

# Significance of Using Information and Communication Technology in National College of Education and Teachers Training College Libraries

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# What are ICT?

## Information Communication Technologies

ICT are the hardware and software that enable society to create, collect, consolidate and communicate information in multimedia formats and for various purposes.

# Impact of ICT in Libraries

- To capture, store, manipulate, and distribute information;
- To introduce and provide new services, revitalize the existing services by providing faster access to the resources, by overcoming the space and time barriers;
- To provide need-based, browsing and retrospective search services to the users;
- To have large number of databases in CDs and Online;
- To utilize the staff for providing better information services;
- To encourage networking and resource sharing at local level;
- To digitize the documents for preservation and for space Saving;

# Impact of ICT in Libraries

- To support library functions such as circulation, serials control, acquisition control, stock maintenance and other routine office works and developing in-house database;
- To retrieve and disseminate the information in user defined format;
- To access library catalogues databases of other libraries through library networks;
- ICT made networking and sharing of information resources possible;
- Digital information may be free or cheaper than print equivalents
- Digital information can be sent in multiple copies simultaneously over information networks in fractions of a minute or even of a second.

# What is the Impact of ICT on information resources and tools for access?



**Print**

**Digital: CD-ROM, DVD, DAT**

**Digital:  
Internet**



The digital environment has led to changes in the creation, storage, access and delivery of information.

# Impact of ICT on the Library and the Librarian

- The digital information environment changed the way information is created, collected, consolidated, and communicated.
- Library services became automated and information services became electronic.
- Librarians had to learn new knowledge and skills in order to meet user needs for new information services using ICT and e-resources.



# Library Services in a Digital Environment

- Automated library system
- Digitized Collections
- Services for e-onsite resources: CD-ROM, Own Digital Collections, e-journals on subscription, e-books , e-books on subscription
- Internet services
- Information services: SDI, Repackaging of information
- Resource sharing activities: Interlibrary loan, document delivery

# Technologies in Libraries

- Information Capture

- Key board, Scanner, Digital Cameras, Mobiles, Barcode Scanner, staff workstation, RFID Pad, etc.

- Storage

- PCs, Floppy disks, CDs / DVDs, Pen drives, Portable HDs, Blu Ray Disk, etc.

- Identification

- Barcode, RFID, Biometric, Tattle-tape, etc.



# Technologies in Libraries...Cont.

- Digital Library Software
  - Green stone digital Library , DSpace, Fedora etc.
- Library automation packages
  - WIN/ISIS, Inmagic, Libsys, Libsuite, ALICE, LibraryWorld,
  - Open Source like KOHA, New Gen Lib, openbilio etc
- Networking
  - Client-server, P2P, Internet

# Why ICT in Libraries?

- Speed
- Storage
- Accuracy
- Reliability
- Ease of use

# Functions in ICT Based Library Systems

ICT is used in various fields of library activities.

- Acquisition

- Acquisition/Accession list
- Order file / report

- Serial Management

- Serial check-in/out and claiming
- Union/holding list

- Cataloging/classification

- Catalogue card/label production
- Online catalogue
- Union

# Functions in ICT Based Library Systems...cont.

- Circulation
  - Issuing
  - Interlibrary loan
  - Reservation
  - Over dues
- Management
  - Accounting/budgeting
  - Word processing / mailing
  - Scheduling/planning
  - Statistics/report

# Functions in ICT Based Library Systems...cont.

- Information storage/retrieval
  - Database construction
  - Online database searching
  - Down loading/uploading
- Reference/Information services
  - Bibliographic listing
  - Library instruction
  - Public access

# **Library Automation**

# Library Automation

- Automation is a process of using the machineries for easily working and saving the human power and time.

# Definitions

## Automation

The Replacement of human skill by automatic machine operations

## Library automation

Library automation is the general term for information and communications technologies (ICT) that are used to replace manual systems in the library.

The functions that may be automated are any or all of the following: acquisition, cataloging, circulation, serials management and reference.



