



اَوْنَبُوْ رَسِيَّتِيْ بِاَتِيْكَوْ لُوْ كِيْ مَبَارَا
UNIVERSITI
TEKNOLOGI
MARA

INDUSTRIAL TRAINING REPORT

at

HOSPITAL TENGKU AMPUAN RAHIMAH (HTAR)

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UNIVERSITI TEKNOLOGI MARA

INDUSTRIAL TRAINING REPORT

At

Hospital Tengku Ampuan Rahimah (HTAR)
Jalan Langat, 41200, Klang, Selangor
28 Mac 2022 to 15 July 2022

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Report submitted in partial fulfillment of the requirement for
the degree of
Bachelor of Science (Hons.) (Statistics)

Faculty of Computer and Mathematical Sciences

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Date : *28/7/2022*

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Date: 22 JULY 2022

Name: NURUL HAZLIN BINTI ZULKIFLI

TABLE OF CONTENTS

ACKNOWLEDGEMENT.....	i
TABLE OF CONTENTS.....	ii
LIST OF FIGURES	iii
CHAPTER 1: INTRODUCTION.....	1-7
1.1 BACKGROUND OF INDUSTRIAL TRAINING	1
1.1.1 OBJECTIVES OF INDUSTRIAL TRAINING	1
1.2 BACKGROUND OF ORGANIZATION	2
1.2.1 LOGO	3
1.2.2 VISION.....	3
1.2.3 MISSION.....	3
1.2.4 OBJECTIVE	3
1.2.5 OUR CULTURE	4
1.2.6 MAIN SERVICES.....	4-5
1.3 BACKGROUND OF DEPARTMENT ATTACHED	6-7
CHAPTER 2: ASSIGNMENTS.....	8-16
2.1 TASK 1 (HELPDESK COMPLAINTS).....	8
2.1.1 INTRODUCTION	8
2.1.2 IMPLEMENTATION	9
2.1.3 RESULTS AND DISCUSSION	10-11
2.2 TAK 2 (USER TESTING FOR I-ECHO SYSTEM).....	12
2.2.1 INTRODUCTION	12
2.2.2 IMPLEMENTATION.....	12-13
2.2.3 RESULTS AND DISCUSSION	14-16
CHAPTER 3: CONCLUSION AND RECOMMENDATIONS.....	17-18
3.1 BENEFIT OF THE ASSIGNMENTS.....	17
3.2 SUMMARY OF INDUSTRIAL TRAINING.....	17-18
BIBLIOGRAPHY	19
APPENDICES	20-21

LIST OF FIGURES

	Page
Figure 1: Logo Hospital Tengku Ampuan Rahimah, Klang	3
Figure 2: Clinical Services Hospital Tengku Ampuan Rahimah, Klang	4
Figure 3: Support Services Hospital Tengku Ampuan Rahimah, Klang	5
Figure 4: Management Hospital Tengku Ampuan Rahimah, Klang	5
Figure 5: Organizational Chart of Information Technology Unit	6
Figure 6: Logo of Information Technology Unit	7
Figure 7: Organizational Chart for System Management Section	7
Figure 8: Interface of phpMyAdmin	8
Figure 9: Relationship between Attributes	9
Figure 10: Helpdesk Complaint Page 1	10
Figure 11: Helpdesk Complaint Page 2	11
Figure 12: Interface of i-Echo system	12
Figure 13: Patient Statistics Interface of i-Echo system	13
Figure 14: Heart Failure Statistics Interface of i-Echo system	13
Figure 15: phpMyAdmin Interface	14
Figure 16: Login Interface of i-Echo system	14
Figure 17: Sign up Interface of i-Echo system	15
Figure 18: Appointment Booking Interface of i-Echo system	15
Figure 19: Patient Details Interface of i-Echo system	15
Figure 20: Statistics Interface of i-Echo system	16

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF INDUSTRIAL TRAINING

All final year students of Bachelor of Sciences (Hons) Statistics, Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA (UiTM) Negeri Sembilan, Seremban Campus are required to undergo industrial training. Students had been given choice to apply which company that they interested in their work place either in government or private organizations. Students are required to complete the industrial training at the organization for period of 16 weeks starting from 28th March 2022 to 15th July 2022. During the industrial training, students are required to complete two main tasks. This training is a good opportunity to expose the students to the various aspects of industrial training practices and ethics. The students are also able to apply the theories and knowledge that they have learned to the tasks assigned to them.

1.1.1 OBJECTIVES OF INDUSTRIAL TRAINING

The general objectives of industrial training of UiTM are to:

1. Expose students to the real work environment and atmosphere.
2. Practice the theories learned at the university in making and solving real-world problems related to their respective areas of specialization.
3. Provide exposure to the latest knowledge and technological developments used in industry.
4. Foster and strengthen networks and cooperation between the university and industry.

