



Faculty of Computer Science and Information Technology

BROOKE DOCKYARD IT ASSET MANAGEMENT SYSTEM

Nina Anak Sudi

Bachelor of Computer Science with Honours (Software Engineering)

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NINA ANAK SUDI

This project is submitted in partial fulfilment of the requirements for the degree of
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(Software Engineering)

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TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS.....	iii
LIST OF FIGURES	vii
LIST OF TABLES.....	xiv
LIST OF ABBREVIATIONS.....	xvi
ABSTRACT.....	xvii
ABSTRAK.....	xviii
CHAPTER 1 INTRODUCTION	1
1.1 Background of Study.....	1
1.2 Problem Statement	2
1.3 Aim and Objectives.....	4
1.4 Project Scope.....	4
1.5 Project Methodology	5
1.6 Expected Outcome	7
1.7 Significance of Project	7
1.8 Project Schedule.....	8
1.9 Summary	8
CHAPTER 2 LITERATURE REVIEW	9
2.1 Introduction	9

2.2	Similar System	9
2.2.1	SNIPE-IT Asset Management	9
2.2.2	ManageEngine ServiceDesk Plus	13
2.2.3	GoCodes.....	17
2.3	Detailed Comparison of Similar System.....	21
2.4	Proposed System	23
2.5	Summary	24
CHAPTER 3 REQUIREMENT ANALYSIS AND DESIGN.....		25
3.1	Introduction	25
3.2	Requirements.....	25
3.2.1	User Requirements.....	25
3.2.2	Interview Summary.....	25
3.2.3	Functional Requirements	31
3.2.4	Non-Functional Requirements	32
3.2.5	Hardware and Software Requirements	32
3.3	Analysis and Design.....	34
3.3.1	Entity Relationship Diagram (ERD).....	35
3.3.2	Data Dictionary	37
3.3.3	Data Flow Diagram (DFD)	48
3.3.4	Navigation Flow and Control.....	56
3.3.5	Wireframes.....	58

3.3.6	Testing Design	67
3.4	Summary	69
CHAPTER 4 IMPLEMENTATION.....		70
4.1	Introduction	70
4.2	Construction	70
4.2.1	Construction Tools.....	70
4.3	Brooke Dockyard IT Asset Management System Features and Functionality	72
4.3.1	Administrator and User.....	72
4.3.2	Administrator	74
4.3.3	User.....	117
4.4	Summary	126
CHAPTER 5 TESTING.....		127
5.1	Introduction	127
5.2	Functionality Testing.....	127
5.2.1	Functionality Testing Result.....	128
5.3	Usability Testing	195
5.4	Findings and Discussion.....	198
5.5	Summary	198
CHAPTER 6 CONCLUSION AND FUTURE WORKS		200
6.1	Introduction	200
6.2	Objectives and Achievements	200

6.3	Project Limitations	201
6.4	Future Works.....	201
6.5	Conclusion.....	202
	References.....	203
	APPENDICES	206
	Appendix A	206
	Appendix B	207
	Appendix C	208
	Appendix D	209
	Appendix E.....	210
	Appendix F.....	211
	Appendix G	212
	Appendix H.....	213
	Appendix I.....	214
	Appendix J.....	216

LIST OF FIGURES

Figure 1.1 Current form used in BDEWC IT department - Technical service log.....	3
Figure 1.2 Rapid Application Development (RAD) model phases (Glaschenko, 2021).....	5
Figure 2.1 SNIPE-IT Admin dashboard interface	10
Figure 2.2 Form to create new asset	11
Figure 2.3 SNIPE-IT interface of assets list in table format.....	11
Figure 2.4 Form to update the asset information	12
Figure 2.5 Interface of asset information' delete confirmation	13
Figure 2.6 Interface of ServiceDesk Plus asset dashboard	14
Figure 2.7 Interface to display categories of asset.....	15
Figure 2.8 Interface for list of assets in ServiceDesk Plus	15
Figure 2.9 Create new asset	16
Figure 2.10 Edit the existing asset details.....	16
Figure 2.11 Delete the existing asset data.....	17
Figure 2.12 Interface of asset list in GOCODES.....	18
Figure 2.13 View of the selected blank asset detail.....	18
Figure 2.14 View the asset details	19
Figure 2.15 Form to edit the asset information.....	20

