DESIGN AND IMPLEMENTATION OF A VIRTUAL PROJECT REPOSITORY SYSTEM (A CASE STUDY OF FEDERAL COLLEGE OF ANIMAL HEALTH AND PRODUCTION TECHNOLOGY)

Article *in* International Journal of Computer Science and Information Security, · November 2021

CITATIONS
0

READS
151

6 authors, including:

Omowamiwa Taiwo Olanrewaju
Federal College of Animal Health and Production Technology
7 PUBLICATIONS **11** CITATIONS
SEE PROFILE

Adegbile Aliu
Federal College of Animal Health and Production Technology Ibadan
9 PUBLICATIONS **1** CITATION
SEE PROFILE

Chinonyelum Vivian Nwufoh
Federal College of Animal Health and Production Technology, Ibadan
7 PUBLICATIONS **1** CITATION
SEE PROFILE

DESIGN AND IMPLEMENTATION OF A VIRTUAL PROJECT REPOSITORY SYSTEM

(A CASE STUDY OF FEDERAL COLLEGE OF ANIMAL HEALTH AND PRODUCTION TECHNOLOGY)

Adegbile, A.A.[1], Ayobiolaja, S.P.[2], Olanrewaju, O.T.[3], Togun, O.A.,[5] Nwufoh, C.V.[6]
Department of Computer Science, FCAH&PT, Moor Plantation Apata, Ibadan, Nigeria
Email: ayotundetaiwo@gmail.com, alibimpe@gmail.com,pelumi.togun@gmail.com, chinonyelum.tabansi@yahoo.com

Osunade, O[4]
Department of Computer Science, University of Ibadan, Nigeria
o.osunade@ui.edu.ng,

Abstract-The project work emphasizes the application of Project Repository System to educational administration as an alternative to the manual method of storing past project documents and class materials. It takes Federal College of Animal Health and Production Technology as a case study. However, the application of Project Repository System focus on the past project works of the institution with a view to reducing the stress, errors, loss and other damages which arises as a result of manual method of keeping past project works in an educational institution like Federal College of Animal Health and Production Technology, Ibadan in particular. This project has been specifically carried out and presented in a concise manner to cover the necessary background information and to satisfy the needs for designing a project repository system. Visual Basic programing language and Windows form application was used to in order to satisfy the needs for designing a project repository system for an institution. The software developed will be able eradicate the difficulties experienced in the old system and make work easier, timely, reliable, efficient in work flow which in turn will assist management in decision making to meet up with global challenges of the recent age.

Keywords: Repository, Project, Educational institution, Information

I. INTRODUCTION

The present technology age is faster moving to the digital level and almost everyone has accessed to the electronic versions of textbooks, projects reports, and notes whether there are online or offline. Many students found it difficult to have access to past project materials due to factors beyond their control, some of those factors may include lack of digital content in schools etc.

A Repository System which is also referred to as digital repository according to Larry lannom of the Corporation for National Research Initiatives (CNRI) is a collection of digital objects that include text, visual materials, audio materials, video materials stored as electronic media formats (as opposed to print, micro form, or other media), along with means for organizing, storing, and retrieving the files and media contained in a library collection. [1]., A digital repository is a mechanism for managing and storing digital content and can be subject or institutional in their focus. therefore, deriving maximum value from it and in the process supporting research, learning, and administrative processes [7].

Reference [4]. explained that the term digital library is used synonymously with e-library, universal library, future library, virtual library and library without walls.

Digital libraries can be very immense in size and scope, and can be maintained by individuals, organizations or can be affiliated with established physical library buildings or institution or with academic institutions. The electronic content may be stored locally, or accessed remotely via computer networks, [6]. A Project Repository System can therefore be regarded to as a type of information retrieval system.

II. RELATED WORKS

Reference [2]. defines a repository as a digital archive of the intellectual product created by the faculty, research staff, and students of an institution.

There are different types of Project Repository System for the diverse information needs of the targeted group of users. Some are developed by groups or organizations, higher education institutions, research centers, national libraries, as well as public libraries. They include contents that are born digital and those that have been digitized [3].