# Cont...

- In the simple language “When we use machineries for collection, processing, storage and retrieval of information and do an other works of library with the help of machineries that called library automation.”

# Library Computerization

- Computerization is the part of library automation. At present use of the computer technology for library keeping operation such as administrative work, acquisition, cataloguing, circulation, serial control, OPAC etc. known as library computerization.

# Library Automation

- The main purpose of library automation is to free the librarians and library staff and to allow them to contribute more meaningfully to spread of knowledge and Information.

# Need of Library Automation

- Information explosion
- Availability of information in various formats (Print, non-print, graphical, audio-visual etc.)
- Different approaches and needs of user
- Limitation of library (time, space & human power)
- Duplication in house keeping operation
- To well management and retrieval of information
- To search national and international database
- Impact of communication technology
- Increasing numbers of users

# Cont...

- To Obtain increased operational efficiencies
- To improve the quality, speed and effectiveness of services
- To improve access the resources on other networks and systems, including the Web
- To improve the management of their physical and financial resources
- To facilitate wider dissemination of their information products and services
- Enable their participation in resource-sharing library networks

# Objectives of Library Automation

- Speedily disposal of library work
- Establishment of a well storage & retrieval system
- Time and human power saving with qualitative services
- Suitability for library cooperation & coordination development
- Simplicity in library management to meet the objectives
- Proper use of human resources
- Development of the new library services
- Preparation of reports and correspondence
- Suitability for resource sharing and networking
- Development of human resources

# Special Features of Library Automation

- It is an electronics based activity which is carried out by human beings
- It is helpful to providing library services
- Standardization in library work
- Accuracy in work
- Speedily communication of information
- Avoid duplication in the library work
- Trained staff
- Availability of information
- It is a time saving system
- User friendly system
- Networking

# Basic Requirements for Library Automation

- Adequate collection
- Financial assistance
- Hardware
- Software
- Trained staff
- User training
- Maintenance & development



# Advantages of Library Automation

- Easily searching of information
- Time saving
- Speedily communication
- Helpful in stock verification
- Easily working with the help of automation
- Helpful in resource sharing
- It motivate to library staff
- Development of human resource

# Disadvantages of Library Automation

- It is long term and time consuming process
- Financial expenses
- Continuous staff training are required for it
- Security problems
- It is totally depended on the electricity
- Costly maintenance
- Untrained users

# Suggestions for Library Automation

- Economical help should be provided by central, state, local govt. and library authority according to library and information policy.
- Libraries should be conducted training program time to time for the development of library staff.
- Librarian should be selected best hardware and software for automation
- All the data or information should be secure with the help of different security tool such as use of Anti-virus, firewall and taking a backup of data time to time.
- Inverter should be used for power

library management system

# What is a library management system?

A library management system, also known as an automated library system is software that has been developed to handle basic housekeeping functions of a library.