1.2 BACKGROUND OF ORGANIZATION

Hospital Tengku Ampuan Rahimah, Klang (HTAR). Klang is one of the oldest cities in Malaysia. In 1892, *Hospital Daerah Klang* was built on a hillside near government and commerce buildings. On 1 January 1976, the hospital was upgraded from *Hospital Daerah Klang* to *Hospital Besar Klang*. The construction of the new *Hospital Klang* in the second stage began on 27 October 1981 and was completed in February 1985. This 9-storey building became one of the landmarks in the state of Selangor. On 2 September 1985, the hospital was named after the Permaisuri *DYMM Sultan Selangor Sultan Salahuddin Abdul Aziz Shah Al-Haj Ibni Almahrum Sultan Hishamuddin Alam Shah Al-Haj*. The name was later changed to *Hospital Tengku Ampuan Rahimah, Klang* in 1993. Hospital Tengku Ampuan Rahimah (HTAR), Klang began operations in April 1985. It is a government hospital with over 1000 patient beds and 20 clinical areas located in South Klang in the district of Klang, Selangor. The hospital provides primary health services as well as selected national specialist healthcare. This hospital is the main specialist referral center for districts covering Klang, Sabak Bernam, Kuala Selangor and parts of Petaling and Kuala Langat districts. HTAR Klang Hospital also provide houses of medical teaching facilities for medical students of the University of Malaya and Management and Science University Malaysia (MSU).

1.2.1 LOGO



Figure 1: Logo Hospital Tengku Ampuan Rahimah, Klang

1.2.2 VISION

Creating an excellent medical service center.

1.2.3 MISSION

Provide comprehensive satisfaction through quality and ethical services, efficiently and professionally to meet the needs and expectations of all customers.

1.2.4 OBJECTIVE

1. Improving quality patient care through efficient and effective early diagnostic, treatment and rehabilitation services.
2. Encourage innovation in services.
3. Conduct training and research on an ongoing basis and focus on human capital development and
4. Provide a safe and comfortable environment to customers and employees.

1.2.5 OUR CULTURE

Caring, Professionalism and Teamwork

1.2.6 MAIN SERVICES



Figure 2: Clinical Services Hospital Tengku Ampuan Rahimah, Klang



Figure 3: Support Services Hospital Tengku Ampuan Rahimah, Klang



Figure 4: Management Hospital Tengku Ampuan Rahimah, Klang

1.3 BACKGROUND OF DEPARTMENT ATTACHED

Information Technology Unit consists of 3 section which are IT Administration (Operation) Section, System Management Section and Network & Technical Section. The internship student is allocated in the System Management Section. The chart below shows the organizational chart and logo of Information Technology Unit.

