
REMOTE ACCESS TOOLS AND DBMS FOR MODERNISING RESEARCH LIBRARIES

Dr V Thangavel

Head-LIRC & Librarian, University of Mumbai
St. Francis Institute of Management and Research, Mumbai. India.
v.thangavel@rocketmail.com

Received: 04/03/2026

Revised: 18/06/2026

Published: 30/06/2026

Abstract: Library services are being redefined by the incorporation of digital resources, which allow for innovation in everything from programming and collections to patron interaction and operational efficiency. Libraries' continued adoption of these technologies strengthens their position as forward-thinking, dynamic organisations, guaranteeing that their services continue to be significant and relevant in a quickly changing digital environment. This study, "Remote Access Tools and DBMS for modernising Research Libraries," suggests that remote access via academic libraries and library automation is a crucial component of educational institutions. The effect of remote access has transformed how libraries operate and their features, enabling them to perform more efficiently. Every piece of information that users come upon is something they want to peruse. They obtain their knowledge in a far-off location outside campus. The ideas, goals, and requirements of library automation are discussed in this article, along with the many add-ons that support library automation. Many software tools are available for automating tasks. This database management system for modernising Research libraries for remote access is followed using online libraries as access platforms, including Knimbus, Remotlog, MyLOFT, RemoteXS, EZproxy, Refread, and INFED. By creating user credentials and offering online education through various channels, consumers can now access subscribed resources remotely, utilising devices like laptops, cell phones, and personal computers, thanks to digital technology enabling this remote access by research libraries and their effective services for educational enrichment for the future generation

Keywords: DBMS, Remote Access, Research libraries, Modernisation, Future education, enrichment, E-Resources, Management. Scholars, Open Resources, Repository, Registry, e-journals, e-books, e-papers,

*E-Thesis, E-projects, e-educations, e-Conferences,
e-dictionaries, e-encyclopedia.*

Abstrak

Layanan perpustakaan sedang didefinisikan ulang melalui integrasi sumber daya digital, yang memungkinkan inovasi dalam berbagai aspek—mulai dari program dan koleksi hingga interaksi dengan pengguna dan efisiensi operasional. Adopsi berkelanjutan terhadap teknologi ini memperkuat posisi perpustakaan sebagai organisasi yang dinamis dan berwawasan ke depan, sekaligus menjamin relevansi serta signifikansi layanan mereka di tengah lingkungan digital yang berubah dengan cepat. Studi berjudul "Remote Access Tools and DBMS for modernising Research Libraries" ini menunjukkan bahwa akses jarak jauh melalui perpustakaan akademik dan otomatisasi perpustakaan merupakan komponen krusial bagi institusi pendidikan. Dampak dari akses jarak jauh telah mengubah cara kerja dan fitur perpustakaan, sehingga memungkinkan operasional yang lebih efisien. Setiap informasi yang ditemukan oleh pengguna merupakan materi yang ingin mereka pelajari lebih lanjut; mereka dapat memperoleh pengetahuan tersebut dari lokasi di luar kampus. Artikel ini membahas gagasan, tujuan, dan kebutuhan terkait otomatisasi perpustakaan, serta berbagai perangkat tambahan yang mendukung sistem tersebut. Tersedia banyak perangkat lunak untuk mengotomatisasi tugas-tugas perpustakaan. Sistem manajemen basis data untuk memodernisasi perpustakaan penelitian agar dapat diakses dari jarak jauh ini memanfaatkan platform akses daring seperti Knimbus, Remotlog, MyLOFT, RemoteXS, EZproxy, Refread, dan INFED. Berkat teknologi digital yang memfasilitasi akses jarak jauh serta layanan efektif perpustakaan penelitian dalam memperkaya pendidikan generasi mendatang, pengguna kini dapat mengakses sumber daya berlangganan dari jarak jauh menggunakan perangkat seperti laptop, ponsel, dan komputer pribadi, cukup dengan membuat kredensial pengguna dan memanfaatkan saluran pendidikan daring yang tersedia.