# library management system

LMS is of two basic types

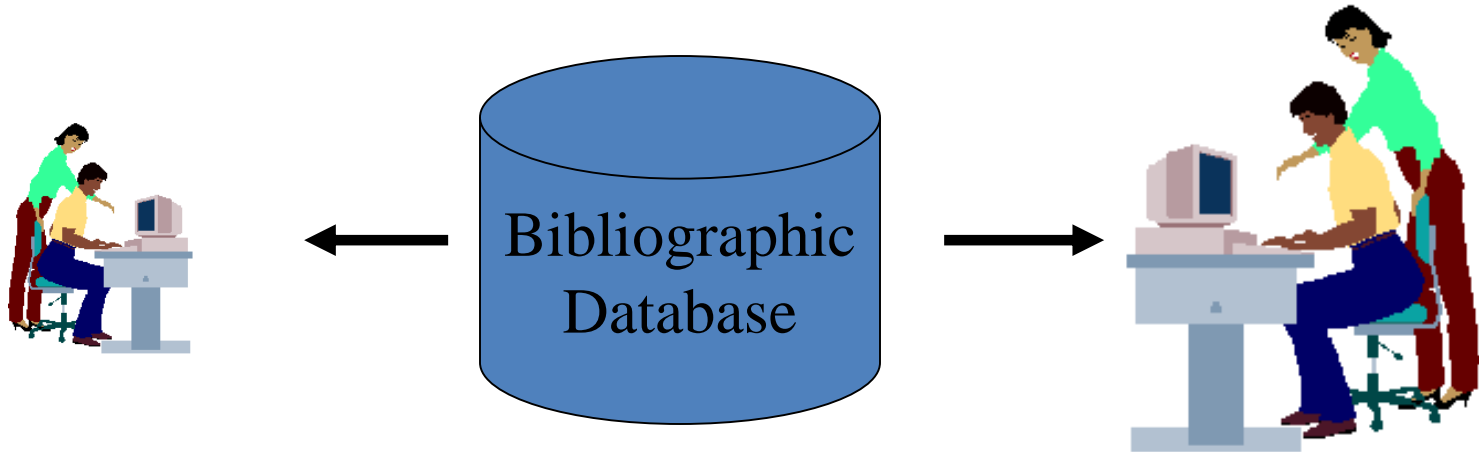
Stand-alone:

Performs only one library operation such as cataloging and OPAC

Integrated:

Can perform all or many operations using data from a single database

# A single function automated library system



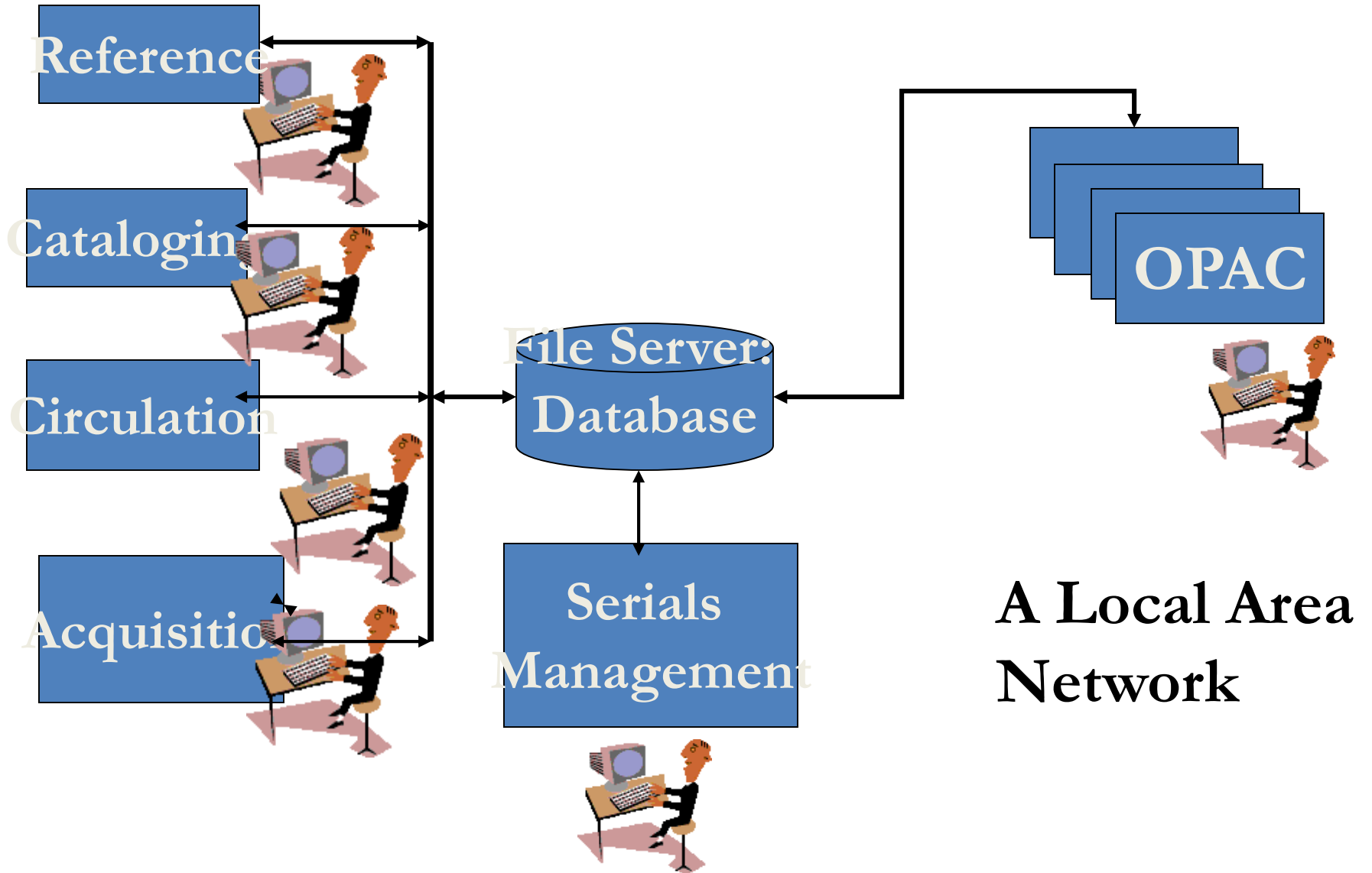
UNESCO's CDS/ISIS, a powerful information and storage retrieval software is used to create electronic catalogs and indexes and to provide OPAC to library users

