

NIGERIAN LIBRARIES

*JOURNAL OF THE NIGERIAN LIBRARY
ASSOCIATION*

VOL. 33 NO 1. 1999

TABLE OF CONTENTS

ARTICLES	Pages
1. Information Technology Revolution. Challenges and Opportunities for Library Services in Nigeria. D. C. Onyekwelu.	1
2. Electronic Networking in the Emerging Nigeria Information Society: The Internet at a Glance- J. O. Daniel	11
3. Internet and Academic Library Services Development in Nigeria M. Alasa and Kalechukwu Ibenne.	17
4. A Computerized System for Managing Overdue books in University Libraries by K. O. Williams-Osula	30
5. Relevance of Extension Service in Disseminating Information to Farmers in Rural Area: A Case Study of IAR & T. Ibadan - O. J. Akinade.	45
6. The Application of CD-ROM Technology in Libraries, and Information centres in Developing Countries: The Case of Agricultural Information Service in African Sub-Regions - Zakari Mohammed.	55

(PUBLISHED BY NIGERIAN LIBRARY ASSOCIATION)

A COMPUTERIZED SYSTEM FOR MANAGING OVERDUE BOOKS IN UNIVERSITY LIBRARIES

WILLIAMS - OSULA, K. O. MLS,
*Senior Librarian & System Librarian,
Hezekiah Oluwasanmi Library,
Obafemi Awolowo University,
Ile-Ife, Nigeria.*

ABSTRACT

The current economic crisis in the nation has necessitated a prudent management of educational resources. Libraries, therefore need to preserve their books and non-book materials to ensure their use by both present and future library users. The Library Penalty System (LPS) was developed for university libraries. It could however be used by any library that has computerized its services. It consists of two major modules and three sub-modules. Each module and sub-module have a unique function. Within the sub-modules, functions were used for specific operations. The system using the versatility of C++ language was tested on Compaq Desktop Pentium with satisfactory outputs obtained.

Keywords: University libraries, Readers Services, Book loan, Overdue, Fine Computerised systems.

INTRODUCTION

The library is the nerve-centre of any academic community especially at the tertiary level. It is therefore not surprising that the library is one of the first sectors given priority in the setting up of a University. The library is a repertoire of knowledge sourced by both lecturers and students. The quality of the products of any University is therefore a reflection of its library facilities. It was in recognition of this fact that the Federal Government of Nigeria through the National Universities Commission (NUC) made concerted effort to inject life into the libraries of the Federal Universities by the NUC/World Bank 1993-1996 Book Supply Agreement. Within the three years of this agreement, the quality and quantity of the stock of the affected libraries were in principle substantially increased. However, a critical look at our shelves today hardly show the presence of these new updated versions of books except for those in the Day Reserve section which operates on restricted access.

Every library is first and foremost concerned with the development of its collection so as to meet the needs of its clientele. The issue of security comes in the moment the books become available to users, (Revil, 1978). While the library is interested in making its stock available to every user that needs it, some users engage in a variety of anti-social acts which may be criminal, against library rules and regulations, (Schefin, 1977). Some problems highlighted by Olaosun (1977) and

Oladipo (1995) include inability to effectively check over-borrowing, lack of effective means of intercepting offending borrowers who have ignored notices sent to them, and the common feature of book loss due to theft as well as the human factor in the collection of fines. There are various offences that could be committed by library users, this paper will be limited to the management of overdue books. However the objective of this study was to develop a computerized package that can be used to track down offenders and enforce appropriate penalties related to overdue books.

Readers Services

The Readers Services is responsible for all reader-oriented services for the library, operates on the end products of the Technical Services and is responsible for all loans, reference services and security. The Circulation Section is responsible for the control and safety of all books on open access. It is imperative for a library to make its well built collection available to users, hence most libraries strive to build a well rounded collection, well organized into appropriate subject areas where they are needed and make them available to users in form of loans and/or references. In order to protect the right of every user to information materials, libraries often set up rules and regulations as well as penalties for offenders. The execution of these penalties has been manual in most Nigerian libraries. This is carried out by Circulation staff and/or library security officers. Like all manual work, it is prone to errors, favoritism or outright abuse.

