

**HEALTHCARE BUSINESS INTELLIGENCE: A CASE STUDY OF
UNIVERSITI UTARA MALAYSIA HEALTH CENTER (PKU)**

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UNIVERSITI UTARA MALAYSIA

2011

**HEALTHCARE BUSINESS INTELLIGENCE: A CASE STUDY OF
UNIVERSITI UTARA MALAYSIA HEALTH CENTER (PKU)**

**A Project Submitted To Dean of Awang Had Salleh Graduate School of Arts
and Sciences in Partial Fulfillment of the Requirement for the Degree of Master
of Science (Information Technology) Universiti Utara Malaysia**

By

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ABSTRAK (BAHASA MALAYSIA)

Organisasi samada swasta atau awam menghadapi peningkatan tekanan yang memaksa mereka merespon dengan cepat untuk perubahan keadaan dan harus inovatif dalam cara mereka beroperasi. Organisasi yang lincah dapat membuat keputusan strategik, taktikal, dan keputusan operasi yang lebih baik. Pembuatan keputusan memerlukan masa yang cukup, data yang relevan, maklumat serta pengetahuan. Setiap semester di UUM dalam menerima mahasiswa baru mewajibkan mahasiswa barunya untuk melakukan ujian kesihatan yang kadang kadang juga termasuk kakitangan. Namun, hasil dari ujian kesihatan dari para ahli teknologi makmal dan doktor, seperti diagnosis pesakit, rawatan dan resep dokter saat ini hanya disimpan di dalam data PKU repositori untuk keperluan merakam tanpa dieksplorasi untuk kegiatan pengurusan mereka. Oleh itu, kajian ini menerapkan konsep Business Intelligence (BI) untuk menerokai database repositori PKU. Gudang data dibina untuk kegiatan di PKU dan prototaip yang dibangun, ketika sistem dinilai oleh calon pengguna sistem di PKU.

Keputusan kajian (PKUBI) membantu pengurusan PKU dengan menggunakan teknik yang diperlukan untuk membuat keputusan pengurusan dan peramalan kegiatan mendatang yang akan membantu PKU. PKUBI juga berguna untuk mengetahui statistik perubahan pesakit dalam UUM dan ubat yang perlu sering ditempah.

ABSTRACT (ENGLISH)

Organizations, private or public, feel increasing pressures, forcing them to respond quickly to changing conditions and be innovative in the way they operate. Such activities require organizations to be agile and make frequent and strategic, tactical, and operational decisions. Making such decision may require considerable amounts of timely and relevant data, information, and knowledge. Every semester that UUM admits new students, they do subject them to medical screening which sometimes includes the staffs and returning students. However, the results of the medical test from the laboratory technologists and the doctors, such as patient diagnosis, treatment and medical prescription are currently kept in the PKU data repository for record purposes without being further explored for their managerial activities. Therefore, this research applied Business Intelligence (BI) method for exploring the PKU database repository. The data warehouse was built for the activities in PKU and a prototype was developed at the end, while the system is evaluated by the prospective users of the system at PKU.

The result of this research (PKUBI) helps the PKU management by simplifying the technique needed for managerial decision making and forecasting future activities that would help the PKU. Also, the PKUBI is also useful to know the medical statistics of the patients in UUM and the drugs that need to be frequently ordered for.

ACKNOWLEDGEMENT

My first praises goes to Almighty Allah for guiding and blessing me throughout the completion of this project. I would like to thank my parents for their parental support during this Masters program in Malaysia. Also, my appreciation goes to my wife, Mrs. F. R. Ishola for her support and advices throughout my program, May Allah reward you abundantly.

In addition, my gratitude goes to my Supervisor, Dr. Azizah Hamad for her support and constructive criticism towards the completion of this project, May Allah help and provide for her needs. Lastly, I am indebted if I do not appreciate everybody that took part in the completion of this project, especially the Universiti Utara Malaysian administration, staffs and students, May Allah continue to bless all of you, amen.

