Development of Computerized Reading List and Library Book Orders System for the Department of Computer Science

by

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ABSTRACT

The aim of this project was to develop a computerized system for the reading lists and library book orders system for Department of Computer Science, Keele University. The system provided for an efficient control and management of the reading list and ordering of books.

The methodology for the development of this system is based on the structured modelling technique. The design was refined iteratively until it met the users requirement.

A prototype system was implemented to illustrate our design. The implementation uses Paradox as a relational database system and ObjectPAL as Object Oriented software development method.

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CHAPTER 1

INTRODUCTION

1.1 OBJECTIVE

The purpose of this project is to develop computerized reading lists and library book Orders System (RILBOS), for use in the Department of Computer Science, Keele University. It covers analysis of the current system and its problems, design, and development of a prototype of system as a model of the implementation.

While keeping in mind the purpose of the project is to identify how the current system can be improved through automation to meet the organizational goal. However, it is not necessary to automate the whole function as a computer based system. Some of the area may simply require changes to existing procedures, rearranging workflows and to distribute some of the responsibilities to the related personnel to improve the system as a whole.

-1.2 CURRENT SYSTEM

1.2.1 Keele University Library

The University Library at Keele forms parts of the Keele Information Services, which also includes the Computer Centre and Media and Communications Centre. Library facilities are concentrated in the centrally located Information Services building, where the Computer Centre is also located.

The library houses some 500,000 books and subscribes to approximately 2,000 journals. The stock is arranged by subjects, using Library of Congress classification. Periodicals are shelved separately from books. Most of the books are listed in the Oracle Library online catalogue.

There is a campus-wide access to a wide range of online databases and services, and the Library has many CD-ROM databases which is available to the members. A number of these are now networked and available from public PCs in the Information Services building, via Library Online.

The contents of the thesis is for internal user only

REFERENCES

[Fred R. Mc. Fadden. Jeffrey A. Hopper, 1991]
Fred R. Mc. Fadden. Jeffrey A. Hoffer. Modern Database Management. The Benjamin/Cummings Publishing Company.INC.

[C. J. Date. 1986]
C. J. Date. An introduction to Database Systems. Addison-Wesley Publishing Company. 1986.

[I. T. Hawryszkiewycz 1991]
I. T. Hawryszkiewycz. Introduction to Systems Analysis and Design. Prentice Hall. 1991.

[S. Skidmore, R. Farmer and G. Mills 1992]
S. Skidmore, R. Farmer and G. Mills. SSADM Version 4 Models and Methods. NCC Blackwell. 1992

[D. E. Avison 1985]
D. E. Avision. Information Systems Development. A. Database Approach. Blackwell Scientific Publications 1985.

[M. Meldrum M Lejk P. Guy 1993]
M. Meldrum M Lejk P. Guy. SSADM Techniques. an introduction to Version 4. Chartwell Bratt. Studentlittevatur 1993.

[Borland, 1985]
Borland. Paradox for Windows Guide to Object Pal. Borland International. Inc. 1985

[Borland, 1985]
Borland. Paradox For Windows. User's Guide. Borland International Inc. 1985

[Borland, 1985]
Borland. Paradox for Windows. Getting Started. Borland International Inc 1985.

[Borland, 1985]
Borland. Paradox For Windows. Object Pal Reference. Borland International Tnc. 1985.