Kata kunci: *DBMS, Akses jarak jauh, Perpustakaan penelitian, Modernisasi, Pendidikan masa depan, Pengayaan, Sumber daya elektronik (E-Resources), Manajemen, Akademisi, Sumber daya terbuka, Repositori, Registri, e-jurnal, e-book, e-makalah, e-tesis, e-proyek, e-pendidikan, e-konferensi, e-kamus, e-ensiklopedia.*

1. INTRODUCTION:

A database management system (DBMS) consists of a set of tools to access a collection of connected data. This is a database since it is a collection of connected data with an underlying meaning. Information pertinent to a company is contained in the data collection, sometimes referred to as the database. The principal aim of a DBMS is to offer a practical and effective means of storing and retrieving database data (2023). We refer to known facts with an implicit meaning that are recordable as data. The management system is crucial since database maintenance is impossible without some sort of set of rules and regulations. In order to establish a relationship between two tables, we must decide which specific properties should be present in each table, which tables should be handled when a new record needs to be added or removed, etc. To address these problems and preserve the database's integrity, some sort of regulations must be in place. The purpose of database

systems is to handle vast amounts of data. Data management entails creating structures for information storage as well as processes for information manipulation. The database system must also guarantee the security of the data it stores, even in the event of system failures or efforts at illegal access. The system must prevent any unexpected outcomes if multiple users are to share the data. Computer scientists have created a vast array of ideas and methods for handling data because information is crucial to the majority of businesses. These principles and strategies comprise the subject of this book. The fundamental ideas and significance of database systems are briefly covered in this essay.

2. LITERATURE REVIEW:

Indraji C and Dominic J (2024): In their study, they outline the ideas, goals, and requirements of library automation as well as the various add-ons that support library automation. Many software tools are available for automating tasks. This is followed using online library remote access platforms including Knimbus, Remotlog, MyLOFT, RemoteXS, EZproxy, Refread, and INFED. By creating user credentials and offering online education through various channels, consumers can now access subscribed resources remotely, utilising devices like laptops, cell phones, and personal computers, through digital technology.

Ishtiyag H B (2019): According to his research, from 2010 until January 2019, the Library's vast collection of online resources was accessible through a single window using EZproxy software. Since February 2019, the library has switched to the most recent and cutting-edge RemoteXs software, which serves as a gateway for accessing its digital materials at any time and from any location. Our Allama Iqbal Library system has been able to create its own digital library portal with features to efficiently reach the target consumers thanks to RemoteXs' affordable cloud-based service model. RemoteXs has also alleviated us from investing in and maintaining an enormous physical infrastructure of e-mail servers, central servers, bandwidth bills, IP address registration, etc.

3. RESEARCH METHODS:

Methodology: The survey used the citation method to collect the data for the present study. The usage was cited based on the following elements: user profile, using online resources through respective platforms like Myloft, benefits of using e-resource platforms, awareness of the existence of electronic resources, Training session about the usage of electronic resources and its platforms, and importance of used database usage and usage of electronic resources and usage details by their respective platforms.

Aim of the Study: To improve library services, the main goal of research on the use of electronic resources (e-resources) in libraries is to examine user awareness about the DBMS and its respective platforms, user-friendly platforms, user interest and future, and purpose while identifying obstacles and evaluating satisfaction levels. These studies assess

how DBMS Remote access tools and e-databases, journals, and books are used for academic, research, or professional purposes by researchers, instructors, and students.

The Objective of the study was to 1. To assess the amount of familiarity and frequency of use of the different types of remote access tools among users. 2. To find the purpose and utilisation of the electronic resources and services by the users through respective remote access platforms. 3. To know the level of satisfaction with current electronic platforms for DBMS services in accessing the e-resources. 4. To know the difficulties encountered by the users while using remote access tools. 5. To assess the opinions of users on the electronic format over the print format.

Limitation of the Study: The present study aims to find the user level of DBMS Services to access e-resources in research libraries around the world through remote access tools. The investigator was able to identify the major limitations, such as the fact that the present study consists of only e-resources users and their satisfaction levels, utilisation and future of DBMS and its remote access tools.

