Dedication

Dedicated to

- My parent
- My husband
- To 'Sudanese student In our country

who have rewarded us over all search by helpful suggestion and kind words'.

ACHNOLAGEMENT

Our gratitude for the following people and any others can not be fully expressed in this short acknowledgment. to Dr Osama Rais for firmly ensure that I did what was supposed to do provided skilled appraisal of the first draft along with many valuable suggestions.

Deep thanks should also be extended to Prof. Pankaj Roy Gupta for his sincere advices , I most thankful to the employee at Sudan University library for their help , support and encouragement I received from, I would like to thank my family their understanding and for tolerating an out of phase through the long months it took to make project .

Abstract

A digital library is a collection of information that is stored and accessed electronically. The information stored in the library should have a topic common to all the data. a digital library is to provide a central location for accessing information on a particular topic. An on line library is digital library that is accessible through computer network.

In Sudan there is an urgent need for establishing Digital and online libraries. These libraries should be based on open source because Sudan is a developing country.

The objective of this project is to develop a common methodology for the preparation, storage, dissemination and evaluation of scientific literature in electronic format. The objective can be achieved by design and implementing Digital library, which providing full access to a collection of serial titles, a collection of issues from individual serial titles, as well as to the full text of articles. The access to both serial titles and articles is available via indexes and search forms.

The goals of project is provides access to serials collection via an alphabetic list of titles or a subject list or a search form by keyword, publisher names, and subject. The interface also provides access to the full text of articles via author index or subject index, or by a search form on article elements such as author names, keywords, subject, words from the full text and publication year.

The Data collected in this research consist of M.Sc & PhD dissertations of Sudan University of Science & Technology.

Techniques that are use for storing and retrieved data is MSQL and PHP under Linux and all work is base on open source .

The abstract about thesis and dissertation already exist using CDS/ISIS

Data exchange between CDS/ISIS and relational databases such as MySQL, database is in great need.

The result is acceptable all data about thesis is available on line

بسم الله الرحمن الرحيم

المستخلص

Table of Contents

Dedication	I
Acknowledgments	II
Abstract (English)	III
Abstract(Arabic)	V
Table of Contents	VI
List of Tables	IX
List of Figures	X
Chapter One: Introduction	**1-2**
1.1 Statement of the Problem	1
1.2 Purpose of the Study	1
1.3 The objective of the Study	2
1.4 Thesis Layout	2
Chapter Two: Literature Review	5-33
2.1 Theoretical Background	5
2.2 What is a Digital Library	5
2.3 Digital Material	5
2.3 .1Sources of Material	8
2.3 .1.1 Internal Sources	8
2.3 .1.2 External Original Sources	9
2.4 Automatic Indexing	10
2.5 Valuable Library Information	10
2.6 Use For Digital Library	12
2.7 Digital Library Access	12
2.8 Security	13
2.9 Reasons For Digital Library	15
2.9.1 To Generate Income	15
2.9.2 To Promote Collections	15
2.9.3 Provide a Gateway	16

2.9.4 Because of Staff Pressure 17
2.9.5 To Raise the Library's Profile 17
2.10 the Costs Of Library 17
2.10.1 Start-Up Costs 17
2.10.2 Ongoing Costs 18
2.10.3 How to Reduce Costs 19
2.10.4 Income 19
2.11 Technology 20
2.12 Future Possibilities 22
2.13 Backup &Recovery 23
2.13.1 Definition 23
2.13.2 Why Backup 23
2.13.3 Backup Policy 24
2.14 Copyright 27
2.14.1 Definition 27
2.14.2 Begin Copyright Protection, and required 27
2.14.3 valid copyright Notice 28
2.14.4 Who owns the copyright in a joint work 29
2.14. Copyright Protection end, or expire 29
2.14.7 Copyrights and the Internet 30
2.14.8 Register a Copyright 31
Chapter Three: Software Requirements Specification 32-68
3.1 Software Requirements 32
3.2 System Interaction 44
3.3Digital Library Metadata 51
3.4 User Interface Design 59
Chapter Four: Design & Implementation 69-89
4.0 Introduction 69
4.1 Requirements Specifications 69
4.3 Languages 77
4.4 Open source Software Development 79
4.5 Problems in Implementation 82
4.6 Design & Implementation for E-University Network 84
Chapter five: Conclusion, Implication & Recommendation 90-92

5.0 Introduction 90
5.2 Problem 90
5.3 Recommendation For Further Studies 91
References 93
Appendices **95-106**
2.1. Appendix A - Install Apache 95
2.2. Appendix B - Installing MySQL on Linux 98
2.3. Appendix C Installing PHP 102
2.4. Appendix D Research studies related to this dissertation 104
2.5. Appendix E Electronic Theses and Dissertations on the Web 105
2.6. Appendix F- Copyright Paper(Arabic) 106

List of Table

1	Table 2-0	Digital Material	5
2	Table3-0	General users characteristics	40
3	Table 3-1	E-Thesis Table	51
4	Table 3-2	User Table	52
5	Table 3-3	User_type Table	52
6	Table 3-4	Account Table	53
7	Table 3-5	Keyword Table	53
8	Table 3-6	Resource keyword table	53
9	Table 3-7	Resource tables	54
10	Table 3-7-1	Resource type Table	55
11	Table 3-9	Location Table	55
12	Table 3-10	Access method Table	57
13	Table 3-11	Resource_subject	57
14	Table 3-12	Subject table	57
15	Table 3-13	Icon table	58

16	Table 3-14	Group_right table	58
17	Table 4-1	Physical Architecture.	87
18	Table 4-2	Requirements.	88
19	Table 4-3	Technical specifications for a server	89

List of Figures

Number	Name	Page
Figure 3-1	System diagram	34
Figure 3-2	System Interaction	44
Figure 3- 3	Overview of SUSTELO System Interaction	45
Figure 3- 4	Database Interaction	46
Figure 3-6	Create a Database	46
Figure 3-6	Drop a Database	46
Figure 3-7	Perform Search	47
Figure 3-8	Retrieve Help	47
Figure 3-9	Follow Links	48
Figure 3-10	Perform Download	48
Figure 3-11	Perform Build and Maintain Collections1	49
Figure 3-12	Perform Build and Maintain Collections2	49
Figure 3-13	Perform Control Access	50

Figure 3-14	Home Page	59
Figure 3-15	Faculty Interface	60
Figure 3-16	Faculty Interface	61
Figure 3-17	Electronic Text Interface 1	62
Figure 3-18	Electronic Text Interface 2	63
Figure 3-19	Advanced Search	64
Figure 3-20	Faculty Information 1	65
Figure 3-21	Faculty Information 2	66
Figure 3-22	Admin Login	67
Figure 3-23	Download Files	68
Figure 4-1	DLS Librarians	72
Figure 4-1	Network Design	86

…