benchote reel	Whatman	Paper	46 cm x 50 mm
11	Cotton wool roll	Idealcare	Paper	500 grams
12	Cover slip/glass cover	Favorit	Glass	24 x 50mm
13	Cover slip/glass cover Cover slip/glass cover	HmBG Sail Brand	Glass Glass	22 x 22mm 22 x 22mm
14	Collection swab	Citoswab	Wooden application stick	
15	Centrifuge tube 15ml	Biologix	Plastic	15 mL
16	Centrifuge tube 50ml		Plastic	30 x 115mm
17	Cellulose nitrate filter 0.45 µm (sterile)	Sartorius	Filter paper	
18	Cellulose Extraction Thimbles	Favorit	Paper	ID 43mm ED 123mm
19	Cellulose Extraction Thimbles	Favorit	Paper	ID 33mm ED 80mm
20	Apron plastic putih		Disposable HDPE PVC apron	800mm/1400mm x 0.02mm
21	Filter papers	Smith	Paper	240 mm
22	Filter papers	Whatman chm	Paper Paper	55mm 55mm

23	Filter papers	Smith	Paper	150mm
24	Filter papers	Smith	Paper	110mm
25	Gauze roll	Panax	Cloth	36 '' x 100 YDS
26	Gauze sponges	Snowflake		19 x 15
27	Glove S (Non sterile)	CleanGuard	Rubber	Size S
28	Glove M (Non sterile)	CleanGuard KleenGuard	Rubber Rubber	Size M Size M
29	Glove L (Non sterile)	CleanGuard	Rubber	Size L
30	Glove S (Nitrile)	3 R	Rubber	Size S
31	Glove M (Nitrile)	3 R	Rubber	Size M
32	Glove L (Nitrile)	3 R	Rubber	Size L
33	Lens paper	Kimtech Science Brand	Paper	
34	Microscope slides	Sail Brand	Glass	25.4 x 76.2mm
35	Micro haematocrit tubes	Vitrex	Glass	
36	Needle 21G x ½''	BD		0.8mm x 38mm
37	Needle 25G x 1''	Terumo		0.5 x 25mm
38	Needle 26G x ½ ''	Terumo		0.45 x 13mm
39	Paper hand towel			
40	Parafilm	Bemis	Cellotape	4 IN. x 125 FT. ROLL
41	Petri disk	Brandon	Plastic	90 x 15mm
42	PCR Tubes 0.2 ml	Odonixx Labware	Plastic	0.2 ml
43	PCR Tubes 0.5 ml	Biological Brand	Plastic	0.5 ml
44	PCR Tubes 1.5 ml		Plastic	1.5 ml
45	Pipette tips 0,5-10 µL	Gilson	Plastic	0,5 – 10 µL
46	Pipette tips 20-200µL	Biologix	Plastic	20 - 200µL
47	Pipette tips 1 - 1000µL	Axygen	Plastic	1 - 1000µL
48	Pipette tips 5 L	Axygen	Plastic	5 L
49	Pasteur pipette 1 ml		Plastic	1 ml
50	Pasteur pipette 3 ml		Plastic	3 ml
51	Surgical Face Mask	Medicos	Cloth (tie-on)	
52	Syringe filter 0.45 µm	Bioflow	Cellulose nitrate (sterile)	0.45 µm
53	Syringe filter 0.45 µm	Sartorius	Cellulose acetate (sterile)	0.45 µm
54	Syringe filter 0.2 µm	Sartorius	Cellulose acetate (sterile)	0.2 µm
55	Sharp bin 2.5 L	Radicare	Plastic	2.5 L

56	Sharp bin 5 L	Radicare	Plastic	5 L
57	Sharp bin 10 L	Radicare	Plastic	10 L
58	Syringe without needle 1ml/cc	Iringe	Plastic – Luer Slip Centre, Sterile	1 ML /cc
59	Syringe without needle 3mL/cc	Iringe	Plastic – Luer Lock Centre, Sterile	3 mL/cc
60	Syringe without needle 5ml/cc	Terumo	Plastic – Luer Lock Centre, Sterile	5ml/cc
61	Syringe without needle 10ml/cc	Terumo	Plastic – Luer Lock Centre, Sterile	10 ml/cc
62	Syringe without needle 10ml/cc	Iringe	Plastic – Luer Lock Centre, Sterile	20 ml/cc
63	Thimble filter	Advantec	Paper	ID 36mm OD 40mm L150mm
64	Tisu roll	Cutie soft	Paper	
65	TLC Silica Gel Plate GF 254	Smith	Glass Plate	20 x 20cm @ 200 x 200mm
66	TLC Plate Silica Gel 60	Merck	Glass Plate	20 x 20 cm
67	TLC Silica Gel 60 F254	Merck	Aluminium	20 x 20 cm
68	TLC Sprayer Kit	Analtech		
69	Kertas A 4	Sohop Gold Supreme	Paper	
70	Urine container		Plastic - Sterile	60 ml
71	Weighing boat tray		Plastic	41 x 41 mm
72	Weighing boat tray		Plastic	89 x 89 mm
73	Weighing boat tray		Plastic	140 x 140 mm
74	Wooden Tounge Despressor		Wooden	
75	Biohazard plastic bag	Radicare	Plastic - yellow	5 L
76	Glass Pasteur pipette bulb (black)		Rubber	
77	Water distill bottle	Nalgene	Plastic	10 L
78	Water distill bottle	Nalgene	Plastic	20 L
79	Togoshi counter	Trademark		
80	Reagent bottle	Boxon	Glass	100 mL
81	Reagent bottle	Boxon	Glass	250 mL
82	Volumetric flask	Schoot duran	Glass	500 mL
83	Volumetric flask	Schott duran	Glass	250 mL
84	Pipette tips box	GEB Greiner Bio-one	Plastic Plastic	1000 µL 1000 µL
85	Pipette tips box	Greiner Bio-one GEB Eppendorf	Plastic Plastic Plastic	10 µL 10 µL 10 µL
86	Centrifuge tube	Simport	Plastic	1.5 MI

	rack			
87	Pipette tips box	Universal	Plastic	200 µL
88	Pipette tips box	Eppendorf	Plastic	100 µL
89	Pipette tips box	Eppendorf	Plastic	20 µL
90	Isopack -21 °C + Isorack	Eppendorf	Plastic	0.5 mL
91	Cryogenic vial	Corning	Plastic	2.0 mL
92	Combitips plus	Eppendorf	Plastic	5 mL
93	Isotherm system,starter set	Eppendorf	Plastic	1.5/2.0 mL
94	Desk lamp with base	DL-107		
95	Flexible arm light	Fisherb		
96	Swing arm lamp Swing arm lamp	Euro Master		
97	Wash bottle		Plastic	
98	Googles, perforated	North	Plastic	
99	Hair dryer	Philips	Plastic	
100	Goggles	Encon	Plastic	
101	Jam randik	Smith		
102	Blood tube rotor	Thermo IEC	Plastic	
103	Filter air			
104	Vacutainer green		Plastic	5 mL
105	Vacutainer yellow		Plastic	
106	Vacutainer green		Plastic	3 mL
107	Vacutaine red		Plastic	
108	Vacutainer blue		Plastic	
109	Vacutainer purple		Plastic	
110	Blood container pink		Plastic	
111	Blood tube	BD	Plastic-EDTA	10 mL
112	Basic isolation gown with elastic band	Medicos		30 gsm
113	Urine container		Plastic	60 mL
114	Dispenser bottle		Plastic	500 mL
115	N 95 Particulate respirator			
116	96 Well Suspension Culture Plate			
117	Aspirator bottle			10 L
118	Centrifuge tube	Biologix	Plastic-sterile,Polypropylene,Non ayrogenic	50 mL
119	Microtitre 96 well	Biologix	Plastic-Sterile,Non	