Figure 2.16 Scanned QR code to view the asset details	20
Figure 2.17 Deactivate or remove the asset	21
Figure 3.1 Current form to record all the asset's information	27
Figure 3.2 Brooke Dockyard IT Asset Management System Entity Relationship Diagram (ERD).....	35
Figure 3.3 Brooke Dockyard IT Asset Management System context diagram	48
Figure 3.4 Brooke Dockyard IT Asset Management System Level 0 Data Flow Diagram	49
Figure 3.5 Level 1 DFD of process 1.0 Login	50
Figure 3.6 Level 1 DFD of process 2.0 Manage Users Information.....	51
Figure 3.7 Level 1 DFD of process 3.0 Manage Employees Information.....	52
Figure 3.8 Level 1 DFD of process 4.0 Manage Assets Information	53
Figure 3.9 Level 1 DFD of process 6.0 Assigned Asset.....	54
Figure 3.10 Level 1 DFD of process 7.0 Manage Assets Service Records	55
Figure 3.11 Level 1 DFD of process 9.0 Generate and Print reports.....	56
Figure 3.12 Proposed system navigation and control flowchart.....	57
Figure 3.13 Login interface design	58
Figure 3.14 Admin dashboard interface design	59
Figure 3.15 Create new asset interface design.....	60

Figure 3.16 Update asset information interface design	61
Figure 3.17 View list of assets interface design	62
Figure 3.18 View of single asset information interface design	62
Figure 3.19 Confirmation of asset deletion interface design	63
Figure 3.20 Add new user interface design	64
Figure 3.21 Add employee interface design	64
Figure 3.22 profile interface design	65
Figure 3.23 User homepage interface design.....	66
Figure 3.24 View asset interface design for User	66
Figure 3.25 User profile interface design	67
Figure 4.1 Login page of Brooke Dockyard IT Asset Management System.....	73
Figure 4.2 The interface of Forgot Password process.....	73
Figure 4.3 The interface of Reset Password	74
Figure 4.4 Upper section of admin Dashboard interface	75
Figure 4.5 Lower section of admin Dashboard interface.....	75
Figure 4.6 Administrator personal information in MY PROFILE	76
Figure 4.7 Administrator contact information in MY PROFILE	77
Figure 4.8 Update administrator profile form interface.....	78

Figure 4.9 Administrator's change password interface	79
Figure 4.10 List of all assets	80
Figure 4.11 List of the workstations	80
Figure 4.12 Add new workstation form interface for Section 1	81
Figure 4.13 Add new workstation form interface for Section 2	82
Figure 4.14 View of specific or single information of workstation.....	83
Figure 4.15 Technical Service Log PDF file	84
Figure 4.16 Update workstation information interface Section 1	85
Figure 4.17 Update workstation information interface Section 2.....	86
Figure 4.18 Latest service record interface.....	87
Figure 4.19 Add new service records form interface.....	88
Figure 4.20 First time software installation for workstation	89
Figure 4.21 Current list of software installed in workstation	90
Figure 4.22 Interface of assign workstation to employee form	91
Figure 4.23 Interface of current user or owner of workstation	91
Figure 4.24 History of assigned workstation interface	92
Figure 4.25 Delete confirmation interface for workstation	93
Figure 4.26 List of laptops	93

Figure 4.27 Add new laptop form interface for Section 1	94
Figure 4.28 Add new laptop form interface for Section 2	95
Figure 4.29 View the single information of laptop interface.....	96
Figure 4.30 Interface of update laptop details for Section 1	97
Figure 4.31 Interface of update laptop details for Section 2.....	98
Figure 4.32 Interface of manage service record for laptop.....	99
Figure 4.33 Assign software to laptop interface	100
Figure 4.34 Assign laptop to employee or its owner interface	101
Figure 4.35 History of assigned laptop interface	101
Figure 4.36 Delete confirmation interface for laptop	102
Figure 4.37 List of software licenses	103
Figure 4.38 Add new software form interface	103
Figure 4.39 List of laptops or/and workstations install specific software	104
Figure 4.40 View of single software information	104
Figure 4.41 Delete confirmation interface for software.....	105
Figure 4.42 List of network equipment.....	105
Figure 4.43 Add new network equipment form interface.....	106
Figure 4.44 View single network information interface	107