TABLE OF CONTENTS

Permission to Use.....	i
Abstrak (Bahasa Malaysia)	ii
Abstract (English)	ii
Acknowledgement.....	iv
Table of Contents	v
List of Tables.....	xii
List Of Figures	xiv

CHAPTER ONE: INTRODUCTION

1.0 Introduction	1
1.1 Problem Statement	3
1.2 Research Questions	4
1.3 Research Objectives	5
1.4 Scope Of The Study	5
1.5 Significance Of The Study	6

1.6 Organization Of The Report.....	7
1.7 Conclusion.....	8

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction	9
2.1 business Intelligence (BI).....	9
2.1.1 Evolution Of Business Intelligence	10
2.1.2 Characteristics Of Business Intelligence.....	13
2.1.3 Benefits Of Business Intelligence.....	13
2.1.4 Types Of Business Intelligence Data Sources	14
2.1.4.1 Operational Data Source	15
2.1.4.2 Private Data Source.....	16
2.1.4.3 External Data Source	16
2.1.5 Business Intelligence (BI) Architecture.....	17
2.1.5.1 Data Warehouse	18
2.1.5.2 Business Analytics.....	19
2.1.5.3 Business Performance Management (BPM).....	19

2.1.5.4 The User Interface (Dashboards And Other Information Broadcasting Tools).....	20
2.2 Healthcare Organizations	21
2.2.1 Healthcare Activities, Services And Processes In The Context Of Business Intelligence	23
2.2.2 Technological Components Of BI In Healthcare.....	25
2.2.2.1 Types Of Operational Databases	25
2.2.3 Benefits Of BI In Healthcare Industry	27
2.2.4 Decision Support System, Data Warehousing And OLAP	28
2.2.5 Related Work	31
2.13 Conclusion	34

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction	35
3.1 The Justification Stage	37
3.2 the Planning Stage.....	37
3.2.1 infrastructure Evaluation	37

3.2.2 project Planning	38
3.3 The Business Analysis Stage.....	38
3.3.1 Project Requirement Definition.....	38
3.3.2 Data Analysis.....	38
3.3.3 Application Prototyping	39
3.3.4 Meta Data Repository Analysis	39
3.4 The Design Stage	39
3.4.1 Sql Server Integration Services (SSIS).....	40
3.4.2 Sql Server Analytical Services (SSAS)	40
3.4.3 Sql Server Report Services (SSRS)	40
3.5 The Construction Stage	41
3.6 The Deployment Stage	41
3.7 Conclusion.....	41

CHAPTER FOUR: SYSTEM ANALYSIS AND DESIGN

4.0 Introduction	42
4.1 Dimensional Model.....	42
4.1.1 Characteristics Of Fact Table.....	43

4.1.2	Characteristics Of Dimensional Table	44
4.2	Dimensional Tables And Models For PKUBI	45
4.2.1	Student's Patient Dimensional Table.....	45
4.2.2	staff's Patient Dimensional Table.....	47
4.2.3	Family's Patient Dimensional Table.....	49
4.2.4	Public's Patient Dimensional Table	50
4.2.5	Disease Dimensional Table	52
4.2.6	Time Dimensional Table.....	53
4.2.7	Doctor Dimensional Table.....	54
4.2.8	Laboratory Technologist Dimensional Table	55
4.2.9	Nationality Dimensional Table.....	55
4.2.10	College Dimensional Table	56
4.2.11	Drug Dimensional Table	56
4.3	Requirements For PKUBI	57
4.3	PKUBI Star Schema.....	59
4.4	PKUBI Data Warehouse	60
4.5	Dimensional Database For PKUBI	61
4.6	The Report Of The PKUBI	63

4.7 User Interface Design.....	67
4.8 The PKUBI UML Diagrams	70
4.8.1 PKUBI Use Case Diagram	70
4.9 The PKUBI Deployment.....	72
4.10 Conclusion.....	76

CHAPTER FIVE: RESULTS DISCUSION

5.0 Introduction	78
5.1 Evaluation Techniques	79
5.2 Evaluation Of Questionnaire	79
5.3 Data Analysis	80
5.3.1 Respondents Profile Analysis.....	80
5.3.2 Descriptive Statistics	86
5.4 Conclusion.....	89

CHAPTER SIX: RECOMMENDATION AND CONCLUSION

Recommendation and Conclusion.....	90
6.0 Introduction	90

6.1 Study Contribution	90
6.2 Problems and Limitation	91
5.3 Future Work	91
6.4 Recommendation.....	92
6.5 Conclusion.....	92
6.6 Summary	92
References	93
Appendix	99