Hypothesis: In this study, the following Hypotheses have been framed. 1. All are encouraged to use respective remote access tools for accessing a variety of databases. 2. All users are accessing electronic resources on their demand and future growth. 3. Experienced professionals are eager to use available remote access facilities by the respective libraries. 4. It is a teaching and research activity for feature generation networks of higher resolution and computer programming of online access systems for their research, teaching and learning purposes.

4. REMOTE ACCESS SERVICES

Remote Access Services facilitated by the library: *Library Server:* Use remote desktop programs or SSH (Secure Shell) for command-line access to efficiently administer a library server from a distance. OpenVPN is a common example, as it offers a safe and encrypted connection to the library server. This makes it possible for administrators to carry out tasks, change configurations, and identify problems without having to be present in person. Make sure that any remote access tool has sufficient encryption and authentication capabilities to safeguard critical library content. Collaboration tools and apps like Microsoft Teams, Zoom, or Google Meet may be taken into consideration if remote operation of the library server and staff training are required. Because of their encryption methods, these are incredibly safe (Ashikuzzaman 2024).

Integrated Library Management System (ILMS): Security and effectiveness should be given top priority while utilising remote access capabilities for library automation software. For secure communications, use virtual private networks (VPNs), put strong authentication measures in place, and update software and access credentials on a regular basis. Select solutions that minimise disruption to library services by enabling remote system monitoring and troubleshooting. To find and fix such security flaws as soon as feasible, audit user access and logs often.

Digital Library Open-Source Software: To provide seamless resource access, digital library software can effectively leverage remote access technologies. For instance, TeamViewer allows users to view and control the desktop of the host computer, facilitating remote access and collaboration. This can assist with software updates, troubleshooting, and user interface guidance for digital libraries. However, security and privacy must be taken into account while implementing such technologies in a library (2026).

Remote Access Tools and Newly Developed Systems for Libraries: A technology called remote access enables library patrons to access resources they have subscribed to at any time and from any location without interruption. These days, the following are some of the main techniques and technologies used to access e-content from locations other than library campuses: Cloud-based services like RemoteXs, EZproxy, VPN, Shibboleth, MyAthens, and OpenAthens, among others, offer a single portal for accessing a range of e-content, remote access authentication with a single login for all content, institutional IP address allocation, and usage statistics for all e-resources. With their credentials, users can access at any time on a range of devices, such as tablets and smartphones. So every library must develop based on future demand to fulfil the user requirements.

The Remote Access Challenge in Modern Education: Educational institutions today face the dual challenge of providing versatile learning environments while managing costs. Remote Access meets this challenge head-on, granting both educators and students seamless access to essential applications and resources on any device, enhancing both flexibility and affordability. Institutions can step beyond the limitations of traditional PC labs, facilitating a scalable, secure, and cost-effective educational model for the modern era, such as TsPlus (2026).



Fig. 1 Remote Access

Cloud Computing and its Models:

The provision of various services via the Internet is known as cloud computing. These resources include software, servers, databases, networking, data storage, and other tools and applications. It has access to the data and the software needed to run it instead of storing files on a proprietary hard drive or local storage device. For many reasons, including cost savings, greater productivity, speed, efficiency, and performance security, cloud computing is a popular choice for both individuals and businesses. Because the data being accessed is located remotely in the cloud or a virtual location, cloud computing gets its

name. Cloud service providers allow users to store files and apps on distant servers and access all the information online. This makes it possible for the user to operate remotely, as they don't need to be in a certain location to access it (Shaiwale 2017).