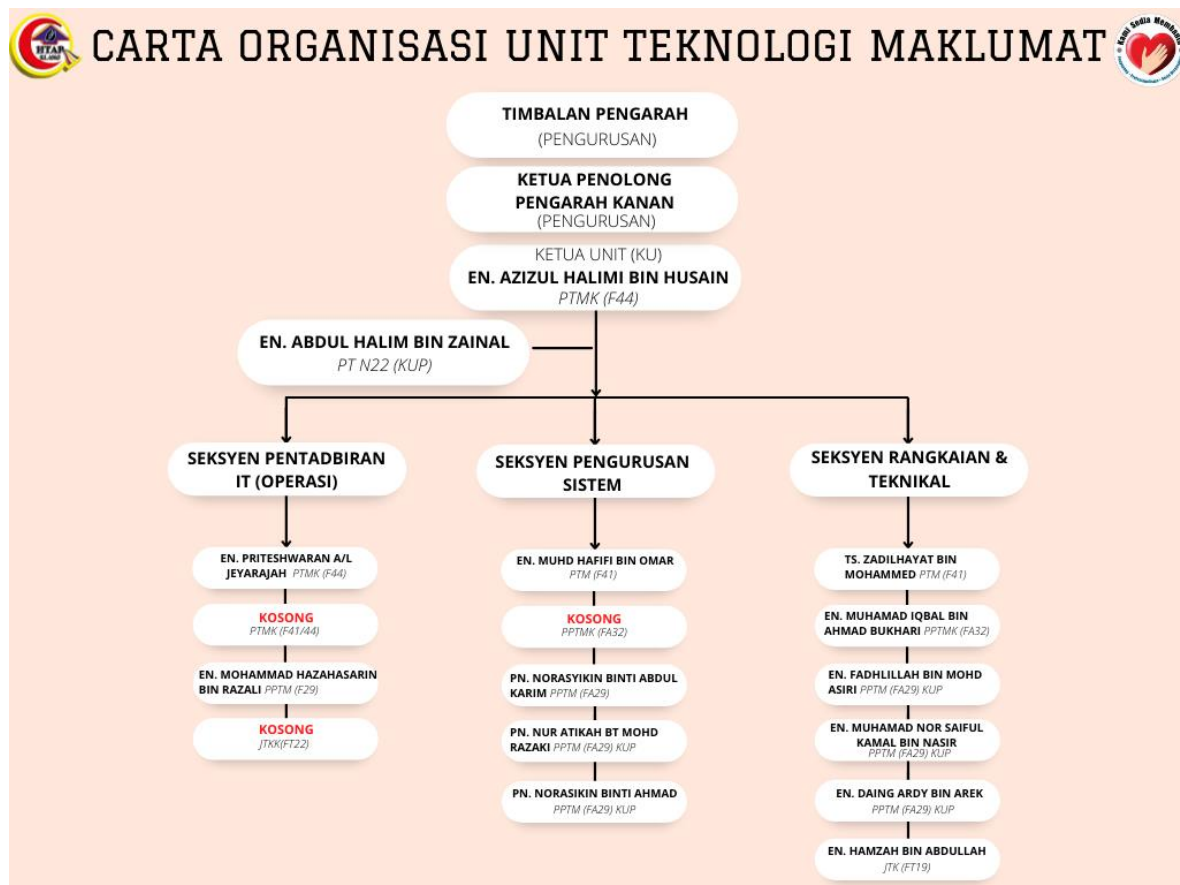


Figure 5: Organizational Chart of Information Technology Unit



Figure 6: Logo of Information Technology Unit

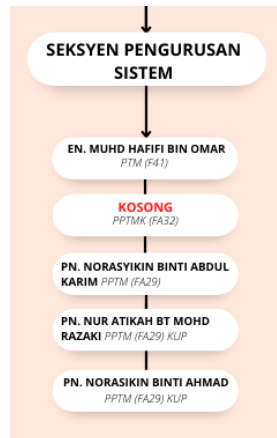


Figure 7: Organizational Chart for System Management Section

CHAPTER 2

ASSIGNMENTS

2.1 TASK 1 (HELPDESK COMPLAINTS)

2.1.1 INTRODUCTION

During the internship period, the intern is assigned to create a dashboard for helpdesk by using a tool Microsoft Power BI that have learned in previous semester for subject, Data Representation and Reporting Techniques, DSC651. It takes about a month to study the helpdesk data. The data consists of 29 attributes related to user, administrators and complaints. Since, it required only to examine the complaints of the helpdesk, some cleaning need to be done. After the cleaning process is complete, proceed to create a two-page dashboard consists of 6 graphs for this data.

Table	Action	Rows	Type	Collation	Size	Overhead
auditaduan	Browse Structure Search Insert Empty Drop	332,738	MyISAM	latin1_swedish_ci	8.3 KiB	-
bangunan	Browse Structure Search Insert Empty Drop	37	InnoDB	latin1_swedish_ci	34 KiB	-
login	Browse Structure Search Insert Empty Drop	57	MyISAM	latin1_swedish_ci	6.2 KiB	-
lokasint	Browse Structure Search Insert Empty Drop	195	InnoDB	latin1_swedish_ci	35 KiB	-
tbl_aduan	Browse Structure Search Insert Empty Drop	27,787	MyISAM	latin1_swedish_ci	4.7 KiB	-
tbl_atletain	Browse Structure Search Insert Empty Drop	33	InnoDB	latin1_swedish_ci	35 KiB	-
tbl_asst	Browse Structure Search Insert Empty Drop	42,742	InnoDB	latin1_swedish_ci	4.5 KiB	-
tbl_brdnrb	Browse Structure Search Insert Empty Drop	8	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_brothernet	Browse Structure Search Insert Empty Drop	8	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_brdpc	Browse Structure Search Insert Empty Drop	337	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_brdserver	Browse Structure Search Insert Empty Drop	8	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_brdswitch	Browse Structure Search Insert Empty Drop	59	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_category	Browse Structure Search Insert Empty Drop	23	MyISAM	latin1_swedish_ci	2.7 KiB	20 B
tbl_inv	Browse Structure Search Insert Empty Drop	1,392	MyISAM	latin1_swedish_ci	442.9 KiB	-
tbl_invnb	Browse Structure Search Insert Empty Drop	179	InnoDB	latin1_swedish_ci	88 KiB	-
tbl_invnt	Browse Structure Search Insert Empty Drop	274	InnoDB	latin1_swedish_ci	64 KiB	-
tbl_invothers	Browse Structure Search Insert Empty Drop	255	InnoDB	latin1_swedish_ci	88 KiB	-
tbl_invsvr	Browse Structure Search Insert Empty Drop	58	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_jenama	Browse Structure Search Insert Empty Drop	333	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_no_aduan	Browse Structure Search Insert Empty Drop	27,782	MyISAM	latin1_swedish_ci	3.3 KiB	-
tbl_prt	Browse Structure Search Insert Empty Drop	1,828	MyISAM	latin1_swedish_ci	287.5 KiB	-
tbl_prtbrnd	Browse Structure Search Insert Empty Drop	238	InnoDB	latin1_swedish_ci	34 KiB	-
tbl_respond	Browse Structure Search Insert Empty Drop	2,794	MyISAM	latin1_swedish_ci	199.1 KiB	-
tbl_sakuran	Browse Structure Search Insert Empty Drop	3	MyISAM	latin1_swedish_ci	2.1 KiB	20 B
tbl_signoff	Browse Structure Search Insert Empty Drop	1,489	InnoDB	latin1_swedish_ci	184.9 KiB	-
tbl_status	Browse Structure Search Insert Empty Drop	6	MyISAM	latin1_swedish_ci	2.1 KiB	20 B
tbl_tindakan	Browse Structure Search Insert Empty Drop	42,693	MyISAM	latin1_swedish_ci	8.8 KiB	-
tbl_type	Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	34 KiB	-
unit	Browse Structure Search Insert Empty Drop	234	MyISAM	latin1_swedish_ci	12.4 KiB	20 B
29 tables	Sum	334,258	InnoDB	latin1_swedish_ci	333.5 KiB	80 B