Book Loan

Book loaned for use outside the Library, involves a form of receipt that must be signed at the Loans Desk. The book is usually stamped with the date due for its return. The borrower is thereafter responsible for its custody and return. Loan restrictions at the Hezekiah Oluwasanmi Library, include the following conditions:

- (a) Senior Staff are restricted to ten volumes at any one time.
- (b) Postgraduate students are restricted to six volumes at any one time.
- (c) Undergraduate students are restricted to ten volumes at any one time.
- (d) Books in the Reference Collection, books marked "Reserved", or "Not for loan", may not be removed from the Library.
- (e) Books in a special collection, e.g. Africana, Government Documents, old, rare, valuable or irreplaceable works, may only be borrowed for home use with the permission of the University Librarian and then only in exceptional cases.
- (f) Periodicals whether bound or unbound may not be removed from the Library except by special permission.
- (g) Members of the junior staff may not borrow books directly, but loans can be made in special cases on the signature of their Heads of Department,

who will take responsibility for them.

Book Overdue

A book is considered overdue when the User failed to return it on the due date. Abegunde (1988) identified 'with-holding of books beyond (overdue) as a malpractice. Okotore (1991) in his work enumerated malpractices viz stealing, rough handling (i.e. defacing marking etc), late return, mutilation, (see Akinwumi, 1986). Overdue offences are monitored by the circulation staff in the course of their daily routine by separating slips of books with expired due date. Such Users are usually sent overdue notices and are asked to return the library books in their possession. At the point of return of the books, outstanding overdue fines are calculated for the user at stipulated rate. This fine has to be paid before the book is discharged and the user freed. Such manual procedure has many disadvantages as enumerated below;

4. Quite often the pressure of work on Circulation staff make the monitoring of overdue offenders difficult.
5. Writing of notices of overdue offenders fall in arrears and some Users escape undetected.
6. The manual system often bring in the human factor i.e. favouritism, overlooking of offences, use of connections, to escape paying penalties, etc.
7. Ineffectiveness
8. Bribery and Corruption of staff by Users seeking to escape penalties.
9. Connivance of some dubious staff with Users to steal library materials or escape penalties cannot be ruled out.

Penalty for Overdue

The normal period for loans is 30 days for Senior staff and 14 days for Post and Undergraduate students. A loan may be renewed for a further period of 14 days. In addition, all books on loan to students must be returned on or before the Monday of the last week of the semester or within 3 days of recall and when recalled by the library for the annual stock check. Where a borrower fails to comply with the above provisions, penalties for overdue books will be imposed as follows:-

- (a) 50 kobo per day for the first 30 days; thereafter at N1.00 per day. All loan privileges will stop after 30 days.
- (b) Books specially recalled by the University Librarian will attract a fine of N5.00 per day after the third day from the date of recall.
- (c) Books lost or damaged will attract a fine four times the current cost of the books.

- (d) No student will be allowed to attend the Graduation Ceremony or receive his/her certificate without a clearance certificate from the University of the effect that no books or fine is outstanding against him or her.

Need for Computerisation

In view of the above disadvantages highlighted for manual operations in the monitoring of overdue books, a case for the computerization of the whole or part of the procedure cannot be overemphasized if libraries are to be saved the harrowing experience of losing their books/materials to dubious and/or anti-social Users. This has become imperative if information materials are to be preserved for the use of future generations. Olaosun (1977) advocated for the use of batch system in Circulation control asking libraries to take advantage of the Mainframes in their various University Computer Centers and thereby minimize cost of computerization. He advocated the adoption of the Automated Library System (ALS) which was already in use by several libraries in the U.K. and the USA. Events have, however, overtaken that proposition as Microcomputers have taken the lead and the Server-Client technology is mostly in use.

Most University libraries in Nigeria are incorporating the Tinlib database system that has facilities for most functions. It has Cataloguing and Circulation modules which hold information of registered users, records on borrowing and returning of books, detailed information of all books within the library, records book overdue with facilities to print out overdue notices and calculate fine. This database system in its present version currently in use in our library systems, lacks the facility to enforce the tracking of overdue books defaulters, and prevent offenders from further borrowing of books.

Essentially the LPS system is a computerization package that can be installed to enhance the tracking ability of the Tinlib database system. Once offenders are recorded in the system, the LPS keeps track of the offenders and enforce the penalties. It also has the facility of denying the User any borrowing right if found guilty until the person is cleared by the system.

SYSTEM DESIGN

The LPS consists of two major modules designated as COMPILE and SYSUSE.

COMPILE

- has a Menu
- has sub-modules that operate the updating of records, detection and print-out of list of offenders.

SYSUSE

- responsible for the use of data in Compile module.

- functions by taking in the Registration number of Users.
- Check through the file offenders to identify the status of Users **whether** he is an offender or not.
- If the User is an offender:
- It displays his/her name, Reg. No, and Fine.
- The function returns to the main menu which notifies the library staff that the User should be denied borrowing rights until he/ she is cleared.
- If the User is not an offender:
- The function returns to the main menu.
- The system gives the message that the User is not an offender and advises the library staff to connect to Tinlib for borrowing facilities.