Cloud Deployment Models:

Public, private, community, and hybrid clouds are the four types of cloud deployment. The location of the deployment's infrastructure and the individuals in charge of it determine a cloud deployment model. It shows how users can access cloud services. The four deployment models connected with cloud computing are as follows

1. **Public or Open Cloud:** As the name implies, this kind of cloud deployment model accommodates all customers who wish to use a computer resource on a subscription basis, such as software (application servers, database) or hardware (OS, CPU, memory, storage). The most popular uses of public clouds are for email services, file sharing, and non-mission-critical tasks like application development and testing.
2. **Private cloud:** As the name suggests, a private cloud is usually utilised by just one company. The organisation may oversee such infrastructure. Either on its own to support different user groups or through a managed service provider that handles it remotely or on-site. Because private clouds require capital expenditures to acquire and operate, they are more costly than public clouds. Nonetheless, private clouds are more suited to handle today's organisations' security and privacy issues.
3. **Community cloud:** This deployment architecture facilitates the sharing of computing resources across several organisations that are part of the community. Examples include police agencies within a nation or state sharing computing resources, or colleges collaborating in certain research fields. Access to a community cloud environment is normally restricted to the members of the community. The end user usually pays little, and there is no capital outlay when using public clouds. Although using private clouds requires capital investment, the cost is still less than that of owning and running the infrastructure because of the higher degree of resource pooling and consolidation found in private clouds. Compared to public clouds, private clouds also provide greater security and compliance support. As a result, some businesses may decide to use public clouds for routine tasks like email services, application development and testing environments, and private clouds for their more secure, mission-critical applications.
4. **Hybrid Cloud:** An organisation uses an integrated private and public cloud infrastructure in a hybrid cloud. This approach is frequently used by businesses that need to quickly expand their IT infrastructure, such as when using public clouds to augment the capacity of a private cloud. For instance, an online store may use public clouds to obtain additional computer resources if it requires them to run its Web applications during the holiday season.

Service Models of Cloud Computing

Numerous services, which can be categorised based on roles, service providers, and user companies, are made feasible by cloud computing. Cloud computing services and models can be roughly categorised as follows:

1. **IAAS:** Infrastructure as a service (IAAS) refers to the outsourcing of IT's physical infrastructure, such as servers, storage, and networks, to a third-party supplier. Users can access the IT resources through an internet connection, and they are hosted on external servers.
2. **PAAS:** Platform as a Service (PAAS) enables the outsourcing of both physical infrastructure and software environments, including databases, runtimes, integration layers, and more.
3. **SAAS:** Software as a service is offered online and doesn't need to be installed beforehand. For a small monthly subscription, these services are accessible from anywhere in the world.

Remote Access Protocols:

The various types of remote access protocols are given below: 1. Point-to-Point Protocol (PPP), 2. RADIUS (Remote Authentication Dial-In User Service), 3. TACACS+ (Terminal Access Controller Access Control System+), 4. VPN (Virtual Private Network) & Tunnelling, 5. PPTP (Point to Point Tunnelling Protocol), 6. L2TP (Layer Two Tunnelling Protocol), 7. IPsec (Internet Protocol Security), 8. SSH (Secure SHell), 9. IEEE802.1x-collection of wireless protocols.

Libraries are essential facilities to promote remote access to e-databases

Libraries enable researchers, instructors, and students to access academic materials at any time and from any location. Remote access to e-resources is crucial for modern learning. With the growing popularity of online, hybrid, and remote learning methods today, using library resources remotely has become essential rather than optional. Essentially, remote access to e-resources eliminates knowledge barriers, increasing accessibility, flexibility, and inclusivity in education. Supporting the contemporary, digitally connected learning environment is essential to ensuring that teachers and students may succeed academically regardless of where they are physically located. Without being constrained by the library's physical location or operation hours, students can access a vast assortment of e-books, journals, research databases, and multimedia content via remote access. Because individuals may arrange their education around their schedules, this flexibility is especially crucial for students balancing numerous obligations, such as employment, family, and academics.

Additionally, remote access improves teamwork and research. With access to the same digital resources, instructors and students can collaborate on group assignments or cooperative research projects from different geographical locations. This encourages

international cooperation by giving users access to a range of viewpoints and information. Additionally, e-resources are often updated in real-time, ensuring that users are working with the most current information, a significant advantage in fast-changing industries such as medical, technology, and business.