Reference [5]. observes that is the ability to make efficient and effective use of information sources, and that an information literate person today should possess specific online searching

https://sites.google.com/site/ijcsis/
ISSN 1947-5500

skills, which include the ability to select appropriate search terminology, construct a logical search strategy, and evaluate information appropriately.

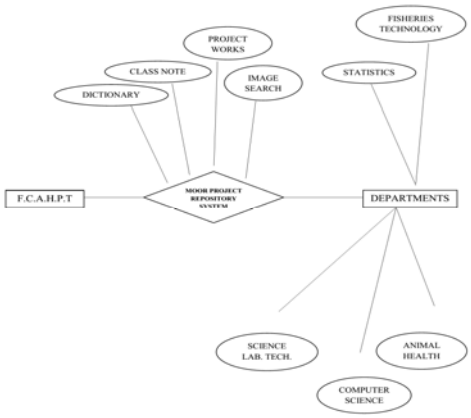

Fig 1.ER diagram of the Project Repository System

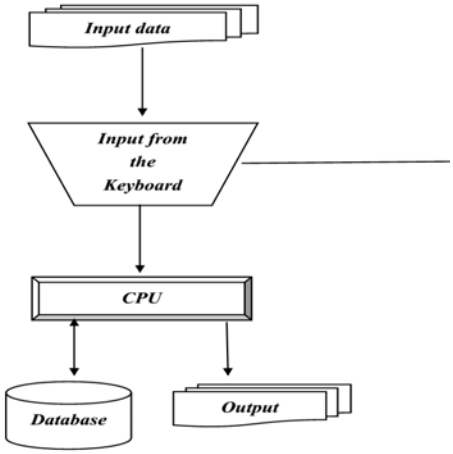

Fig. 2 System Flowchart

E. System Coding / Building the new System

1) The system was built using the following resources Visual Studio 2013, .Net Framework 4.0, Notepad and the code used is VB.NET.
2) For the system to operate seamlessly, the following are the operational requirement that the users need to adhere to:

F. Software Requirement

1) The software (moor project repository system) will have to be installed on the users operating system e.g. A window 7, 8, and 8.1
2) The user system must have a utility software name .net frame work 4.0 on the system to allow proper function of the software.
3) The user system must have a high definition of Adobe Reader which allows display of the other tools in the software.

G. Hardware Requirement

1) The user system should have Intel Pentium 4 or AMD AthlonR 32-bits or 64-bits processor.
2) The Random-Access Memory of the user system should be at least 1GB or more recommended.
3) The user system should have a hard disk of at least 500MB space for installation
4) The computer system should have 1024x768 display (1280x800 recommended) with qualified hardware-accelerated OpenGL graphics card, 16-bit color, and 256MB of VRAM.

III. RESULT AND DISCUSSION

Procedure for the use of System

1) Home.
2) Student Department.
3) Response from the System ---> Department Fields (Dictionary, Class Note, Project Works, Picture Search).
4) Response from the System ---> Users Inputs or Information Search. ---> Output.
5) Exit.

This procedure explains the steps and procedure to follow in accessing the Moor project repository system. From the software home in Figure 3, the user will see the college department which are Animal Health Technology, Computer Science, Fisheries Technology, Science Laboratory Technology and Statistics then the user selects his own area of specification. Now under the user area of specification, the user will find its department fields contained in the moor project repository system which are dictionary, class note, project works and picture search as shown in figure 4. Then the user selects its field under its department, if it's to be dictionary, the user will have to input the words he/she required information about and if the request is accepted by the system, the system will process the information out to the user and if the user data is not meet; the system will show

https://sites.google.com/site/ijcsis/
ISSN 1947-5500

a notification message that. “no result found” and a pop-up message will display to the user if he / she will like to use the embedded browser to search the necessary information in which he / she will needs internet connection as shown in figure 7 and 8.; this process also operates for picture search (Figure 6). If the user is selecting project work in his/her department field contained in the moor project repository, the user will have to click the year he / she is interested in searching for, then a drop down will be shown to the user containing project works of the year the user has selected. Once the user clicks a project works, the system will generate the output of the year selected to the user as shown in figure 5. In term of class note contained has a department field in the moor project repository system, the user will have to select the level he / she is interested for either ND I or ND II, after selecting the level, the system will show a drop down showing whether first semester or second semester then the user selects its semester of its own choice. After which the system generates the course under the semester the user has selected and the user select the course he / she intended to generate information from. After the course is selected then the system generates output of the course selected to the user from software resource.