What is an integrated library system?

When the library management system shares a common database to perform all the basic functions of a library, the system is integrated.



# A library with an integrated library system



# Library Software/ library management system

LMS is of two basic types

Open Source Library Software

Commercial Library Software

# Open and Commercial LMS:

S.No	Core services	Alice	Libsys	New Genlib	Soul	VTLS	Libsuite	Koha
01	Acquisition	1	1	1	1	1	1	1
02	Cataloguing	1	1	1	1	1	1	1
03	Circulation	1	1	1	1	1	1	1
04	Web/OPAC	1	1	1	1	1	1	1
05	Serials	1	1	1	1	1	1	1
06	Biblio format	1	1	1	1	1	1	1
07	Data exchange	1	1	1	1	1	1	1
08	Standards	1	1	1	1	1	1	1
09	Cost(Approx.)	12 Lak	35 Lakh	12 Lak	7 Lak	12 Lak	15 lak	free

# Software

Computer programme or software is set of instructions to computer to work in a desired manner.



There are two types of code for software

Object code

Source code

# Source Code

“Programming statements created by a programmer.”  
Instructions to computers are normally written by programmers in Programming Languages like – C, C++, Java etc.

These instructions are readable by humans and referred as Source Code.

In human readable form

Easy to modify

Programmers use a compiler to turn it into object code

## Source

Imports System

---

```
Public Class Employee
    Private _name As String
    Private _salary As Decimal
```

---

```
Public ReadOnly Property Name() As String
    Get
        Return _name
    End Get
End Property
```

---

```
Public ReadOnly Property Salary() As Decimal
    Get
        Return _salary
    End Get
End Property
```