Figure 8: Interface of phpMyAdmin

2.1.2 IMPLEMENTATION

The data is obtained from helpdesk system in format of sql file. Next, the data store in phpMyAdmin to connect it with Microsoft Power BI. Before cleaning up the data, the intern need to study and examine the data to identify the problems and find a solutions. 20 irrelevant attributes are removed as they are only needed for help desk complaint data. Therefore, only nine attributes remained to be used. Otherwise, some columns will be deleted because the data is meaningless. Futhermore, changed any zero, null or blank into NULL value. Besides that, split the data of date to group it to year, month, day and quarter attributes. Time attributes also changed to group by morning and evening to ease the user. The aims of this task is to create a visualization of the helpdesk data to see the pattern of the helpdesk complaint from the user.

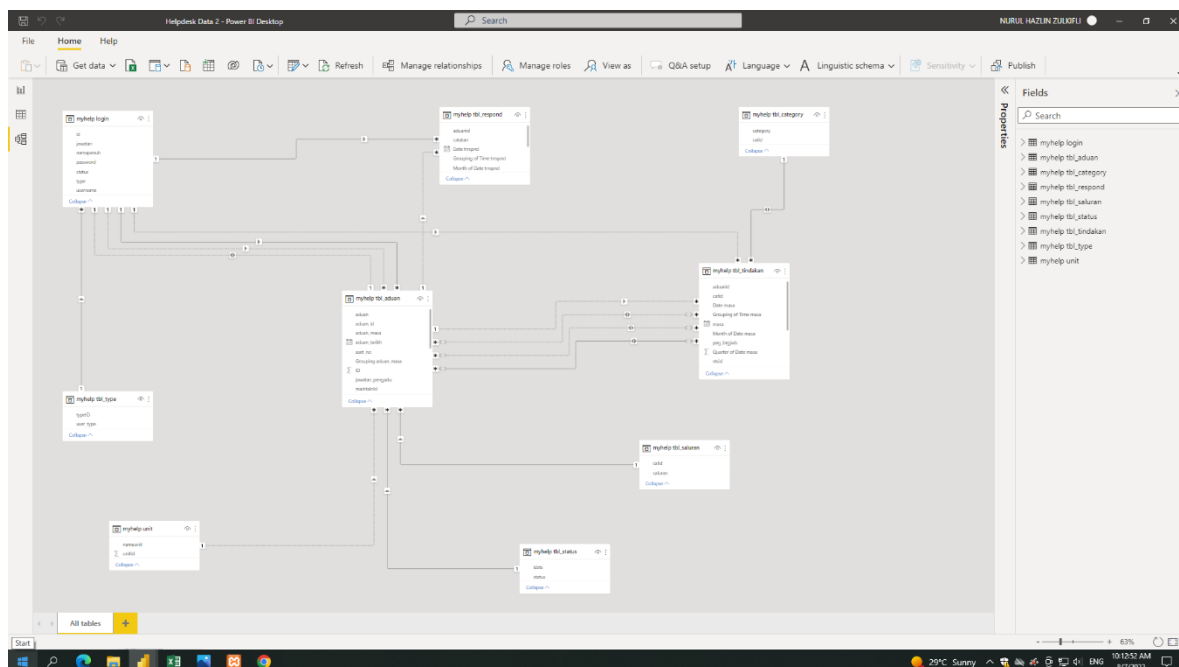


Figure 9: Relationship between attributes

2.1.3 RESULTS AND DISCUSSION

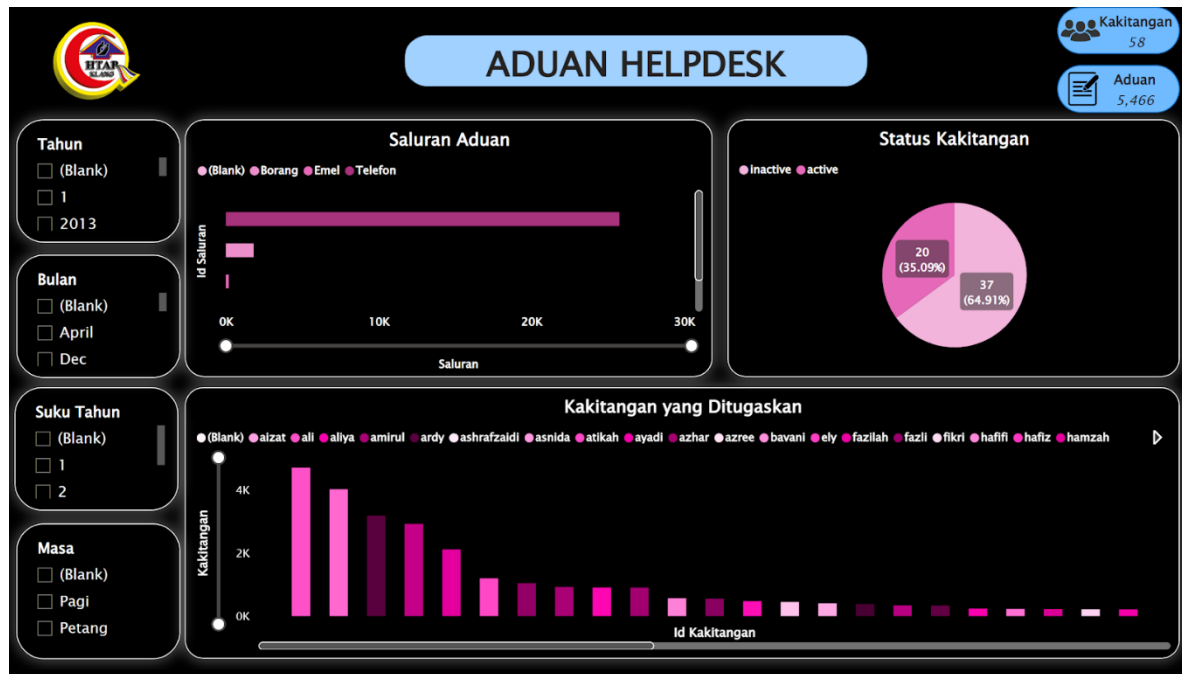


Figure 10: Helpdesk Complaint Page 1

Figure 10 shows 3 graphs of helpdesk complaints in page 1 of the dashboard. At the left side of the dashboard, there are four slicer which are year, month, quarter and time for the user to choose to view the selected data. The first graph shows a bar chart of sources of complaints. It shows that *telefon* is the highest sources of complaints which is 92.71 percent. Followed by *borang* and *emel* which is 6.51 percent and 0.67 respectively. Lastly is the