Figure 4.45 Update network equipment interface.....	108
Figure 4.46 Assign network to location form interface	109
Figure 4.47 Form to return network equipment.....	109
Figure 4.48 History of assigned network equipment interface	110
Figure 4.49 Delete confirmation interface for network equipment	111
Figure 4.50 List of users' information interface	112
Figure 4.51 Add new user form interface	113
Figure 4.52 View fully information for specific user	113
Figure 4.53 Update user's information interface.....	114
Figure 4.54 Delete user confirmation interface	114
Figure 4.55 List of employees' information interface	115
Figure 4.56 Add new employee interface	115
Figure 4.57 Update employee information interface	116
Figure 4.58 Delete employee's confirmation interface	116
Figure 4.59 Asset controller dashboard interface Part 1.....	118
Figure 4.60 Asset controller dashboard interface Part 2.....	118
Figure 4.61 Head of department dashboard interface.....	119
Figure 4.62 List of employees on the user side	119

Figure 4.63 List of laptops on the user side	120
Figure 4.64 View of single laptop information.....	121
Figure 4.65 List of workstations on the user side	122
Figure 4.66 List of software on the user side.....	122
Figure 4.67 List of networks on the user side	123
Figure 4.68 View of a single workstation information	123
Figure 4.69 View of a single software details.....	124
Figure 4.70 View of a specific network equipment.....	124
Figure 4.71 Update user's contact number and location functionality.....	125
Figure 4.72 Change user's password interface.....	125
Figure 5.1 IT Executive from BDEWC participating in usability testing	195
Appendix A Part 1 of Project Schedule	206
Appendix B Part 2 of Project Schedule	207
Appendix C Part 3 of Project Schedule	208
Appendix D Part 4 of Project Schedule	209
Appendix E Part 5 of Project Schedule.....	210
Appendix F Photo with an IT Executive of BDEWC at Sejingkat Fabrication Yard.....	211

LIST OF TABLES

Table 2.1 Comparison of three similar systems features	22
Table 3.1 Item No. and Description of information needed in form	28
Table 3.2 Minimum specification of computer device for system development.....	33
Table 3.3 Software requirements for system development.....	34
Table 3.4 Data dictionary for table USER	37
Table 3.5 Data dictionary for table ADMIN.....	38
Table 3.6 Data dictionary for table EMPLOYEES.....	39
Table 3.7 Data dictionary for table ASSETS	39
Table 3.8 Data dictionary for table WORKSTATIONS.....	40
Table 3.9 Data dictionary for table LAPTOPS	42
Table 3.10 Data dictionary for table SOFTWARE.....	43
Table 3.11 Data dictionary for table SOFTWAREINSTALLATION.....	43
Table 3.12 Data dictionary for table NETWORK	44
Table 3.13 Data dictionary for table ASSIGNEDASSETS	44
Table 3.14 Data dictionary for table HISTORYASSIGNEDASSET	45
Table 3.15 Data dictionary for table ASSIGNEDNETWORK	45
Table 3.16 Data dictionary for table HISTORYASSIGNEDNETWORK	46

Table 3.17 Data dictionary for table SERVICE_RECORDS	46
Table 3.18 Data dictionary for table SERVICE_RECORDS_HISTORY	47
Table 5.1 Test Case for Login.....	128
Table 5.2 Test Case for Forgot Password	130
Table 5.3 Test Case for User Management.....	133
Table 5.4 Test Case for Employee Management	142
Table 5.5 Test Case for Manage Workstations	149
Table 5.6 Test Case for Manage Laptop	159
Table 5.7 Test Case for Manage Software.....	167
Table 5.8 Test Case for Manage Network	171
Table 5.9 Test Case for Manage Service Records	177
Table 5.10 Test Case for Assign Asset to Employee/Location	181
Table 5.11 Test Case for Return Asset	185
Table 5.12 Test Case for Software Installation.....	188
Table 5.13 Test Case for Generate PDF and Export Data to Excel File.....	191
Table 6.1 Brooke Dockyard IT Asset Management System's objectives and achievements	200