	plate		pyrogenic,Non cytotoxic	
120	Cell culture flasks	Cell star	Plastic,filter screw cap red,clear,sterile	50 mL (25cm <sup>2</sup> )
121	Conical tube	SPL Life Sciences	Plastic,Sterile,Non pyrogenic	15 mL
122	Acrodisc Syringe Filters	PAAL CORPORATION	Non pyrogenic	25 mm
123	Serological pipette	Cellstar	Sterile	10 mL in 1/10mL
124	Microtip (Pipette tips)	Tarson's	Plastic-Bevelled yellow	200 mL
125	Microtip (Pipette tips)	Tarson's	Plastic	10 µL
126	Cell culture flask	Crystal Grade Polysterene	Plastic.Sterilized,Non pyrogenic	
127	Microtitre 96 well plate		Plastic-Flat bottom	
128	Blue tips	Axygen scientific	Plastic	1-1000µL
129	Yellow tips	Axygen scientific Greiner Bio-ONE	Plastic Plastic	1-200µL
130	White tips	Axygen scientific	Plastic	0.5 – 10 µL
131	Single PCR Tubes	Axygen scientific	Plastic	0.2 mL
132	8-strip PCR Tubes/cap	Axygen scientific	Plastic	0.2 mL
133	Microtubes	Axygen scientific	Plastic	1.5 mL
134	Multi-Fold Towel	Scoot brand		
135	Kimwipes	Kimtech Science Brand	Paper	
135	Glove	Ansell TouncNTuff	Rubber	Small (S)
136	Glove	Ansell TouncNTuff	Rubber	Medium (M)
137	Glove	Ansell TouncNTuff	Rubber	Large (L)
138	Falcon Tubes	BD Falcon	Plastic	15 mL
139	Falcon Tubes	BD Falcon	Plastic	50 mL
140	Buccal Swab			
141	Pamplet Unit HID/DNA			
142	Letterhead Unit HID/DNA			
143	Watermark paper Unit HID/DNA			
144	FACS Tube	Falcon	Plastic-Polystyrene round-bottom tube	5 mL, 12x75mm
145	Centrifuge tube	Axygen	Plastic-screw cap, pre-sterilized	15 mL
146	Well plate	TPP	Plastic-sterile with lid	24-well plate
147	Centrifuge tube	China	Plastic-screw cap, sterile	15 mL
148	Parafilm	Bemis		4 inch x 125 ft.Roll
149	Glove	Hang Care	Rubber-powder	Large (L)



			free,Latex	
150	Centrifuge tube	Falcon	Plastic-screw cap, pre-sterilized	50 mL
151	Cell Culture Flask	TPP	Plastic-filter,screw cap,sterile,vent	75 cm <sup>2</sup>
152	Well-plate	HmBG	Plastic-flat bottom with lid,sterile	96-well
153	Clear tips Bulk	Axygen,USA	Plastic	0.5-10 µL
154	Glove		Rubber-latex examination glove,powder free	XL
155	Stericup membrane filter for media	Merck		
156	96 well plate		No pinch bar,separate LID	96-WELL PLATE
157	48 well plate	Nunc	Single wrap	48-well plate
158	Tube flow		Single wrapped	2 mL
159	Urine container		Plastic-yellow cap	
160	Tips box	Axygen	Plastic	0.5-10 µL
161	Tips box	Axygen	Plastic	100-200 µL
162	Tissue culture flask	SPL	Sterile,filter cap	25 cm <sup>2</sup>
163	Tubes with rack	Nest	Plastic-sterile	50 mL
164	Clear tips	Axygen	Plastic-sterile,bulk	0.5-10 µL
165	Yellow tips	Axygen	Plastic-sterile,bulk	100-200 µL
166	Tube	Biologix	Plastic-sterile	15 mL
167	Well plate		Plastic-no pinch bar,separate plate and LID	96-well plate
168	Petri dish			
169	Conical tube	Blue Mex™ (Falcon)	Plastic-disposable,polypropylene	50 mL
170	Round-bottom tube	BD Falcon	Plastic-polytyrene	5 mL-12 x 75 mm
171	Parafilm		Pachiney plastic packaging,disposable	4 inchi x 125" roll
172	Cell culture plate	Cellstar,greiner Bio-One	Plastic-sterile,F-bottom with lid	96-well
173	Tissue culture test plate 96F	TPP		96-well plate
174	Tissue culture flask 25	TPP	Plastic-filter screw cap,sterile	40 mL
175	96-well plate	Costar	Plastic-flat bottom wih lid	96-well plate
176	Blue pipette tips	Axygen scientific	Plastic-disposable	1-1000 µL
177	Stericup	Milipone corporation		1000 µL
178	96-well plate	Lotto	Plastic-flat bottom	96-well plate
179	Nelgene filtration products	Thermo Scientific	Rapid flow 75mm filter unit presterilized	500 MI

180	96 well plate cover	Lotto	Plastic-disposable	96-well plate
181	Syringe	BD	Plastic-luek lok™ without needle,latexfree	10 mL
182	Tissue culture flask 75	TPP	Plastic-vent screw cap	150 mL
183	White tips	Fisher scientific	Plastic-virgin polypropylene,non sterile	0.2-10 µL
184	Glass beaker	Schoot duran	Glaswere	1000 mL
185	Measuring cylinder	Simax,Czech republik	Glasswere	1000 mL
186	Printer (broken)	Canon Ip 1880	Inkjet printer	
187	Printer (broken)	HP Desjet Ink Adventage 2515	Inkjet printer	
188	TLC Silica gel 60 F254	Merck	TLC Glass plate	
189	TLC Silica gel 60 F254	Merck	TLC Aluminium paper	25 cm x 25 cm
190	Biotage sphene for solid	ZIP	Phase Extraction (SPE)	
191	Vacuum glass column chromatography with sintered disc	Favorit		Length 600 mm Diameter 40 mm
192	Vacuum glass column chromatography with sintered disc	Favorit		Length 600 mm Diameter 20 mm
193	Cassettes	Unknown		
194	Syringe	Cellotron	Plastic	10 mL
195	Syringe	Cellotron	Plastic	3 mL
196	Syringe tuberculin	Terumo	Plastic	1 cc/mL
197	Syringe	BD	Plastic	10 mL
198	Needle	Cellotron	Plastic-hypodermic	23 G x 1 ½
199	Needle	Terumo	Plastic-	27 G x ½
200	Plain blood tubes	Golden Vac	Plastic	5 mL
201	Urine container	Unknown	Plastic-red cap	60 mL
202	Reagent reservoir	Eppendorf		
203	Clear tips	Greiner Bio	Plastic	1000mL
204	Yellow tips	Greiner Bio	Plastic	100 mL
205	Pasteur pipette	GS	Plastic	3 mL
206	Elisa Plate	JET Biofel		
207	Cell culture flask	NEST	Plastic	75 cm <sup>2</sup>
208	Filter top	TPP	Sterile	0.22 µm,500 mL
209	Centrifuge tube	NEST	Plastic	50 mL
210	Centrifuge tube	NEST	Plastic	15 mL
211	Flowcytometry tube	BD Falcon		