null, that there is no information about sources of the complaints which is 0.12 percent. Second graph shows a pie chart about status of staff. It shows that 64.91 percent of the user of helpdesk in inactive compared to active user which is only 35.09 percent. Next graph shows a bar chart of assigned staff to solve the issues of the complaint by the user. There are 52 staff who have been assigned to solve the problems. It shows that staff ali has the most assigned with 4,712 complaints, followed by saiful with 4020 complaints and 3192 complaints assigned for ardy.

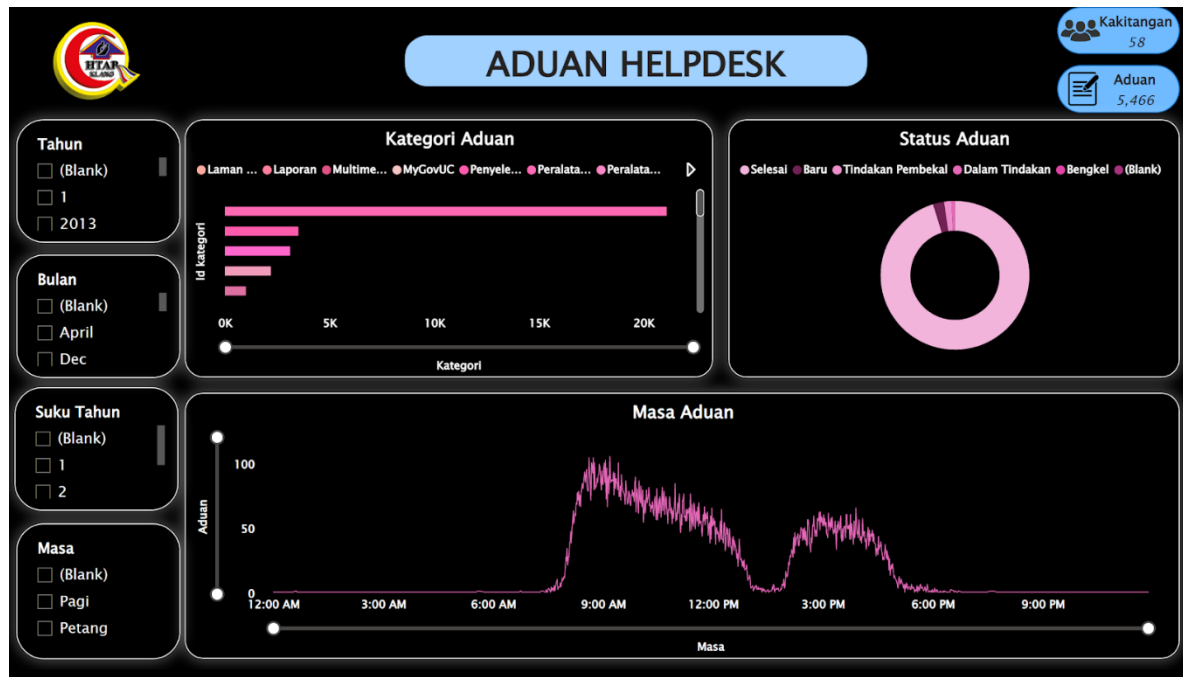


Figure 11: Helpdesk Complaint Page 2

Figure 11 shows 3 graphs of helpdesk complaints in page 2 of the dashboard. At the left side of the dashboard, there are four slicer which are year, month, quarter and time for the user to choose to view the selected data. The first graph shows a bar chart of category of complaints. It shows that *Peralatan dan Perisian* is the highest category of complaints with 21093. Followed by *Penyelenggaraan Pusat* and *Sistem Aplikasi* with 3511 and 3112 respectively. Second graph shows a donut chart about status of complaints. It shows that 95.24 percent of the complaints is *selesai*. Followed by *baru* and *tindakan pembekal* which is 2.38 percent and 1.65 percent respectively. Last graph shows a line chart of time of the complaints that user complaint to helpdesk. It shows that highest number complaints is at 9:11 A.M with 106 complaints while 1 complaints is the lowest number of complaints.