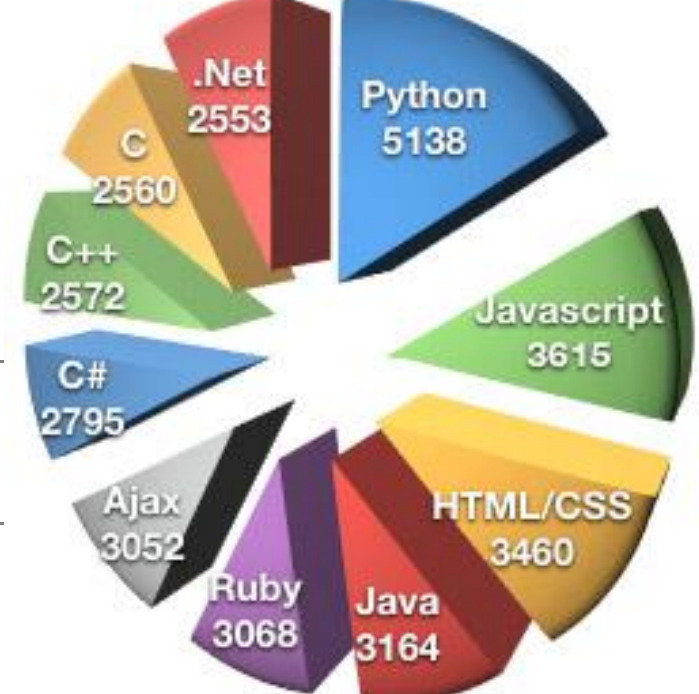
---

```
Public Sub IncreaseSalary(ByVal amount As Decimal)
    _salary += amount
End Sub
```

---

```
Public Sub New(ByVal name As String, ByVal salary As Decimal)
    _name = name
    _salary = salary
End Sub
End Class
```

---



## Object Code

Also called executable code

“The instruction sequence for the computer processor.”

Not human readable

Most software is distributed in object code form



# Open Source Software

Thus, Open Source Software is software for which the underlying programming code is also available to the users.

They may read it, make changes, and build new versions of the software incorporating their changes.

# What is koha

Koha was developed in 1999

First Open Source LMS

Koha is integrated library management system developed by Horowhenua Library Trust and Katipo Communications Ltd, New Zealand.

Koha is a full featured Integrated Library System (ILS). there is no cost for the license, you have the freedom to modify the product to adapt it to your needs, etc.

It is designed to manage physical collections of items (books, CD's, videos, reference, etc.)

Koha is web-based ILS, with a SQL database backend with cataloguing data stored in MARC and accessible via Z39.50.

The user interface is very configurable and adaptable and has been translated into many languages.

What is koha

It is currently maintained by a dedicated team of software providers and library technology staff from around the globe.

That by adopting it, the customer becomes "joint owner " of the product. In particular, the customer can freely install new versions or not, and can take part in new developments by financing them or by carrying them out them self.

It provides cataloguing, Searching, Member / patron management, an acquisitions system, and circulation (issues, returns, and reserves).

Circulation is handled with a full screen curses interface or a Web-based interface. It has OPAC and cataloguing, acquisition circulation modules

# What does it cost Koha ?

- ▶ Free/open source software Free download under the GNU General Public License.
- ▶ Users of open-source software Koha can often deploy yourself using in-house resources. They pay only for needed support or any additional vendor services they require.
- ▶ It means the cost involved development, upgrading, maintenance etc., Koha does not need the initial cost like commercial software.
- ▶ Here cost means commitment, dedication, and a long term efforts to sustain and development of the software.

# Who use of koha

More than 50000 libraries are using Koha, including academic, public, school and special libraries, in Africa, Australia, Canada, USA, France, India, Sri Lanka and, of course, New Zealand.

# Koha Feature

A full featured modern integrated library system (ILS).  
Linux, Unix, Windows and MacOS platform.

Web Based. We can full integrate it into your website.  
Full MARC21 and UNIMARC support for professional cataloguing.

Use as a document manager or digital library.  
Manage online and off line resources with the same tool.

E-mail and/or txt patron's over dues message and other notices.

- ▶ Print your own barcodes.
- ▶ Full catalog, circulation and acquisitions system for library stock management, Online reservation.
- ▶ Serial management module.
- ▶ Interlibrary loan
- ▶ Web based OPAC system (allows the public to search the catalog in the library and at home).
- ▶ Simple, clear search interface for all users
- ▶ Multilingual and multi-user support
- ▶ Export and import records, ISO2709
- ▶ Library-Standards-Compliant. industrial standards & protocols such as Z39.50 server,SRU, OPENSearch, NCIP
- ▶ Major industry-standard database type (text, RDBMS), SQL,MYSQL.