212	Serological pipette	SPL Life Sciences		10 mL
213	Serological pipette	SPL Life Sciences	Disposable,sterilized	2 mL
214	Serological pipette	SPL Life Sciences		5 mL
215	Centrifuge tubes	Falcon	Disposable,sterilized	15 mL
216	Flask T25	Falcon	Plastic-blue vented cap	50 mL
217	Pipette tips	Watson	Plastic	10 mL
218	Pipette tips	Watson	Plastic	1000 µl
219	Cotton wool		Cotton	400 gm/pk
220	Tissue culture flask	TPP	Plastic-vent screw cap	75 cm <sup>2</sup>
221	Sharp container		Plastic-cap yellow	3 L
222	Pipette tips	Quality Scientific Plastics	Plastic	10 µl
223	Nalgene Rapid Flow Filters	Thermo Scientific	Plastic	500 mL,0.45 µm,PES 75 mm DIA.Membrane
224	96-well polystyrene microplates	Greiner Bio-one	Plastic-V-Bottom,solid	
225	Cell culture flask T75	SPL	Plastic-sterilized	
226	Serological pipette	SPL	Sterilized,disposable	1 MI
227	Glove	Ironskin	Rubber-powder free latex	Size S
228	Glove	Ironskin	Rubber-powder free latex	Size M
229	25 cm <sup>2</sup> tissue culture flask w/filter cap	Biologix		25 cm <sup>2</sup>
230	2.0 ml self-standing cryogenic vials	Biologix		2.0 mL
231	Syringe	Terumo	Plastic-Luer lock	50 mL
232	Microstar universal-fit blue pipet tips	Golden gate biosciences	Plastic-Bull pack non-sterile	100-1000µL
233	Microstar universal-fit pipet tips	Golden gate biosciences	Plastic-10 MI short tips in-self-standing bulk pack	0.1-10 µL
234	Microcentrifuge tube	Golden gate biosciences	Plastic-with snap cap	1.7 ml in self-standing bag
235	Microstar universal-fit yellow pipet tips	Golden gate biosciences	Plastic-bulk packed,non-sterile	1-200 µL
236	Universal-fit blue tips	Plastilab (Lebanon)	Plastic	100-1000 µL
237	Tube		Plastic-polypropylene round bottom	14 mL
238	Serological pipette	BD Falcon	Plastic	25 mL
239	Tissue culture,96 well plate with lids	NEST		96-well plate

240	Tissue culture,6 well plate with lids	NEST		6 well plate w/lids
241	Tissue culture,24 well plate with lids	NEST		24 well plate with lids
242	Topo Shotgun Kit	Invitrogen		
243	Nebulizer Kit	Invitrogen		
244	Petri disk	Labsern	Plastic-disposable	90 x 15 mm
245	PCR Sv Mini	Gene all Korea		
246	Clear microtubes	Axygen,USA	Plastic	1.5 mL
247	Yellow tips	Axygen,USA	Plastic-bulk	1-200 $\mu$ L
248	75 cm <sup>2</sup> tissue culture flask w/filter cap	SPL Life Sciences	Plastic	75 cm <sup>2</sup>
249	25 cm <sup>2</sup> tissue culture flask w/filter cap	SPL Life Sciences	Plastic	25 cm <sup>2</sup>
250	Serological pipette	SPL Life Sciences	Plastic	10 mL
251	Serological pipette	SPL Life Sciences	Plastic	5 mL
252	Reservoir	SPL Life Sciences		50 mL
253	Microcentrifuge tube	SPL Life Sciences	Plastic-conical	50 mL
254	Cryovial external cap	SPL Life Sciences	Plastic	1.8 mL
255	Petri disk	SPL Life Sciences	Plastic-disposable	90 x 15 mm
256	Laboratory bottle	Schott,Duran	Glasswere	500 mL
257	Laboratory bottle	Schoot,Duran	Glasswere	250 mL
258	Laboratory bottle	Schott,Duran	Glasswere	100 mL
259	Universal bottle		Glasswere	
260	Boufant cap			
261	Face mask industrial use			
262	Centrifuge tube	Biologix,USA	Plastic-disposable	15 mL
263	Centrifuge tube	Biologix,USA	Plastic-disposable	50 mL
264	6-well multiwall culture plate	Biologix,USA	Plastic	6-well
265	Tubes rack,40 well	Biologix,USA	Plastic-	15 mL
266	Tubes rack,25 well	Biologix,USA	Plastic	50 mL
267	Cryogenics storage box	Biologix,USA	Plastic-Assorted colors,81-well	81-well
268	Cryogenics storage box	Biologix,USA	Plastic-Assorted colors,100-well	100-well
269	Clickseal microfuge tubes	Golden Gate Bioscience (GGB)	Plastic-snap cap	2.0 mL
270	Microflex thin wall PCR	Golden Gate Bioscience (GGB)	Plastic-single tubes	0.2 mL

271	Micropipet tips	Golden Gate Bioscience (GGB)	Plastic-microstar universal fit-G-STYL	10 µL
272	Yellow tips	Golden Gate Bioscience (GGB)	Plastic	200 µL
273	PCR Tube storage racks	LABCON	Plastic-assorted colour	96-place
274	Racks microtubes for 0.5/1.5/2.0	LABCON	Plastic-assorted colour	96-place
275	Blue pipet tips	Golden Gate Bioscience (GGB)	Plastic-non sterile	100-1000 µL
276	Reagent resevoirs	Biologix,USA	Plastic-Assorted colours bulk pack	55 mL
277	Glove	Ironskin Malaysia	Rubber-powder free Nitrile	9" size S
278	Glove	Ironskin Malaysia	Rubber-powder-free latex	9" size S
279	96-well culture plate	SPL Life Sciences	Plastic-sterile	96-well
280	Serological pipette	SPL Life Sciences	Glasswere-orange plug,sterile	10 mL
281	25cm Tissue culture flask	SPL Life Sciences	Plastic-with filter cap,sterile	25cm
282	Multiwell culture plate	SPL Life Sciences	Plastic	24-well
283	Cell scraper	SPL Life Sciences		Length 230 mm
284	Blade wide	SPL Life Sciences		13 mm,sterile
285	75cm Tissue culture flask	SPL Life Sciences	Plastic-with filter cap	75cm
286	Petri disk	BION	Plastic	90 mm
287	Petri disk	Greiner bio-one	Plastic	60 mm
288	Pipette tips		Plastic	1000 µL
289	Pipette tips	TARSONS	Plastic	10 µL
290	Microcentrifuge tube	TARSONS	Plastic	1.5 mL
291	Microcentrlfuge tube		Plastic	2.0 mL
292	White pipette tips	Labcon	Plastic	100-1250 µL
293	24-well tissue culture test plate	SPL Life Sciences	Plastic	24-well
294	Centrifuge tube	BD Falcon	Plastic	50 mL
295	Centrifuge tube		Plastic-with polystyrene rack,conical,sterile	50 mL
296	Cryovial	SPL Life Sciences	Plastic	1.8 mL
297	Serological pipette	SPL Life Sciences	Glasswere-sterile	5 mL
298	White cap tubes			25mL
299	Centrifuge tube	SPL Life Sciences	Plastic	15 mL
300	Disiposible syringe	Terumo,Japan	Plastic-Luer lock tip without needle	10 cc/mL