System input and output

COMPILE

Input: The sub-module requires the entry of detailed information of the user into the system. This is done using the function record-add(). The required inputs are:

- Name
- Registration number
- Department
- Book title
- Book number
- Call mark

SYSUSE

Input: User registration number

Output: If an offender: The screen display:

(a) User's information and offences:

- Name
- Registration number
- Department
- Book title
- Book number
- Call mark
- Fine or any other required penalty and

(b) A message notifying the staff that the User should be denied borrowing rights.

If not an Offender: The screen displays a message that the User is **not an** offender and that the staff can connect to Tiblib to proceed with borrowing.

Based on the information in the Compile and Sysuse modules, the data were programmed using the C++ language which was considered very suitable for its versatility, (Ammeraal, 1991). This is an object oriented programming. The full programme highlighting the various modules and sub-modules is listed in Appendix A.

Testing and Sample Output

The programme was tested using different categories of users including offenders and non-offenders. Non-offenders were users who were not having any overdue books. Offenders include those who fail to settle their penalty fines and also those who have partially settled their fines. The print out of detail information of different category of users are as shown in Appendix B. The programme was able to detect all offenders and deny them access to borrowing facilities. On the other hand non-offenders were allowed access to borrowing facilities. With this system in place, the circulation section can adequately manage all users on case by case basis.

CONCLUSION

The main objective of this research work was to design and implement a Library Penalty system whose function is to keep track of library overdue books offenders and enforce the prescribed penalties. The system was designed to be menu-driven given rise to easy information retrieval. It also has a modular design in order to make future expansion easy. Its implementation in the library, will increase the efficiency and accuracy of tracking down offenders as well as ensuring the payment of penalties.

Note: Further enquiries about the systems application should be directed to the author.

REFERENCES

1. Ammeraal, Leendert (1991), "C++ for Programmers". Chichester: John Wiley, 328pp.
2. Abegunrin, J. A. (1988) "Security needs for a Typical Nigerian Academic Library". *Nigerian Library and Information Science Review* 6(2): pp 62-66.
3. Akinwumi, K. (1986) "Book Determination and Mutilation in Libraries: Cases and Remedies" Paper Presented at Oyo State College of Education Joint Librarians' Seminar held on Tuesday, 25th April, pp. 1-22. Unpublished.
4. Guide to Hezekiah Oluwasanmi Library, Obafemi Awolowo Univeristy,. Rev. 1986, Amended 1989, Printed by Debiyi-Iwa Printing Works, Ile-Ife (Unpublished).

5. Hezekiah Oluwasanmi Library and Procedures for Circulation Section. June 1985. (Unpublished).
6. Okotore, K. (1991), "Misuse of Library materials at Oyo State College of education Library, Ilesa". *Nigerian Library and information Science Review* 9(1): 12-19.
7. Oladipo, B, B, (1995), "Computerization of a Library Circulation Procedure (B.Sc Thesis) Department of Computer Science, O. A. U., Ile-Ife.
8. Olaosun, Adebayo (1977), "Computer-based Circulation Control for Univeristy Libraries in Nigeria", *Zambia Library and Information Science Review* 9(1-4): 90-98.
9. Revil, D. H. (1978). "Library Security", *New Library World*, 79: pp. 75-77
10. Schefin, R. A. (1977), "Barriers to and Barriers of Library Security". *Wilson Library Bulletin*, 45pp. 00. 875.

REFERENCES

APPENDI A: PROGRAM LISTINGS

```

main()
{
    void SYSUSE (void);
    void COMPILE (void);
    char optn;
    do
    {
        printf("\n\tTHIS IS THE HEZEKIAH OLUWASANMI LIBRARY PENALTY
SYSTEM\n\n");
        printf("\n\t(1):SYSUSE (To check for offenders)\n\n");
        printf("\n\t(2):COMPILE (To update offenders files)\n\n");
        printf("\n\t(3): EXIT\n\n");
        printf("\nENTER AN OPTION:\n");
        scanf("%c", &optn);
        switch(optn){
            case'1': SYSUSES();break;
            case'2':COMPILE();break;
            default:printf("\nSYSTEM QUITs MENU\n");
                }scanf("%c", &optn);
                system("cls");
        }while(optn!='3');
        return EXIST_SUCCESS;
    }
}

void SYSUSE (void)
{
    int OD(char*Reg_no);
    int a;
    char Reg_no[12], choice;
    printf("\n\n\nTHIS IS SYSUSE MODULE-CHECK FOR LIBRARY USE
OFFENDERS\n")
    do{
        printf("\n\n ENTER USER REG_NO:\n");
        scanf("%s", Reg_no);
        a=OD(Reg_no);
        if(a==0)
        {
            printf("\n% is not an offender\n", Reg_no);
            printf("\n\n\t\tCONNECTING TO TINLIB\n\n");
            system("f:\lcd public\lcd tinman\tinlib");
        }
    }else
        printf("\n\nBORROWING RIGHTS DENIED! THANK YOU.\n\n");
        printf("\n\nANY OTHER USER??? (Y/N):\n");