# Koha System Architecture:

- ▶ Koha is based on a client-server architecture.
- ▶ Network Server:
  - ▶ koha can be installed on a server running Linux, Unix, Mac. The recommended operating system is stable version of Debian Linux, although Koha can run on any modern operating system.
- ▶ Client Workstations:
  - ▶ Koha requires only a web browser on the workstation (a graphical browser, or even a text browser for the OPAC). Koha thus functions on PCs running Windows, PCs running Linux, Macs, or even UNIX workstations.
- ▶ Koha runs over any TCP-IP network.



## Koha Server Software:

- › Server operating system: Linux, OpenBSD, FreeBSD, MacOS X, or any other Unix.
- › Web server: Apache.
- › Programming language: Perl.
- › Database :MySQL.
- › Integrated Library software: Koha 17.6 (new)

# Skill Requirements To Operate System:

- ▶ Koha's interfaces are designed with usability in mind and are extremely user friendly.
- ▶ Staff and patrons with only basic computer skills have quickly learned to use the system efficiently.
- ▶ The cataloging module requires an understanding of cataloging practices such as MARC, Z30.50 retrieval tools, how to add holdings information, etc.
- ▶ Administrators should know operating system (Linux, etc.) for maintenance, some knowledge of cataloging in setting up the system preferences.



**Circulation**



**Serials**



**Patrons**



**Acquisitions**



**Advanced search**



**Reports**



**Lists**



**Koha administration**



**Cataloging**



**Tools**



**Authorities**



**About Koha**



# Online Public Access Catalogue

## University of Ruhuna

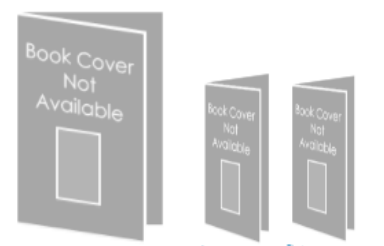
Search:

[Advanced search](#) | [Course reserves](#) | [Tag cloud](#) | [Most popular](#) | [Purchase suggestions](#)

### Home

- Quick Links**
- HOME
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  - Advanced Search
  - Legal Deposit Collection
  - Location Map
  - Opening Hours
  - Using Library
  - Collection
  - Contact Us

### New Arrivals within Last 7 days



The Faber Book of Religious Verse  
The Faber Book of Religious Verse  
The Faber Book of Religious Verse

#### About the Library

The Library of University of Ruhuna being a central research library in the southern region of Sri Lanka caters for vast variety of communities in the country. The Ruhuna University Library has four branch libraries in addition to the Main Library viz: Agricultural Library at Mapalana, Allied Health Sciences Library at Mahamodara, Engineering library at Hapugala and Medical Library at Karapitiya.

The resource collection consists of more than two hundred thousand books and 200 titles of periodicals related to courses and staff requirements of the university.

The library service intends to cater to a large body of users and more services will be provided through a distributed library system using modern communication technologies. The Ruhuna library will be automated using Koha Library Management System.

#### Legal Deposit and University of Ruhuna

The Main Library of University of Ruhuna is one of the five libraries entitled to maintain the Legal Deposit Collection in Sri Lanka since 2013. It is the only library that maintains an Online Public Access Catalogue (OPAC) to search the contents and provides reference facilities for patrons to continue their scholarly work.

### Log in to your account:

User Name:   
Password:

- Don't have an account?**
- Register here.
  - Forgot your password?
  - Reset Password

### Fast Moving Titles

Loading...

#### Search other University Library Systems in Sri Lanka

- South Eastern University of Sri Lanka
- Open University of Sri Lanka
- University of the Visual and Performing Arts

# ICT-Based User Services

- Web access to OPACs / Web OPAC
- Electronic document delivery (EDD)
- Networked information resources
- Delivery of information to users' desktops
- Online instruction
- Online readers advisory services

Thank You