301	6-well culture plate	SPL Life Sciences	Plastic	6-well
302	Microscope slide box		Plastic-100 slide capacity(blue)	
303	PCR tube storage box		Plastic-yellow/white	96-well
304	Cryogenic storage box			25-well
305	Cryogenic storage box		Plastic-black/green	50-well
306	Cryogenic storage box		Plastic-pink,orange &yellow	100-well
307	Cryogenic storage box		Plastic-transparent	100-well
308	Cryogenic storage box	Nalgene	Plastic	100-well
309	Conical flask	Biomex	Glasswere-narrow neck	250 mL
310	Conical flask	Biomex	Glasswere-narrow neck	500 mL
311	Conical flask	Biomex	Glasswere-narrow neck	1000mL
312	Specimen bottle	S.Murray		60 mL
313	Specimen bottle	S.Murray		120 mL
314	Filter funnel	Wheel	Glass	90 mm
315	Beaker	PYREX	Glass	100 mL
316	Beaker	Borosil	Glass	250 mL
317	Beaker	Schott-Duran	Glass	250 mL
318	Beaker	Pyrex	Glass	250 mL
319	Beaker	Pyrex	Glass	400 mL
320	Beaker	Pyrex	Glass	500 mL
321	Beaker	Borosil	Glass	600 mL
322	Lab glass bottle	Schott Duran	Glass	50 mL
323	Lab glass bottle	Schott Duran	Glass	100 mL
324	Lab glass bottle	Schott Duran	Glass	250 mL
325	Lab glass bottle	Simax	Glass	500 mL
326	Lab glass bottle	Schott Duran	Glass	500 mL
327	Lab glass bottle	Borosil	Glass	500 mL
328	Lab glass bottle,Amber	Simax	Glass	1000 mL
329	Lab glass bottle	Schott Duran	Glass	1000 mL
330	Petri disk	Brandon	Plastic-disposable	90 x 15 mL
331	Needle	SJ Needle	Plastic-disposable	23 G x 30 mm
332	Syringe	Terumo	Plastic-with needle,sterile	10 cc/mL
333	Microcentrifuge tube clear	Golden Gate Bioscience	Plastic-clickseal	1.7 mL
334	Conical bottom	Axygen scientific	Plastic-presterilized tube caps	15 mL
335	Conical bottom	Greiner Bio One	Plastic-blue screw cap,sterile	50 mL

336	Microcentrifuge tubes	Golden Gate Bioscience	Plastic-clear tube	0.65 mL
337	Pipette tips	Axygen scientific	Plastic-clear tips	0.5 – 10 µL
338	Yellow pipette tips	Axygen scientific	Plastic	1 – 200 µL
339	Blue tips	Universal Science Trading	Plastic	1000 µL
340	Yellow tips	Golden Gate Bioscience	Plastic-graduated,uni Fit Universal Fit Pipet Tips	200 µL
341	Tubes	Axygen	Plastic-thin wall,clear,flat cap	0.2 mL
342	Syringe	Terumo	Plastic-Luer lock w/out needle	5 cc/mL
343	Syringe	Terumo	Plastic-Luer lock w/out needle	10 cc/mL
344	Syringe	Terumo	Plastic-Luer lock w/out needle	50 mL
345	Glove	Ironskin	Rubber	Size M
346	Glove	Ironskin	Rubber	Size L
347	Aluminium tray			
348	Automatic processor compatible (APC)	Promega	Disposable	
349	Biohazard plastic		Plastic-blue color,autoclave disposable bag	
350	Blood collection set	BD Vacutainer	Plastic-disposable	23 G ¾"
351	Blood collection set	BD Vacutainer	Plastic-disposable	23 G ¾"
352	Blood collection set safety-lok with needle	BD Vacutainer	Plastic-disposable	23 G ¾"
353	Bottle filtration systems	Thermo scientific	Plastic-disposable,sterile	500 mL,0.2 pes
354	Casette for tissue embedding		Plastic-lid	45° angle
355	Cassettes for gel casting	Invitrogen	Plastic	1.5 mm
356	Centricon centrifugal filter divides	Milipore	Disposable	30 k MWCO
357	Centrifuge bottle PPCO	Thermo scientific	Plastic	250 mL
358	Chromatography paper	Whatman	Paper-disposable	12 x 14cm
359	Combs 10 well	Invitrogen	Plastic	1.5 mm,10 well
360	Cotton applicator	Premier	Wood-sterile	6"

	6"			
361	Cryobox 81 well		Plastic-lid	9 x 9
362	Cryobox 25 well	Nalgene	Plastic	25 well,1.2 mL
363	Discofix	Braun	Disposable-sterile	3SC
364	EIA/RIA plate	Costar	Disposable	96 well
365	F8 maxisorp loose	Nunc	Disposable	400 µL
366	Faeces container	Nice	Plastic-disposable	60 mL
367	Filter holder with receiver	Nalgene	Plastic-	47 mm,500 mL
368	Filter paper	Macherey nagel	Paper-disposable	12 x 12 cm
369	Filter paper	Whatman	Paper-disposable	125 mm
370	Filter paper	Whatman	Paper-disposable	24 mm
371	Flashback blood collection needle	BD Vacutainer	Plastic-with needle	23 G x 1"
372	Glass plate for SDS Page		Glass	Large
373	Beaker	Pyrex	Glass-borosilicate	100 mL
374	Beaker	Pyrex	Glass- borosilicate	50 mL
375	Petri dish	Pyrex	Glass- borosilicate	55 mm x 17 mm
376	Silinder glass			
377	Swing bucket rotor A-4-38	Eppendorf	Glass	4 x 85 mL, 4 x 90 mL
378	Hybond-C nitrocellulose	Amersham	Cellulose-disposable	0.45 micron
379	Hypodermic needle	Sterican	Plastic-with needle,disposable	23G x 30 mm
380	Hypodermic needle	Sterican	Plastic-with needle,disposable	25G x 1", 0.50 x 25 mm
381	Hypodermic needle	Sterican	Plastic-with needle,disposable	25G x 1", 0.60 x 30 mm
382	Hypodermic needle	Sterican	Plastic-with needle,disposable	23G x 30 mm
383	Hypodermic needle	Fine-ject	Plastic-with needle,disposable	21G x 11/2"
384	Microlance	BD	Plastic-with needle,disposable	20G x 11/2"
385	Microlance	BD	Plastic-with needle,disposable	22G X 11/4"
386	Microlance	BD	Plastic-with needle,disposable	23G x 1"
387	Precision glide needle	BD	Plastic-with needle,disposable	25G x 5/8"
388	Ice bag		Plastic	5 x 10 cm
389	Ice box	Eppendorf	Plastic	24 x 1.5 mL
390	K2 EDTA plus blood collection tube	BD Vacutainer	Plastic-EDTA, disposable	13 x 75 mm x 3.0 mL
391	Endofree plasmid	Qiagen		