```

```

        scanf("%o", &c);
        scanf("%o", &choice);
        choice=toupper(choice);
    }while(choice=="Y");
    return;
}
/*-----*/
/*This function checks for overdue offenders*/
intOD(char*Reg_no)
{
    FILE *odue;
    record user;
    int od=0;
    odue=fopen("overdue. dat", "rb");
    {
        printf("\nOFFENDERS FILE (Aoverdue.date) CANNOT BE OPENED, PLS TRY AGAIN \n");
        return od;
    }
    while (fread(&user, sizeof(struct rec), 1, odue)==1)
    {
        if(strcmp(user.reg_no, Reg_no)==0)
        {
            printf("\nTHIS USER HAS AN OVERDUE BOOK IN HIS/HER POSSESSION\n\n");
            printf("REG_NO"%s\n", user.reg_no);
            printf("NAME:"'%s', user.name);
            printf("DEPT:"'%s', user.dept);
            printf("BOOK_TITLE:"'%s', user.bk_no);
            printf("CALL MARK:"'%s', user.call_mark);
            printf("PENALTY(FINE TO BE PAID):%s\n", user.fine);
            od=1;
        }
    }
    return (od);
}
/*-----*/
/*This function compiles overdue offenders list*/
void COMPILER(void)
{

```



```

    gets(user.dept);
    printf("ENTER IN BOOK_TITLE:\t");
    gets(user.bk_title);
    printf("ENTER IN BOOK_NO:\t");
    gets(user.bk_no);
    printf("ENTER CALL MARK:\t");
    gets(user.call_mark);
    printf("ENTER FINE:\t");
    scanf("%f",&user.fine);
    fwrite(&user,sizeof(record),1,odue);
    printf("\n\n\tANY OTHER RECORD? ENTER (Y/N):\t");
    scanf("%c",&choi);
    scanf("%c",&choi);
    choi=toupper(choi);
    while(choi=="Y");
    fclose(odue);
    return;
}
/*-----*/
/*This function prints out defaulters list*/
void record_ouprint(void)
{
    record user;
    FILE * oude;
    scanf("%c",&choi);
    oude=fopen("overdue.dat","r+b");
    if(oude==NULL)
    {
        printf("\nSORRY SYSTEM CANNOT OPEN OFFENDERS
FILE FOR PRINTING\n");
        return;
    }
    printf("\n\n\tLIST OF OVERDUE OFFENDERS\n\n");
    rewind(oude);
    while((fread(&user,sizeof(record),1,oude))==1){
        printf("=OD offender-\n");
        printf("NAME:\t");
        puts(user.name);
        printf("DEPT\t");
        puts(user.dept);
        printf("REG_NO:\t");
        puts(user.reg_no);
        printf("BOOK_TITLE:\t");
        puts(user.bk_title);
        printf("BOOK_NO:\t");
        puts(user.bk_no);
        printf("CALL MARK:\t");

```



```

        puts(user.call_mark);
        printf("FINE:/t%/o,2f\n",user.fine);
        printf("\t\t\tPRESS ENTER TO CONTINUE VIEWING\n");
        scanf("/o/%c");
    }
    printf("\nTHIS IS THE END OF THE LIST\n");

return;
}
/*-----*/
/*This function deletes names from offenders list*/
void record_odelete(void)
{
    record user;
    FILE * oude,*temp;
    float ovef;
    char REG_no[12]
    scanf("/o/%c");
    odue=fopen("overdue.dat","r+b");
    temp=fopen("temp.dat","w+b");
    if(0due==NULL||temp==NULL)
    {
        printf("\nNONE OF THE REQUIRED FILES CANNOT B
OPENED\n");
        return;
    }
    printf("ENTER REG_NO OF USER:\t");
    scanf("/o/s", REG_no);
    while )fread(&user, sizeof(record), 1, odue))==1
    {
        if(stremp(user.reg_no,Reg_no)!=0)
        fwrite(&user,sizeof(record),1,temp);
        else
        {
            printf("\nENTER OVERDUE FINE PAID:\t");
            scanf("/o/f", &ovef);
            if(overf!=user.fine)
            {
                printf("\nWRONG FINE PAID");
                printf("\nYOU CANNOT DELETE THIS NAME, THANKS");
                fclose(oude);
                fclose(temp);
                return;
            }
        }
    }
}