LIST OF TABLES

Table 4.1: Student’ Patient Dimensional Model Definition.....	45
Table 4.2: Staff’s Patient Dimensional Model Definition.....	47
Table 4.3: Family’s Patient Dimensional Model Definition	49
Table 4.4: Public’s Patient Dimensional Model Definition	50
Table 4.5: Disease Dimensional Model Definition	52
Table 4.6: Time Dimensional Model Definition	53
Table 4.7: Doctor Dimensional Model Definition	54
Table 4.8: Laboratory Technologist Dimensional Model Definition.....	55
Table 4.9: Nationality Dimensional Model Definition	55
Table 4.10: College Dimensional Model Definition	56
Table 4.11: Drug Dimensional Model Definition	56
Table 4.12: Requirements Detail For PKUBI	57
Table 4.13: Student Patient Database For PKUBI	61
Table 4.14: Diseases Database For PKUBI	62
Table 4.15: Drug Database For PKUBI	62
Table 4.16: The Pkubi Functional Requirements	67
Table 4.17: The Pkubi Non-Functional Requirements.....	68
Table 5.1: Sex Distribution Of Respondent	80
Table 5.2: Age Distribution Of Respondent.....	82

Table 5.3: Staff Department Distribution Of Respondent.....	83
Table 5.4: Level Of Study Distribution Of Respondent.....	85
Table 5.5: Descriptive Statistics Of Ease Of Use Of PKUBI	87
Table 5.6: Descriptive Statistics Of Quality Of Service Of PKUBI	88

LIST OF FIGURES

Figure 2.1: Evolution Of Business Intelligence	12
Figure 2.2: A High Level Architecture Of BKUBI.....	18
Figure 2.3: Healthcare Process In The Context Of PKUBI	24
Figure 2.4: Technology Of Business Intelligence In Healthcare	26
Figure 3.1: Business Intelligence Roadmap	36
Figure 4.1: A PKU Star Schema	59
Figure 4.2: PKUBI Data Warehouse.....	60
Figure 4.3: Distribution Of Patients According To The Nationality.....	63
Figure 4.4: The Cube For The Patients According To The Nationality In PKU	64
Figure 4.5: Distribution Of Use Of Drug According To The Nationality.....	65
Figure 4.6: The Cube For The Use Of Drug According To The Nationality In PKU	65
Figure 4.7: Distribution Of College According To The Diseases.....	ERROR!
BOOKMARK NOT DEFINED.	
Figure 4.8: The Cube For The College According To The Diseases In PKU.....	66
Figure 4.9: Distribution Of Use Of Drug According To The Patient.....	ERROR!
BOOKMARK NOT DEFINED.	
Figure 4.10: The Cube For The Use Of Drug According To The Patient In PKU	ERROR! BOOKMARK NOT DEFINED.
Figure 4.11: PKUBI Use Case Diagram	71

Figure 4.12a: Login Page Of PKUBI.....	72
Figure 4.12b: Login Page Of PKUBI.....	73
Figure 4.13: Home Page Of The PKUBI	74
Figure 4.14: Viewing Page Of The PKUBI	75
Figure 4.15: Update Page Of The PKUBI.....	76
Figure 5.1: Bar Chart Representation Of The Respondent Sex Distribution	81
Figure 5.2: Bar Chart Representation Of The Respondent Age Distribution	82
Figure 5.3: Bar Chart Representation Of The Respondent Staff Department.....	84
Figure 5.4: Bar Chart Representation Of The Respondent Level Of Study.....	85

CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

The business environment in which organizations operate today is becoming more complex and ever-changing. Organizations, private or public, feel increasing pressures, forcing them to respond quickly to changing conditions and be innovative in the way they operate. Such activities require organizations to be agile and make frequent and strategic, tactical, and operational decisions. Making such decision may require considerable amounts of timely and relevant data, information, and knowledge. Processing these in the framework of the required decisions needs quick, frequent and some computerized support which is traced to business intelligence (BI) (Efrain, et al. 2008).

Healthcare organizations are swimming in an ever-deeper pool of data. But without a program in place to target, gather, deliver and analyze the most relevant data, these organizations will continue to be data rich but information poor (Eckerson, 2003). Forward-thinking healthcare organizations realize that data and, thus, BI is at the center of informed and precise decision-making will improve patient and service outcomes in ensuring their organizations' future (Hyperion Solution Cooperation,

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