	maxi kit (10)			
392	MicroAmp optical 96 well plate	Applied Biosystem		96 well, 10 plate
393	Nucleospin plasmid (10)	Macherey-nagel		
394	Kit-Pathogen lysis tube L	Qiagen		
395	Polyporylene columns	Qiagen		1 mL
396	Qiafilter maxi cartridges	Qiagen		
397	Qiaprep spin miniprep kit	Qiagen		
398	Qiaprep spin miniprep kit	Qiagen		
399	Qiaquick gel extraction kit	Qiagen		
400	Qiaquick PCR purification kit	Qiagen		
401	Qiaquick spin columns	Qiagen		
402	Qia shredder	Qiagen		
403	Kodak biomax ms intensifying screen	Sigma		
404	Kodak X-omat LS film	Sigma		
405	MicroAmp 96 well tray/ retainer set	Applied Biosystem		8 tube strips 0.2 mL
406	Microlance blood lancet	BD		
407	Multidish 24 well	Nunc		24 well x 1 mL
408	Nitrobind pure nitrocellulose	Osmanics inc		0.45 micron
409	Nitrocellulose	Hybond		0.45 micron, 22 x 22 cm
410	Oak ridge centrifuge tube	Nunc	Plastic	50 mL
411	Optical thin-wall 8 cap strips	Super array		
412	Pasteur pipette	Omniceil	Plastic-sterile	3 mL
413	Pasteur pipette	Nest	Plastic-sterile	3 mL
414	Petri dish culture plate	Brandon	Plastic-sterile	90 x 15 mm
415	Ph meter apparatus		Glass	
416	Pipette multichannel		Plastic	

417	Pipette single		Plastic	
418	PluS blood collection tube	BD Vacutainer	Plastic	6 mL
419	Polystyrene round bottom tube	BD Falcon	Plastic	5 mL
420	Precision glide needle	BD	Plastic-with needle	21G x 1½"
421	Pre-separation filters	Macs	Sterile	30 µm
422	Tube racks		Plastic	15 mL
423	Real-time PCR Plates 96 Unskirted Low Profile Blue	Eppendorf		
424	Safety-lok syringe	BD	Plastic-with needle	1 MI 25G x 5/8"
425	SDS Apparatus			
426	SDS Tank			
427	Single well blot holders	Milipore	Plastic	
428	Slide box		Plastic	Large & Small
429	Sodium heparin plus blood collection tube	BD Vacutainer	Plastic-sodium heparin	4 ml, 13 x 75 mm
430	Surflo winged infusion set	Terumo	Plastic-with needle	23G x ¾"
431	Syringe	BD	Plastic-luer-lok, w/out needle	10 mL
432	Syringe	BD	Plastic-luer-lok, w/out needle	5 mL
433	System 100 cryobox	Thermo scientific	Plastic	1.5ml
434	System 100 cryobox	Thermo scientific	Plastic	1.5 mL
435	TC dish 100 x 20 SI	Nunc		
436	Needle	Terumo	Plastic-with needle	21G x 1"
437	Needle	Terumo	Plastic-with needle	27G x ½"
438	Needle	Terumo	Plastic-with needle	26G x ½"
439	Syringe	Terumo	Plastic-w/out needle	1 mL
440	Syringe	Terumo	Plastic-w/out needle	30 mL
441	Test tube			
442	Thermal film	Amersham		10.1 cm x 14m
443	Tips box		Plastic	
444	Tissue culture dish	BD Falcon	Plastic-sterile	35 X 10 mm
445	Tissue culture plate 96 well flat bottom	BD Falcon	Plastic-sterile	96 well
446	Tissue culture plate 96 well u bottom	BD Falcon	Plastic-sterile	96 well
447	UPS Supply			

448	Wood for flow cytometer transportation			
449	Urine specimen container	Sinagama	Plastic	60 mL
450	V shape 96 well plate	Nunc	Plastic-non sterile w/out lid	96 well x 300 $\mu$ L
451	Versafluor microcuvette	Biorad	Plastic	
452	Vial for freeze dryer		Glasware	
453	Vivaspin 4 ml concentrator			30k MWCO PES
454	Western blot accessories & glass plate for SDS page (medium)			
455	White microplate with bonded GF/C filter	Perkinelmer	Plastic	
456	96 well plate	TPP	Plastic	96 well
457	48 well plate	TPP	Plastic	48 well
458	96 well immunoplate	TPP	Plastic-w/out lid	96 well
459	6 well plate	TPP	Plastic	6 well
460	12 well plate	TPP	Plastic	12 well
461	24 well plate	TPP	Plastic	24 well
462	Pasteur pipette		Plastic	
463	Extraction thimble			
464	Falcon tube		Plastic	15 mL
465	Falcon tube		Plastic	50 mL
466	Cell culture flask T25		Plastic-filter cap,crystal grade	25 cm <sup>2</sup>
467	Cell culture flask T75			
468	Serological pipette			25 ml (0.2 ml graduated)
469	Tips box			
470	Submicon surgical face mask			

# APPENDIX C

# ATTENDANCE

**REKOD KEDATANGAN LATIHAN INDUSTRI**

Nama Pelatih : Muhamad Hilmi Zainuddin bin Che Razak No. Matrik : 16420874  
No. I/C : 931009035521 No. Telefon : 01137590817  
Nama / Alamat Organisasi : Universiti Sains Malaysia (USM) Kampus Kesihatan  
16150 Kubang Kerian, Kelantan  
Nama Penyelia : Puan Zamilah Hussin  
Bulan / Tahun : 1 Ogos – 31 Disember 2018

Tarikh	Waktu Masuk	Waktu Keluar	Tandatangan Penyelia

REKOD KEHADIRAN  
SEPERTI LAMPIRAN  
DISEDIAKAN

Dengan ini saya mengesahkan bahawa maklumat di atas adalah benar.

Tandatangan Pelajar : *[Signature]* Tarikh : 31 Disember 2018  
Tandatangan Penyelia : *[Signature]* Tarikh : 31 Disember 2018

Lampiran

**LAPORAN KEHADIRAN PELAJAR LATIHAN INDUSTRI  
PUSAT PENGETAHUAN, KOMUNIKASI DAN TEKNOLOGI (PPKT)  
KAMPUS KESIHATAN, UNIVERSITI SAINS MALAYSIA**

**NAMA: Muhamad Hilmi Zainuddin bin Che Razak**

**NO PENGENALAN: 931009035521**

<b>StatusIN</b>	<b>StatusOUT</b>
15/08/2018 8:31	15/08/2018 17:01
16/08/2018 8:20	16/08/2018 16:44
19/08/2018 8:13	19/08/2018 17:02
20/08/2018 8:24	20/08/2018 17:00
21/08/2018 8:39	21/08/2018 13:02
26/08/2018 8:15	26/08/2018 16:59
27/08/2018 8:25	27/08/2018 16:59
28/08/2018 8:26	28/08/2018 17:05
29/08/2018 8:30	29/08/2018 16:58
30/08/2018 8:24	30/08/2018 16:43
03/09/2018 8:29	03/09/2018 16:58
04/09/2018 8:36	04/09/2018 17:00
	04/09/2018 17:01
05/09/2018 13:05	05/09/2018 16:58
06/09/2018 8:46	06/09/2018 16:42
12/09/2018 8:25	12/09/2018 16:58
13/09/2018 8:33	13/09/2018 16:47
17/09/2018 8:26	17/09/2018 7:49
	17/09/2018 16:59
18/09/2018 8:33	18/09/2018 16:57
19/09/2018 8:34	19/09/2018 17:02
23/09/2018 8:44	23/09/2018 16:57
25/09/2018 8:17	25/09/2018 17:01
26/09/2018 8:22	26/09/2018 17:00
27/09/2018 8:15	27/09/2018 16:45
30/09/2018 8:26	30/09/2018 17:01
01/10/2018 8:29	01/10/2018 17:00
03/10/2018 8:22	03/10/2018 16:58
04/10/2018 8:33	04/10/2018 16:45
07/10/2018 8:32	07/10/2018 16:57
08/10/2018 8:23	08/10/2018 17:01
10/10/2018 8:22	10/10/2018 16:59
11/10/2018 8:27	11/10/2018 16:43
14/10/2018 9:45	14/10/2018 16:57
15/10/2018 8:35	15/10/2018 17:00
	15/10/2018 17:02
16/10/2018 8:40	16/10/2018 16:57
17/10/2018 8:16	17/10/2018 16:57