2.2 TAK 2 (USER TESTING FOR I-ECHO SYSTEM)

2.2.1 INTRODUCTION

During the internship period, the intern is assigned to testing the performance of a system as a user to ensure the system is run smoothly and no errors occurred.

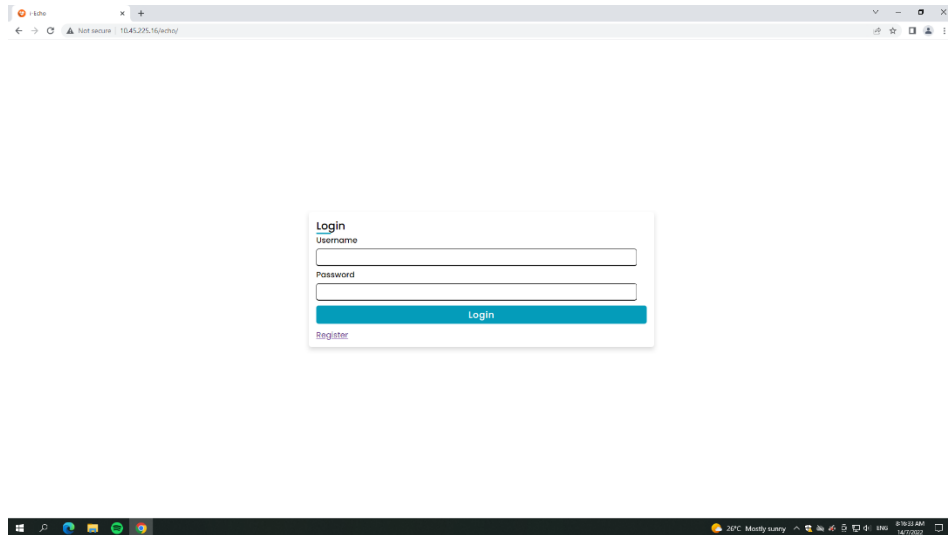


Figure 12: Interface of i-Echo system

2.2.2 IMPLEMENTATION

I-Echo system is a system to ease doctors to fill in information of patients but before that, need to ensure that there are no errors occurred. Therefore, user testing is needed to be done to ensure the system run smoothly. There are a lot of typing errors hence action that need to be taken is to change and make a correction of the words.