```

```

fclose(odue);
rewind(temp);
odue=fopen("overdue.dat", "w+b");
while(fread(&user,sizeof(record),1,temp))==1);
fwrite(7user,sizeof(record),1,odue);
printf("\nDELETION PROCESS COMPLETED\n");
fclose(odue);
fclose(temp);
return;
}
/*-----*/
/*-----*/

```

Appendix B: Output of Program

THIS IS THE HEZEKIAH OLUWASANMI LIBRARY PENALTY SYSTEM

- (1) :SYSUSE (To check for offenders)
- (2) :COMPILE (To update offenders files)
- (3) :EXIT

ENTER AN OPTION: 1

THIS IS SYSUSE MODULE - CHECK FOR LIBRARY USE OFFENDERDS

ENTER USER REG_NO: 98775

THIS USER HAS AN OVERDUE BOOK IN HIS POSSESSION

REG_NO:98775

NAME: OLUWATOYIN, O.P.I.

DEPT: ZOOLOGY

BOOK_TITTLE: ANIMAL KINGDOM

BOOK_NUMBER: 344566

CALL MARK: QT23.F65

PENALTY(FINE TO BE PAID): N23.50

BORROWING RIGHTS DENIED! THANKYOU.

ANY OTHER USER??? (Y/N): Y

ENTER USER REG_NO: 905765

905765 is not offender

CONNECTING TO TINLIB

ANY OTHER USER??? (Y/N): Y

ENTER USER REG_NO: EEG/1999/023
EEG/1999/023 is not offender

CONNECTING TO TINLIB

ANY OTHER USER??? (Y/N): N

THIS IS THE HEZEKIAH OLUWASANMI BIBRARY PENALTY SYSTEM

- (1) :SYSUSE (To check for offenders)
- (2) :COMPILE (To update offenders files)
- (3) :EXIT

ENTER AN OPTION: 2

COMPILE MENU

- (1) :ADD RECORD
- (2) :DELETE RECORD
- (3) :PRINT FILE
- (4) :EXIT

ENTER OPTION: 3

LIST OF OVERDUE OFFENDERS

NAME: OLUWATOYIN, O.P.I.
DEPT: ZOOLOGY
REG_NO:98775
BOOK_TITLE: ANIMAL KINGDOM
BOOK_NO: 344566
CALL MARK: QT23.F65
FINE: N23.50

PRESS ENTER TO CONTINUE VIEWING

NAME: ADEDIPE, O. A.
DEPT: MANAGEMENT & ACCOUNTING
REG_NO:936846
BOOK_TITLE: ACCOUNTING
BOOK_NO: 236461
CALL MARK: HD3422.D45
FINE: N20.00

PRESS ENTER TO CONTINUE VIEWING

COMPUTERIZED SYSTEM FOR MANAGING OVERDUE BOOKS

NAME: ADEOJO, B. A.
DEPT: MUSIC
REG_NO:945632
BOOK_TITLE: MUSIC RUDIMENTS
BOOK_NO: 243165
CALL MARK: M23.G56
FINE: N16.00
THIS IS THE END OF THE LIST

COMPILE MENU

- (1) :ADD RECORD
- (2) :DELETE RECORD
- (3) :PRINT FILE
- (4) :EXIT

ENTER OPTION: 2
ENTER REG_NO OF USER: 986775
ENTER OVERDUE FINE PAID: N23.50
DELETION PROCESS COMPLETED

COMPILE MENU

- (1) :ADD RECORD
- (2) :DELETE RECORD
- (3) :PRINT FILE
- (4) :EXIT

LIST OF OVERDUE OFFENDERS

NAME: ADEDIPE, O. A.
DEPT: MANAGEMENT & ACCOUNTING
REG_NO:936846
BOOK_TITLE: ACCOUNTING
BOOK_NO: 236461
CALL MARK: HD3422.D45
FINE: N20.00

PRESS ENTER TO CONTINUE VIEWING

NAME: ADEOJO, B. A.
DEPT: MUSIC
REG_NO:945632
BOOK_TITLE: MUSIC RUDIMENTS
BOOK_NO: 243165
CALL MARK: M23.G56
FINE: N16.00
THIS IS THE END OF THE LIST