Remote access ensures that all students have fair access to top-notch academic resources by bridging the gap between on-campus and off-campus education for online and distant learners. Students can use the same resources as those attending in-person classes, regardless of whether they are enrolled in an online degree program or using a hybrid learning strategy. This guarantees that distant learning programs are just as intellectually demanding as traditional ones, promoting student achievement wherever they may be (2024).

1. Remote Access Tools for Libraries:

In order to meet the needs of researchers, faculty, and students, modern libraries must provide remote access to e-databases for e-resources. Libraries can offer easy and safe access to digital content, including databases, academic journals, and e-books, from anywhere in the globe, thanks to a variety of platforms and tools. Libraries employ the following top e-databases for all types of e-resources, and remote access tools to make this access possible:

1) Platforms for Specialised Remote Access:

Libraries may manage, authenticate, and grant access to subscribed materials from any location on any device with these systems.

- a) *Kimbus*: A digital library platform that offers mobile app support along with a single, unified search gateway for all subscribed e-content.
- b) *2. MyLOFT (My Library on Fingertips)*: A platform developed for mobile-first access, allowing users to discover, tag, and organise information for offline reading.
3. *RemoteXS*: Created by Eclat Engineering, this cloud-based technology gives librarians access to a variety of e-content with only one login and usage data.
- c) *4. Remotlog*: A specialised tool that offers remote access to databases, journals, and ebooks through a secure login.
5. *Reftread*: A remote access program that makes it possible to access licensed digital content off campus.
6. *iPROX/iProx21 (Algorhythms)*: A middleware solution for remote authentication that works with IP, cookie, or username/password protocols and avoids the need for multiple passwords.
- d) *7. LSRemote (Libsys)*: Provides "one search" for digital and physical library resources.

- e) 8. *Aurora*: Aurora delivers open-source database flexibility with Islander and Drupal at its core, allowing customisation and community collaboration without a software engineering team. All databases and e-resources can be integrated and harvested using our default OAI-PMH feed. You can also connect to additional services via various APIs, including Google Analytics, Matomo/Piwik, and Single Sign-On solutions such as CAS, OAuth, and LDAP.
- f) 9. *Alma*: Alma electronic resource management is a versatile, cutting-edge library solution that makes it easier to manage print, digital, and electronic collections. has the capacity to effectively manage curation, acquisitions, and connections to library analytics. Alma consolidates resources and formats while giving a mechanism to streamline the metadata using unified workflows and processes that give a system for optimal efficiency.
- g) 10. *TS Plus*: Today's educational institutions must balance cost control with the provision of flexible learning settings. This problem is addressed with TSplus Remote Access, which improves flexibility and affordability by providing instructors and students with easy access to necessary apps and resources on any device. Institutions can overcome the constraints of conventional PC laboratories with TSplus, enabling a scalable, safe, and affordable educational approach for the contemporary period.
- h) 11. *TIND DA*: TIND DA offers a modern user experience to search and present your digital collections, fulfilling state-of-the-art accessibility standards. With built-in Optical Character Recognition (OCR), Handwritten Text Recognition (HTR), audio/video transcription and digital exhibits, TIND DA offers a wide variety of use cases and formats. Active digital preservation is a key feature of TIND DA, ensuring the long-term readability, accessibility, and security of your digital assets.
- i) 12. *Libby (by OverDrive)*: The standard app that allows patrons of public libraries to check out and peruse the whole digital collection of e-books, audiobooks, and magazines from their local library.
- j) 13. *Hoopla Digital*: A well-known app that offers immediate, simultaneous access to a huge library of music, movies, TV series, audiobooks, and e-books without having to wait for holds.
- k) 14. *ePlatform (by Wheelers)*: Optimised for smartphones and tablets, this program allows users to borrow and read e-books and audiobooks from school or public libraries, with automated synchronisation of reading positions across devices.
- l) 15. *Lean Library*: An add-on for Chrome, Firefox, Edge, and Safari that offers easy access to library-subscribed resources through browser searches. makes it easy to access scholarly publications, journals, and databases that are licensed by your library at any time and from any location. Install the browser

extension once and enjoy a simpler, faster method to acquire access. Set Up the Extension