LIST OF ABBREVIATIONS

BDEWC – Brooke Dockyard and Engineering Works Corporation

CRUD – Create, Read, Update, and Delete

CSS – Cascading Style Sheets

ERP – Enterprise Resource Planning

GB – Gigabyte

GPS – Global Positioning System

HTML – HyperText Markup Language

IT – Information Technology

OS – Operating System

PC – Personal Computer

PDF – Portable Document Format

PHP – Hypertext Preprocessor

QR – Quick Response

RAD – Rapid Application Development

RAM – Random-Access Memory

SDLC – System Development Life Cycle

SQL – Structured Query Language

UAT – User Acceptance Testing

VM – Virtual Machine

ABSTRACT

In this era of globalization, the concept of digital form is increasing use among the organization to ensure their business run smoothly. However, the IT Department of BDEWC is still using a manual approach to manage over a thousand IT assets, including hardware, software, and network stuff. Therefore, this project develops the Brooke Dockyard IT Asset Management System to replace the traditional paper form-based to web-based forms. This system allowed users to track, manage, and store their asset information. In addition, this thesis covered the development and implementation of a web-based application for BDEWC's IT Department at Sejinkat Fabrication Yard. The Rapid Application Development model was chosen as the project's methodology.

ABSTRAK

Dalam era globalisasi ini, konsep ke arah digitalisasi semakin pesat dipraktikkan dalam kalangan organisasi bagi memastikan perniagaan mereka berjalan lancar. Walau bagaimanapun, Jabatan IT BDEWC masih menggunakan pendekatan manual untuk mengurus lebih seribu aset IT, termasuk perkakasan, perisian dan bahan rangkaian. Oleh itu, projek ini membangunkan Sistem Pengurusan Aset IT Brooke Dockyard untuk menggantikan borang berasaskan borang kertas kepada borang berasaskan web. Sistem ini membenarkan pengguna menjejak, mengurus, dan menyimpan maklumat aset mereka. Di samping itu, tesis ini merangkumi pembangunan dan pelaksanaan sistem berasaskan web untuk Jabatan IT BDEWC di Sejangkat Fabrication Yard. Model Rapid Application Development telah dipilih sebagai metodologi projek.

CHAPTER 1 INTRODUCTION

1.1 Background of Study

Technology has been growing rapidly in this era of globalization. It is increasingly being implemented in development and has acted as a pillar of strength for a wide range of economic sectors. A web-based system is one of the most popular and widely used, especially by organizations, to run their business operations. As for the IT department of Brooke Dockyard & Engineering Works Corporation (BDEWC), they need a system to store and manage data of their company assets. IT assets are software or hardware components that are used in the information technology environment, such as computers, laptops, and software licenses.

BDEWC is a Sarawak-based company that is active in the oil and gas, shipbuilding, ship repair, bridge infrastructure, and onshore manufacturing sectors. There are a few BDEWC branches, including the following:

i. BDEWC Administration Office

Demak Laut Commercial Centre Phase 3, Jalan Bako, Petra Jaya, Kuching, Sarawak, Malaysia

ii. Sejingkat Fabrication Yard

Muara Tebas Land District, Sejingkat, Off Jalan Bako, 93050 Kuching, Sarawak, Malaysia.

iii. Demak Fabrication Yard

Muara Tebas Land District, Demak Laut Industrial Estate Phase III, 93050 Kuching Sarawak, Malaysia.

BDEWC's IT department is located at the Sejingkat Fabrication Yard, which also covers the other two offices. Therefore, the conventional ways used by IT support to manage,

track, and record asset information using spreadsheets and form formats are ineffective due to the large number of assets that need to be recorded. They also might be overlooked in recording some other assets' detail.