21/10/2018 8:15	21/10/2018 16:58
22/10/2018 8:10	22/10/2018 16:57
23/10/2018 8:10	23/10/2018 16:58
25/10/2018 8:13	25/10/2018 16:43
28/10/2018 8:20	28/10/2018 16:58
29/10/2018 8:19	29/10/2018 16:58
30/10/2018 8:23	30/10/2018 16:58
31/10/2018 8:19	
01/11/2018 7:52	

**Nota :**

Sistem tidak dapat menyediakan rekod kehadiran pelajar berkaitan dari 2 November sehingga 31/12/2018 kerana masalah teknikal.









REKOD KEDATANGAN LATIHAN INDUSTRI

Nama Pelatih : Muhammad Hilmi Zainuddin bin Che Razak No. Matrik : 2016420874  
No. I/C : 931009035521 No. Telefon : 01137590817  
Nama / Alamat Organisasi : Universiti Sains Malaysia (USM) Kampus Kesihatan  
16150 Kubang Kerian, Kelantan  
Nama Penyelia : Puan Zamilah Bt Hussin  
Bulan / Tahun : 2-31 Disember 2018

Tarikh	Waktu Masuk	Waktu Keluar	Tandatangan Penyelia
2/12/2018	8:05	17:50	
3/12/2018	8:05	17:50	
4/12/2018	8:05	17:50	
5/12/2018	8:05	17:50	
6/12/2018	8:05	17:50	
9/12/2018	8:05	17:50	
10/12/2018	8:05	17:50	
11/12/2018	8:05	17:50	
12/12/2018	8:05	17:50	
13/12/2018	8:05	17:50	
16/12/2018	8:05	17:50	
17/12/2018	8:05	17:50	
18/12/2018	8:05	17:50	
19/12/2018	8:05	17:50	
20/12/2018	8:05	17:50	
23/12/2018	8:05	17:50	
24/12/2018	8:05	17:50	
26/12/2018	8:05	17:50	
27/12/2018	8:05	17:50	
30/12/2018	8:05	17:50	
31/12/2018	8:05	17:50	

Dengan ini saya mengesahkan bahawa maklumat di atas adalah benar.

Tandatangan Pelajar :  Tarikh : 31 Disember 2018  
Tandatangan Penyelia :  Tarikh : 31 Disember 2018



REKOD KEDATANGAN LATIHAN INDUSTRI

Nama Pelatih : Muhammad Hilmi Zainuddin bin Che Razak No. Matrik : 2016420874  
No. I/C : 931009035521 No. Telefon : 01137590817  
Nama / Alamat Organisasi : Universiti Sains Malaysia (USM) Kampus Kesihatan  
16150 Kubang Kerian, Kelantan  
Nama Penyelia : Puan Zamilah Bt Hussin  
Bulan / Tahun : 2-30 November 2018

Tarikh	Waktu Masuk	Waktu Keluar	Tandatangan Penyelia
2/11/2018	8:05	17:50	
4/11/2018	8:05	17:50	
5/11/2018	8:05	17:50	
7/11/2018	8:05	17:50	
8/11/2018	8:05	17:50	
9/11/2018	8:05	17:50	
10/11/2018	8:05	17:50	
13/11/2018	8:05	17:50	
14/11/2018	8:05	17:50	
15/11/2018	8:05	17:50	
16/11/2018	8:05	17:50	
17/11/2018	8:05	17:50	
18/11/2018	8:05	17:50	
19/11/2018	8:05	17:50	
21/11/2018	8:05	17:50	
22/11/2018	8:05	17:50	
23/11/2018	8:05	17:50	
24/11/2018	8:05	17:50	
25/11/2018	8:05	17:50	
26/11/2018	8:05	17:50	
27/11/2018	8:05	17:50	
28/11/2018	8:05	17:50	
29/11/2018	8:05	17:50	

Dengan ini saya mengesahkan bahawa maklumat di atas adalah benar.

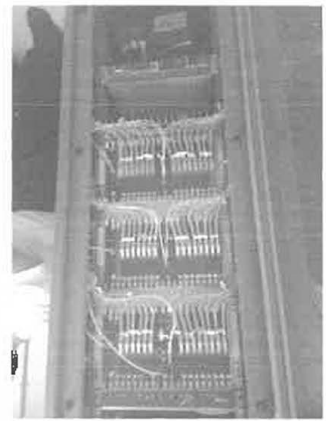
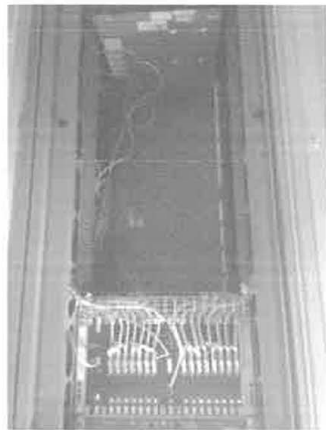
Tandatangan Pelajar :  Tarikh : 31 Disember 2018  
Tandatangan Penyelia :  Tarikh : 31 Disember 2018

# APPENDIX D

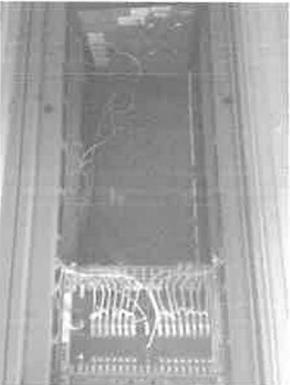
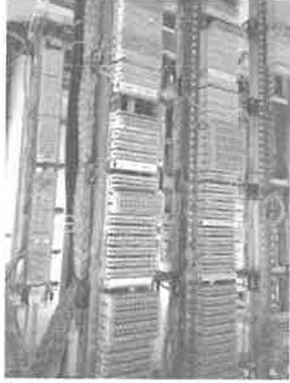
**PICTURE**