Fig. 3. System Home Page

Fig.4. A department homepage showing its field

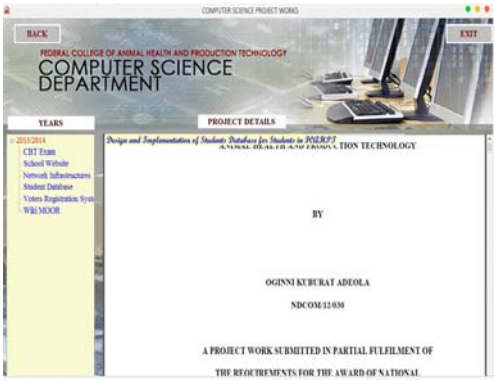

Fig 5. Project works as a field of computer science department in moor project repository system

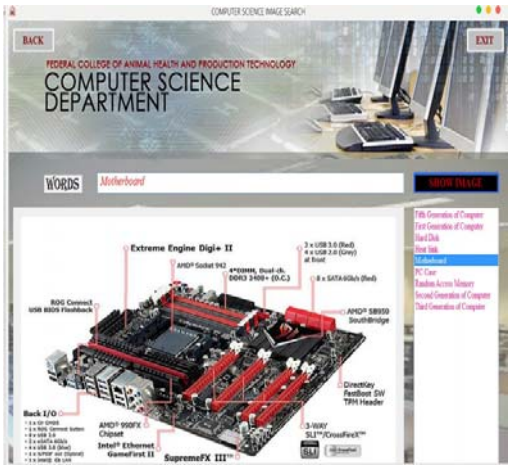

Fig 6. Picture Search as a field of computer science department in moor project repository system

https://sites.google.com/site/ijcsis/
ISSN 1947-5500

Fig 7. Moor Project Repository System Browser

Fig. 8 Browser embedded in moor project repository system to display more information if the result is not meet

IV. CONCLUSION

The overall aim of this study was to develop a flexible and yet easy to use repository system that will contains student project, the repository system will assist students and their lecturers in accessing past projects work done by the graduating students in the National Diploma programme.

The design and implementation of a project repository system for the Federal College of Animal Health and Production Technology, Moor Plantation Ibadan has provided a solution to most of the challenges encountered in keeping hardcopy of past project works done by the students and also aided in the process of digitization of student's project work.

This repository system tool is expected to impact positively on the process of digitization of student's projects write up in the school and other places where there may be needed. The system helps librarians and other people that are concern with the process of digitization and making project writeup more accessible to students.

References

[1] Akst, D. (2003). The Digital Library: Its Future Has Arrived. Carnegie Reporter , 2(3), 4-8.

[2] Crow, R. (2002). *The case for institutional repositories: a SPARC position paper*. Washington, D.C.: Scholarly Publishing & Academic Resources Coalition. Available at: http://www.arl.org/sparc/IR/ir.html

[3] Digital library (2009), in Wikipedia, The Free Encylopedia, retrieved from http://en.wikipedia.org/w/index.php?title=Digital_library&oldid=272431571

[4] Issa, A.O., Amusan B., and Daura, U.D. (2009). Effects of Information Literacy Skills on the Use of eLibrary Resources among Students of the University of Ilorin, Kwara State, Nigeria(2009). *Library Philosophy and Practice (e-journal)*. page 245. Retrieved http://digitalcommons.unl.edu/libphilprac/245

[5] Julien , H. (2002). Use of Information, *Encylopedia of Communication and Information.*USA: Macmillan Reference page 1051-1056.

[6] Lanagan, Smeaton, james, Alan F . (2017). Video digital libraries: contributive and decentralized". *Springer*: page 273–284.

[7] Repositories Support Project (RSP) (2017), What is a repository? Retrieved from http://www.rsp.a c.uk/start/before-you-start/w hat-is-a-repository/ on the 27 of February, 2018