- m) 16. *INFED*: The first Federation in India, the INDIAN Access Management Federation (INFED), has embraced Shibboleth, an open-source, standard-based program, to authenticate authorised college and university users and give them easy access to e-resources at any time and from any location. The INFLIBNET Centre, as one of its key responsibilities, provides access to academic e-resources to universities and colleges in India under the ONOS (One Nation One Subscription)
- n) 17. *NDLI*: Academic resources are available on several platforms thanks to the National Digital Library of India's award-winning smartphone application. Knowledge is accessible everywhere thanks to MNDLI, which was created for ease of use and finding educational resources. English, Hindi, Bengali, Telugu, Marathi, Tamil, Kannada, Gujarati, Malayalam, Odiya, and Assamese are among the languages in which MNDLI is available.

2). Proxy & Authentication Systems:

These programs operate in the background to confirm user credentials and grant access to publisher websites that are IP-authenticated and restricted.

- a) *EZproxy (OCLC)*: One of the most popular, long-standing technologies that works as an intermediate server between library customers and subscribing databases. To grant off-site users the same access as on-site users, "URL rewriting" is made possible.
- b) *OpenAthens*: A popular federated authentication system that offers a safe, single sign-on experience by managing access using SAML standards.
- c) *Shibboleth (INFED)*²¹: A federated, open-source authentication system that is frequently used in educational settings to impose uniform access regulations.
- d) *Web Access Management (WAM) or III-WAM*: This tool is frequently used to handle remote authentication in conjunction with library management systems, such as Sierra.

3). Infrastructure for Distant Access:

- a. *Virtual Private Network (VPN)*: A safe, encrypted tunnel that gives the impression that a user is on campus by connecting their remote device to the institutional network.
- b. *Remote Desktop Protocols (RDP/VNC)*: Software that allows a user to control a library computer/server from a distance, helpful for accessing certain locally installed software.

Tools for Discovery and Access:

These platforms facilitate simultaneous resource discovery and access.

- 1) *Google Scholar CASA (Campus Activated Subscriber Access)*: Enables easy access to subscriptions from off campus by connecting a researcher's Google ID with their institutional affiliation.
- 2) *EBSCO Discovery Service (EDS)*: Provides a single search box for a library's full collection, combined with remote authentication.
- 3) *Cloud Source (SirsiDynix)*: This application integrates Open Access resources and subscription content into a single search interface.

Tools For Developing Library Mobile Applications:

When developing a mobile application for a library, a variety of tools are required for development, integration, content management, and user experience enhancement. The following are a few of the most prominent platforms and technologies used when designing mobile apps for libraries:

- 1) **Flutter**: Google developed Flutter to address a problem within the company: "We keep creating iOS and Android applications for every mobile product; that's getting annoying."
- 2) **React Native**: The open-source React Native framework for creating mobile apps was created by Facebook. It enables developers to leverage a single JavaScript and React codebase to create natively rendered mobile apps for iOS and Android. Because React Native allows developers to use a consistent set of cross-platform components, it is an efficient way to create cross-platform mobile applications, especially those used by libraries.
- 3) **Xamarin**: Programmers can use C# and the .NET framework to construct cross-platform mobile applications using Microsoft's open-source Xamarin platform. By enabling the creation of native programs for Windows, iOS, and Android using shared code, it reduces development time and effort. Libraries may design mobile applications that run natively on several platforms with the help of Xamarin.
- 4) **Firebase**: Google's Firebase platform delivers a complete Backend as a Service (BaaS) solution, liberating developers from the burden of managing backend infrastructure and allowing them to focus on building, operating, and expanding mobile and web apps.
- 5) **AWS Amplify**: On behalf of Amazon Web Services (AWS), AWS Amplify is a cloud-based Backend as a Service (BaaS) that helps developers create safe and scalable mobile and web applications. Amplify's set of tools and services, which can be integrated into an application's frontend and backend, makes it easy for developers to build feature-rich apps.
- 6) **Kinvey**: File storage, user authentication, data storage, and real-time data synchronisation are just a few of the backend services that Progress Software's

Kinvey platform, a Backend as a Service (BaaS), provides to developers of online and mobile applications. Because of its serverless architecture, Kinvey enables libraries to build feature-rich mobile applications without worrying about managing backend infrastructure (2025).