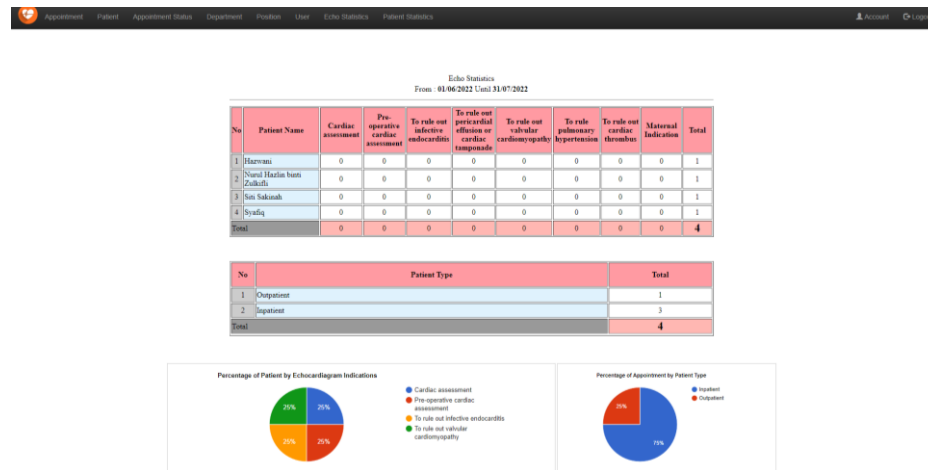


Figure 13: Patient Statistics Interface of i-Echo system

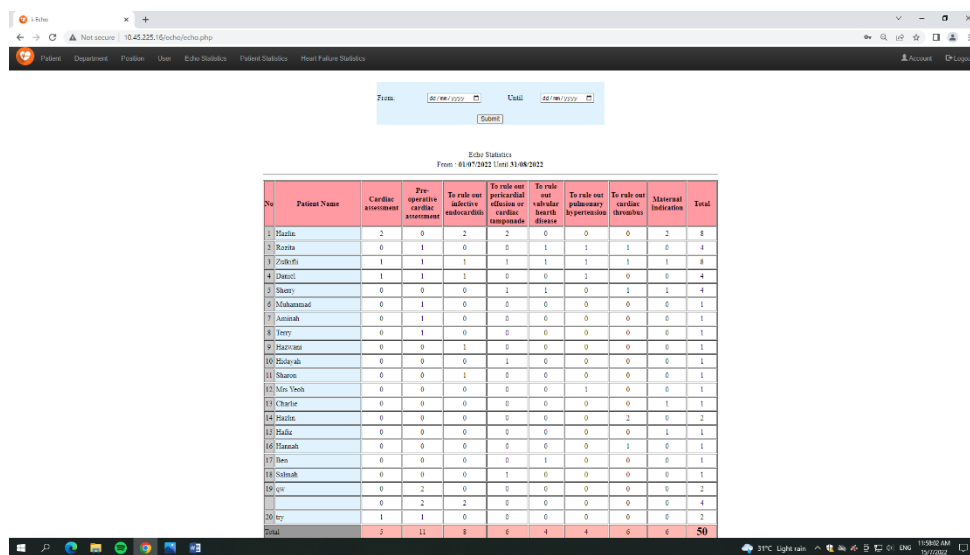


Figure 14: Heart Failure Statistics Interface of i-Echo system

The data for the statistics shown are not accurate therefore the action that need to be taken is to ensure that the data of patients in the chart is same as the data of patients in the table.

2.2.3 RESULTS AND DISCUSSION

This system use phpMyAdmin to create i-Echo system. There are three interface for this system. The first one is user interface where user who is a doctor will sign in to this interface and fill in the information of the patient. There are two section which are booking appointment and patient details. Second is admin interface, in this interface admin can see patients details, user list, department list, position list, appointment booking list and three types of statistics which are echo statistics, patient statistics and heart failure statistics. For the last interface, verify interface, it is quite similar with admin interface function however in this interface, verify need to verify the form which has been filled. Lastly, the form will be shown in a form of pdf.