# APPENDIX E

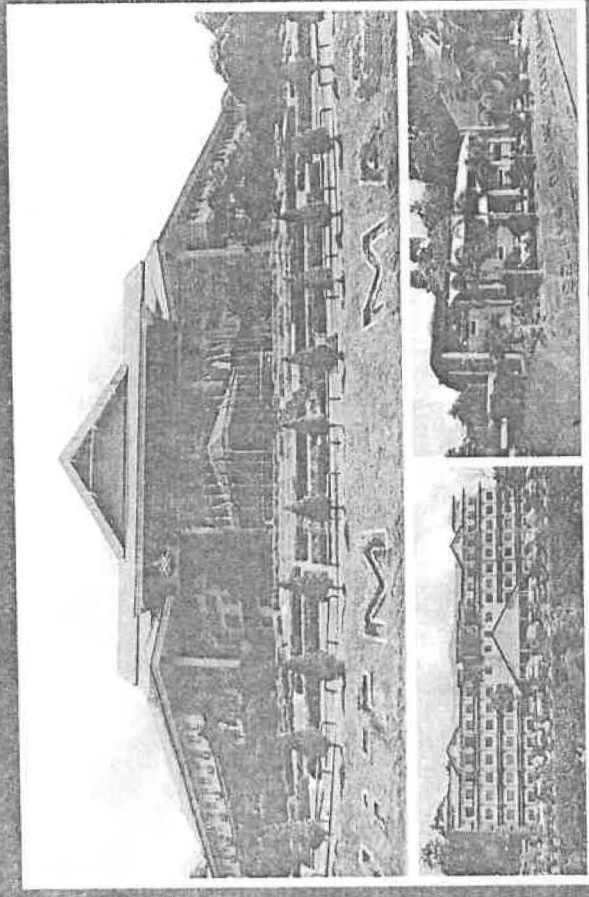
# LOG BOOK



# UNIVERSITI TEKNOLOGI MARA

## CAWANGAN KELANTAN

Leading in Entrepreneurship and Community Engagement



# PRACTICAL TRAINING LOG BOOK



Universiti Teknologi MARA  
Cawangan Kelantan  
Bukit Juru, 13500 Machabang, Kelantan  
09-976 2100, 09-976 3300  
<http://www.kelantan.uitm.edu.my>

## INSTRUCTIONS

- 1) This book is issued to you to record your assignments and activities during industrial training.
- 2) All entries must be regularly recorded by trainee and initialed by the Supervisor.
- 3) All entries are made in ink, except sketches.
- 4) The book must be handed to your Industrial Training Coordinator upon completion of attachment.

## PERSONAL DETAIL

1. Name : MUHAMMAD HILMI ZAINUDDIN B. CHE  
PAPAR
2. Student ID : 2016420874
3. Programme : IM 2UF
4. Semester : 07
5. Home Address : PT 310, TAMAN BUNGA RAYA,  
CHABANG EMPAT, 16210, TUMPAT,  
KELANTAN
6. Tel No (HP) : 01137590817
7. Email : hilmizainuddin93@google.com

## ORGANISATION INFORMATION

1. Full Name & Address : \_\_\_\_\_  
\_\_\_\_\_
2. Department : \_\_\_\_\_
3. Supervisor : \_\_\_\_\_
4. Position : \_\_\_\_\_
5. Tel : \_\_\_\_\_ HP : \_\_\_\_\_
6. Email : \_\_\_\_\_

## FOR OFFICE ONLY

Remarks :

---

---

---

---

DATE: 1/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
8.10 am - Daftar diri di Jabatan Pendaftaran	
10.00 am - Daftar diri di Jabatan	
Pengetahuan komunitari dan	
Teknologi kampus perihatan.	
12.20 pm - Berjumpa dengan Supervisor	H
Pa. Zamilah Hussin	





DATE: 6/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
10.00am - Berjumpa dengan Head of Department (HOD) Hj. Nik Narrul (Nas Arok)	H
11.00am - memindahkan mesej ke PC	
untuk kegunaan lecture URM	

DATE: 7/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
1) Menenalpasti jenis-jenis coding yang sesuai untuk digunakan	H
2) Menyemat kembali sistem yang dibangunkan pebelum ini	
3) Melakukan perbincangan dengan Firdaus mengenai sistem yang batal dibangunkan	
4) melakukan kajian ke atas sistem yang sedia ada.	

DATE: 8/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
10.00 am - memin dahkan telefon pejabat yang tidak digunakan untuk dipupkan	
11.30 am - Masuk ke dalam bilik PABX dan Encik Nahrudin menerangkan fungsi bilik PABX (bilik server telefon)	Hy

DATE: 9/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
9.00 - memahami tatacara Pengurusan stor berpandukan slide/bahan yang dibarikan oleh Puan Jamilah	
2.00 - mencari contoh sistem Pengurusan stor yang sedia ada	Hy
( Sistem Pemantauan Pengurusan Aret Kerjasama Malaysia	
↳ Kementerian Pendidikan Tinggi	
↳ Kementerian Kesihatan Malaysia	Dserena
<b>ZAMILAH BINTI HUSSIN</b> PEGAWAI TEKNOLOGI MAKLUMAT F44 Pusat Pengetahuan, Komunikasi & Teknologi Kampus Kesihatan, Universiti Sains Malaysia 16150 Kubang Kerian, Kelantan	









DATE: 28/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Meneliti perbezaan antara borang pengaliran dan penerimaan stok.	
meeting dengan HOD mengenai progress projek project.	[Signature]
mendengar presentation daripada salah seorang pelajar yang melancarkan pameran industri di UTM mengenai Arduino dan sistem attendance.	

DATE: 29/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
mengeluarkan details yang perlu daripada borang yang diberikan	
membuat Context Diagram & ERD untuk pembangunan perisian sistem.	[Signature]
menerima perpep peraliran dan penerimaan.	[Signature]
<p style="text-align: right;">ZAMILAH BINTI HUSSIN            PEGAWAI TEKNOLOGI MAKLUMAT F44            Pusat Pengetahuan, Komunikasi &amp; Teknologi            Kampus Kesihatan, Universiti Sains Malaysia            16150 Kubang Kerian, Kelantan</p>	

DATE: 30/8/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
mengecek workluart dan mencuba beberapa coding yang pernah	A.
Design interface system dan beberapa table.	
membuat ERD system yang melibatkan flow system	

DATE: 2/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS



DATE: 3/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar format dan input ke staff bernama Bu. Julikili	✓
Menyarikan portable yang dipelajari oleh staff utam.	

DATE: 4/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Mencari template yang sesuai untuk dijadikan contoh dan rujukan.	✓
menarik dari contoh yang sedia ada.	

DATE: 5/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
melukis storyboard <del>dan</del> dan design interface serta basic system.	HA

DATE: 6/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
membuat routing di internet menggunakan pwp language yang paswori dan beberapa contoh design rrtan kerangka yang digambarkan.	HA

HA

**ZAMILAH BINTI HUSNIN**  
 PEGAWAI TEKNOLOGI MAKLUMAT F41P  
 Pusat Pengetahuan, Komunikasi & Teknologi  
 Kamp: Kesihatan, Universiti Sains Malaysia  
 16150 Kubang Keratan, Kelantan

DATE: 10/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
mendeskripsikan design terbaru untuk list, elct, elevator and form untuk pergelangan burung.	L7
melihat contoh list burung di pitaan perunggu.	

DATE: 12/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
berpinda ke tempat baru, tempat kerja untuk praktikul kerbau jutek pelajar praktikal yang lain <sup>parutan</sup> bertambarw.	Z

DATE: 13/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
mengerbang design Pictaw dan mencari beberapa sumber untuk penambahannya	9/
menyediakan beberapa Pictaw sebagai carter.	