Thus, with the advancement of technology changing the way organizations operate, Brooke Dockyard IT Asset Management System can help the IT department control their asset information efficiently. This system will be developed using HTML, CSS, PHP, JavaScript scripting languages, and other frameworks. In addition, the system interacts with a database using a Structured Query Language (SQL).

1.2 Problem Statement

IT assets must be well managed to enable an organization to track all its assets easily. Effectively managing IT assets ensures that all the relevant assets are encountered and tracked. However, BDEWC's IT department lacks a robust system for tracking, managing, and storing asset details, especially computers and laptops. According to the IT Executive from Sejingkat Fabrication Yard, the IT department is now using traditional paper form based, as shown in Figure 1.1. Therefore, he was looking for an appropriate system to replace the hardcopy records that can store all the information on the assets, identify where the assets are located, to whom the asset has been assigned, and when changes or updates were made.



Brooke Dockyard & Engineering Works Corporation

Sejingkat, Jalan Bako,
93050 Kuching,
Sarawak, Malaysia.
Tel: 082-439732 Fax: 082-439736

Technical Service Log

No.:

Name :
 Department :
 Position :
 Contact No. :

Date : 30 July 2018
 Technician : Nina Anak Sudi

Item No.	Description	QTY
01.	Acer Veriton Model: X6650G S/N: DTVPXSM004809026B39600 SNID: 80900990796	01
02.	Intel® Core™ i7-7700 3.60GHz	01
03.	Micron 8GB 1Rx8 PC4-2400T DDR4-2400MHz Memory MTA8ATF1G64AZ-2G3B1	01
04.	Seagate ST1000DM010-2EP102 SCSI 1.0TB 3.5" 7200rpm SATA-3 Hard Disk Drive, 1x2280 M Key	01
05.	Integrated Intel® HD Graphics 630	01
06.	LG HL-DT-STDVD RAM GHD0N5.25" SCSI Optical Disc Drive	01
07.	Intel® Ethernet Connection I219-LM Intel® Dual Band Wireless-AC 7265	01
08.	Realtek High Definition Audio Intel® Display Audio	01
09.	Acer USB Keyboard S/N: DKUSB1P02D8048097AK701 M/N: PR1101U	01
10.	Acer USB Optical Mouse S/N: DC11211007751013F4K701 P/N: MOANUOA	01
	Acer 22" KA221QL LCD Monitor S/N: MMT6HSM001818012814200 SNID: 81800473742	01
Faulty:	<i>New request. Local Purchase Requisition No.: 20516.</i>	
Total		1 set

Service Record				
Date	Time			Action Taken
	From	To	Duration	
26 Jul 18	0800	1700	09H00M	- Online updates Windows service pack and system files.
				- Install Microsoft Office and online updates service pack.
				- Install Adobe Flash Player & Adobe Shockwave.
				- Install DirectX 12.
				- Install Java JRE 7.
				- Install IBM Notes 9.0.1 & configuration.
				- Install Roxio DVD Creator.
				- Install & online activate Trend Micro Office NeatSuite.
<i>IP Address:</i>	172.16.12.53		NIL	- Install digital copier driver and scanner driver.
<i>MAC Address:</i>	F4-4D-30-FE-A5-C9	00-E1-8C-2F-99-37		- Install WinZip.
<i>Printer Brand/Model:</i>	FXDC C4300	FXDC 2055		- Test run.
<i>Printer IP Address:</i>	172.16.12.21	172.16.12.22		
<i>Operating System:</i>	Microsoft Windows 10 Professional x64			KQF4J-MMB7W-TKCPH-8X344-PPQGP
<i>P.D.F.:</i>	Adobe Acrobat Professional XI			NIL
<i>Office Suite:</i>	Microsoft Office Home & Business 2016			KNHK8-JXYPB-3D6KK-XDJ27-VT9VX
<i>System Asset Code:</i>	EA/BDEWC/2018/247			<i>Monitor Asset Code:</i> EA/BDEWC/2018/247

Warranty Status: Yes No 3 years warranty.

Remarks:

Figure 1.1 Current form used in BDEWC IT department - Technical service log