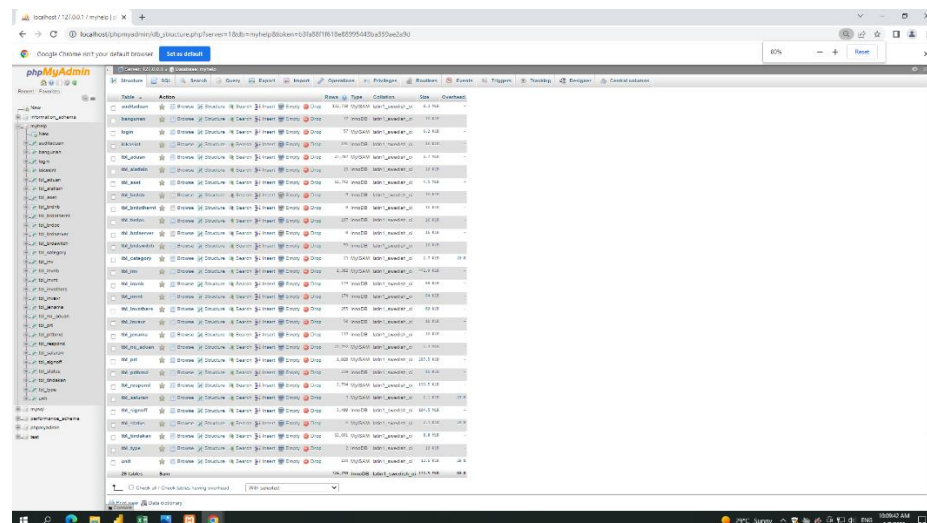


Figure 15: phpMyAdmin Interface

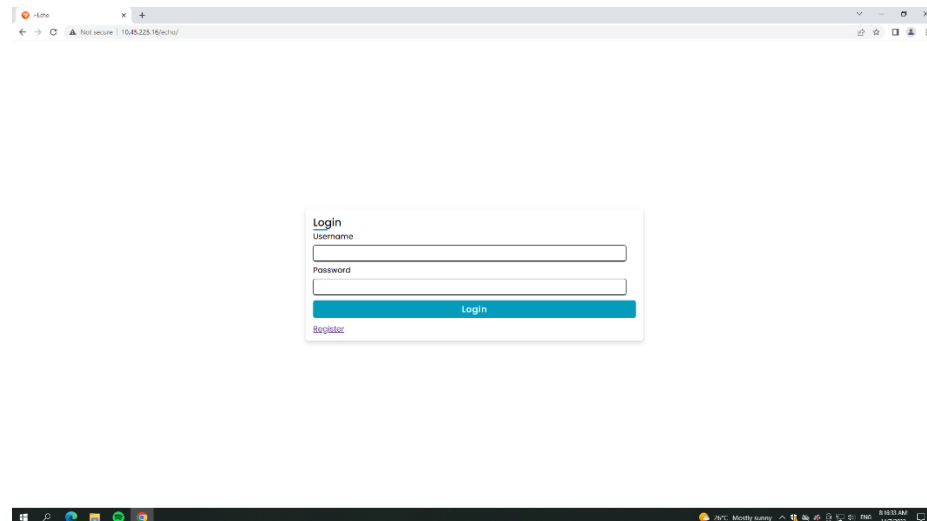


Figure 16: Login Interface of i-Echo system

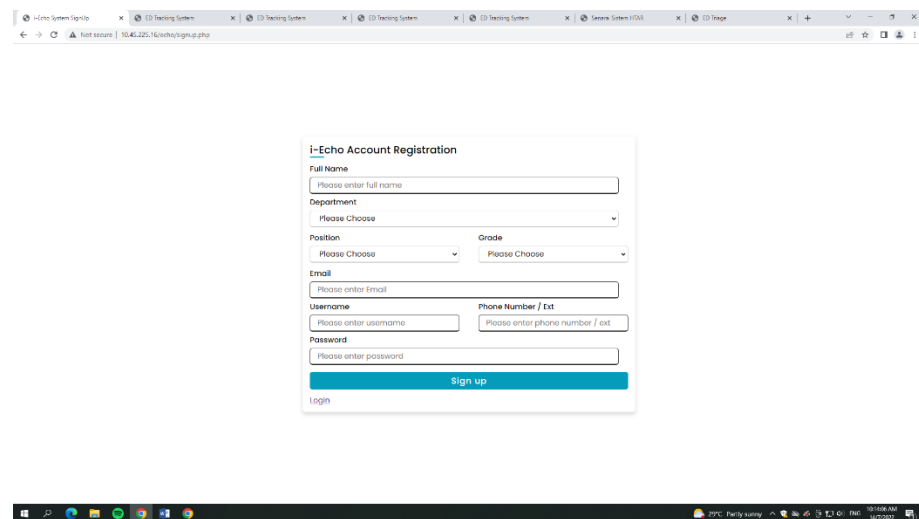


Figure 17: Sign up Interface of i-Echo system

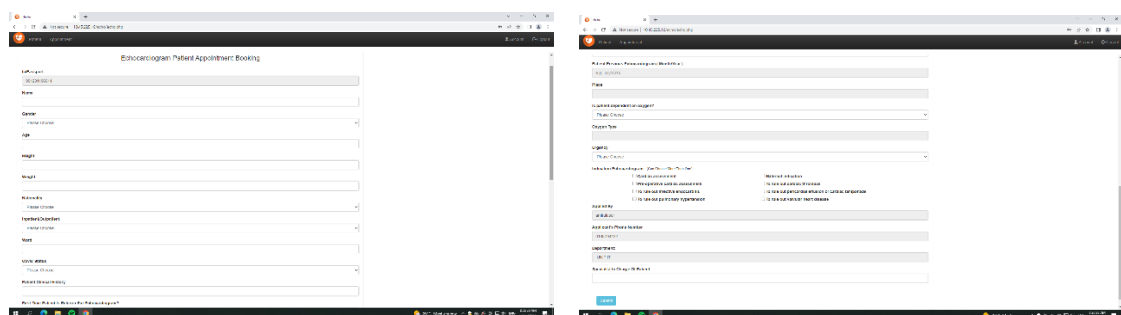


Figure 18: Appointment Booking Interface of i-Echo system

CHAPTER 3

CONCLUSION AND RECOMMENDATIONS

3.1 BENEFIT OF THE ASSIGNMENTS

The task that have been completed by creating a dashboard for helpdesk complaints allow the intern to apply the knowledge that have learned for the previous semester for taking the subject and adapt it to a real-life situation in workplace. It can help to solve problems that occur as well as the unexpected problems occurred. Not just that, from this task also, help the intern to learn about other systems such as MySQL and phpMyAdmin, as well as internal systems of IT unit. Besides that, it helps to sharpen skills used in Microsoft Power BI. It has a lot to discover in Microsoft Power BI that cannot be learned in classes.

3.2 SUMMARY OF INDUSTRIAL TRAINING

Industrial training helps intern to learn and adapt the real-life of working although it is only for short period of time. There is a lot to learn in the company to strengthen your skills. The staffs in the company are also very helpful to guide and teach something new. Being in slightly different units throughout the internship, eventhough it is related to system management, but it helps to adapt the courses learned by working at this company and gain new knowledge. It also helps to enhance skills that cannot be mastered in classes such as multi-tasking where need to double checking the data in two different files to check whether there are any errors occurred. Other than that, teamwork with other staff in the section by helping to setup the camera for live viewing for an event to make sure it run smoothly. Hard and soft skills, as well as management skills, are also skills that cannot be acquired in the classroom such as attended a few meetings with user for a system along with supervisor. Moreover, a presentation for Microsoft Power BI on how to use it with all staff in IT unit. Futhermore,

becoming an emcee for a farewell one of the staff in IT unit helps to boost confidence and also by creating a slide for a system helps to enhance the creativity. Lastly, a cooperation with staff by helping each other while decorate and prepared for Hari Raya Celebration.

BIBLIOGRAPHY

Hospital Tengku Ampuan Rahimah Klang (HTAR). Hospital Tengku Ampuan Rahimah Klang (HTAR). (n.d.). Retrieved July 8, 2022, from <https://htar.moh.gov.my/>

APPENDICES



Presenting Microsoft Power BI in a meeting with all staff of IT unit



Presenting progress of dashboard power BI