#  
**ZAMILAH BINTI HUSSIN**  
PEGAWAI TEKNOLOGI MAKLUMAT F47  
Pusat Pengetahuan, Komunikasi & Teknologi  
Kesihatan, Universiti Sains Malaysia  
Kamp. Kesihatan, Kubang Kerian, Kelantan


DATE: 17/9/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS

DATE: 18/09/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS

DATE: 19/09/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
<p>Berjumpa dengan HOD pada pukul 12 pm, membincangkan mengenai perniagaan untuk mengawal barangan dalam data center dan pemeliharaan peralatan.</p>	
<p>Diberikan beberapa nama staff untuk kami jumpa</p> <ul style="list-style-type: none"> <li>- En. Hiyon (Data Center)</li> <li>- En. Azharri (Pemeliharaan)</li> </ul>	

DATE: 23/09/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
<p>Pelajar praktikal diwaran berhampul pada pukul 9.30 di dalam utaran untuk membuat video pendek mengenai tindakan yang perlu diambil jika berlaku kebakaran.</p>	<p>JH</p>
<p>video direkodkan oleh staff multimedia</p>	

DATE: 24/09/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
<p>Melihat contoh eodong di - W3Pewo18-ccn</p>	
<p>- mengardikan sistem yang diperlukan oleh Lazada dan Ewopel dalam urusan pembelian dan flow perpelewatan berump. pebanguni contoh.</p>	<p>JH</p>
<p><b>BINTI ANI BINTI HUSSIN</b> PEGAWAI TEKNOLOGI MAKLUMAT P44 Pusat Penyelidikan, Komunikasi &amp; Teknologi Kampus Kesihatan, Universiti Sains Malaysia 16150 Kubang Keratan, Kelantan</p>	

DATE: 25/09/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar buttar edit dan mencari carter coding	
	41

DATE: 26/09/2018

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar buttar deleted dan mencari carter coding	
	84
ZANILAH BINTI HUSSIN PEGAWAI TEKNOLOGI MAKLUMAT F41 Pusat Penyelidikan, Komunikasi & Teknologi Kampus Kesihatan, Universiti Sains Malaysia 16150 Kubang Kerian, Kelantan	





DATE: 28/10/18

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
morsu ber pemantauan	
bancu per ke daktar tarble	
	72



DATE: 28/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Berjumpa dengan PV	
Berjumpa dengan perancang	
Perancang pelayan lantikan	
Industri utk membangunkan	
mempunyai sistem	
	73



DATE: 8/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar format pc install software	
	#

DATE: 9/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat piktur cari pwrba baru	
	#

DATE: 10/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat function untuk Add product.	

*[Handwritten signature]*

DATE: 11/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat coding yang sesuai dan minta bantuan dgn pr	

*[Handwritten signature]*

**ZAMILAH BINTI HUSNIN**  
 PEGAWAI TEKNOLOGI MAKLUMAT E44  
 Pusat Pengetahuan, Komunikasi & Teknologi  
 Kampus Kesihatan, Universiti Sains Malaysia  
 16150 Kubang Kerian, Kelantan

DATE: 14/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Balayar coding "Add" dari contoh PHP	

DATE: 15/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat coding table.	













DATE: 30/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
cari contour coding untuk add wheel	
	gof

DATE: 31/10

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Berjumpa RV untuk belajar coding	
	gg

DATE: 1/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat Riptan dgn	
PV	
	gg
<b>ZAMRIAH BINTI HUSSIN</b> PEGAWAI TEKNOLOGI MAKLUMAT F47 Pusat Pengetahuan, Komunikasi & Teknologi Kampus Kesihatan, Universiti Sains Malaysia 16150 Kubang Kerian, Kelantan	

DATE: 4/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat Riptan dgn	
PV	
	gg

DATE: 5/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Bertemu perkhidmatan pekerja PPKT belajar coding	
	41

DATE: 6/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat perantaraan Add user.	
	41

DATE: 7/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar coding	
	99

DATE: 8/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar coding	
	99

DATE: 13 / 11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
<p>Jump on for artikel            'perbaikan' on function            "Add user"</p>	
	71

DATE: 14 / 11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
<p>Belajar coding            di belklor yew</p>	
	71

DATE: 15/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
function Add-upen Ramp.	
	#
<p align="center"> <b>ZARIFAH BINTI HUSSIN</b>            PEGAWAI TEKNOLOGI MAKLUMAT F48            Pusat Pengetahuan, Komunikasi &amp; Teknologi            Kampus Kesihatan, Universiti Sains Malaysia            16150 Kubang Keratan, Kelantan         </p>	

DATE: 18/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Mula kerja Module 2	
	#

DATE: 19/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Balayar coding receipt	
	A

DATE: 21/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Balayar coding Print	
	A



DATE : 22 / 11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar coding POP-up	
	JA

DATE : 25 / 11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat database baru	
	JA

DATE: 26 / 11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat EPD untuk	
pekerjaan -	
	J

DATE: 27 / 11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belayer eating tolak	
	J
	H

DATE: 28/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Belajar editing maya	
	9/11

DATE: 29/11

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Design interface	
	9/11

ZANILAH BINTI HUSSEIN  
 PEGAWAI TEKNOLOGI MAKLUMAT F424  
 Pusat Pengetahuan, Komunikasi & Teknologi  
 Kampus Kesihatan, Universiti Sains Malaysia  
 16150 Kubang Kerian, Kelantan

DATE: 2/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Burst coding print	
	21



DATE: 3/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Burst coding to work	
	21



DATE: 4/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Buat dan coding pop-up barisan	
	#

DATE: 5/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
wawancara barisan dari	
tahap aplikasi	
	#

DATE: 6/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Tolow barrier pc	
	A

DATE: 9/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Tolow Perawat PC	
Instal software	
	A

DATE: 10/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Tolong format PC install software	
	77

DATE: 11/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Hant pelajar lain buka i ercedre door	
	77

DATE: 12/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Berant unorder 2, fambark coding baran	
	#

DATE: 13/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
cari ending dan belajar	
	#

ZAMILAH BINTI HUSSIN  
 PEGAWAI TEKNOLOGI MAKLUMAT #44  
 Pusat Pengetahuan, Komunikasi & Teknologi  
 Kampus Kesihatan, Universiti Sains Malaysia  
 16150 Kubang Kerian, Kelantan



DATE: 16/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
<p>2 jump on EV untuk tugasan projek</p>	
	H

DATE: 17/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
<p>Pisutan dalam form order lagi 30% untuk piarp</p>	
	H

DATE: 18/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
cuba function coding telor ke dibwart.	
	#

DATE: 19/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Banki malarah coding	
	#

DATE: 23/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Jumper PV untuk baterai Pretan	
	#

DATE: 24/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
ambor jumper PV untuk test Piston	
Bateri listrik dengan coding baterai.	#

DATE: 26/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Pilotan berujung: P12rp	
	9A

DATE: 27/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
gabungan module 1 dan module 2	
	9A

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
gambar dan carta berbeza modul 1 dan modul 2	
	H

DATE: 31/12

EXTRACT NATURE OF WORK DONE	SUPERVISOR REMARKS
Piptan Pimp Sepanwng	
	H

ZAMIAH BINTI HUSSIN  
 PEGAWAI TEKNOLOGI MAKLUMAT #41/  
 Pusat Pengetahuan, Komunikasi & Teknologi  
 Kampus Kesihatan, Universiti Sains Malaysia  
 16150 Kubang Kerian, Kelantan