Remote Access Rules:

1. Only personal research or study should be conducted using remote access, which is completely private. 2. The systematic download of vast volumes of data, including whole books or journals, the commercial use of data, and the systematic storing of data are all severely prohibited. 3. It is completely prohibited to utilise remote access in connection with another employer and to give user IDs and passwords (PIN codes) to third parties. 4. The user's remote access account will be closed if the library or data provider finds any abuse. 5. The library and the data provider both log all remote access-related traffic.

Mandatory Requirement & Terms for Remote Access:

1. Users may display, download, or print restricted copies of citations, abstracts, complete texts, or sections from e-books and e-databases only for research or private study, in accordance with the Copyright Ordinance's legal restrictions. 2. Under no circumstances may the e-books, e-databases, or any of their contents be used, reproduced, or modified for profit. 3. All the content in e-books and e-databases is protected by copyright; users are not permitted to remove, cancel, or modify any copyright or other proprietary notices that may be present in the content. 4. The license agreement prohibits users from downloading, copying, burning, capturing, transmitting, renting, selling, restreaming, or altering any content from the e-books and e-databases, as well as from producing derivative works based on such content. Information databases 5. Users are warned that any legal repercussions resulting from copyright infringement will be entirely their responsibility (2025).

Success of Library Law -Save the time of the Reader:

1. Documents delivered by snail mail have given way to documents received electronically in terms of technology for remote access to resources. 2. People can now locate articles in scholarly journals, publications, and newspapers without physically visiting the library. 3. Although not all volumes are available electronically, patrons can locate print and electronic books by searching the library's online catalogue. 4. The technologies employ a password to authenticate users. They can use the library's resources for their research after they have been verified.

Benefits or advantages of using distant platforms to access library materials (Database & e-Resources):

In contemporary education, research, and professional development, remote access to library materials has become crucial. As academic institutions, libraries, and users

increasingly adopt digital technology, the capacity to access e-books, e-journals, databases, and multimedia content from any location is revolutionising the way learners and researchers interact with information (2024). The main advantages of remote access to library materials are: 1. Convenience and Flexibility. 2. Support for Online and Distance Learning. 3. Wider Access to Resources. 4. Time and Cost Efficiency. 5. Enhanced Research and Collaboration. 6. Equitable Access to Resources. 7. Environmentally Friendly. 8. Real-Time Updates and Access to Current Information.

DISCUSSION AND RESULT

Discussion: In fact, this has made it easier for the university to concentrate on its main academic research endeavours and make appropriate use of its savings. The results demonstrate that users from all these categories were utilising e-resources; awareness of these resources motivates users to make the most use of them, and users are more likely to access information through personal computers, laptops, tablets, and mobile devices (2026). The decline in printed journals relative to the rise in electronic journals and online databases demonstrates the effect of e-resources. The use of e-databases and e-journals has grown significantly. Because electronic resources are readily available and easy to acquire, printed materials are rapidly being replaced (Ishtiyag H B 2019).

Result: To enable off-campus access to scholarly literature, journals, and databases, remote access technologies for library e-resources have become crucial, especially with COVID-19. Important conversations in this field, especially in academic contexts like India, centre on assessing tools for dependability, usability, and user happiness. The majority of respondents expressed interest in using digital library services and materials, according to the research. The majority of inhabitants access electronic resources from within the library because they use desktop computers. The resources are accessible from off-campus and outside the library for those using laptops and other mobile devices. To access all databases, other e-resources, and other mobile devices with internet access, the MyLoft library remote access tools administration should be very beneficial and easy to use.

5. CONCLUSION

A cultural change in the way libraries provide services, encourage study, and engage with their communities is represented by mobile integration. The vital function that Library DBMS plays in the library ecosystem is highlighted by this methodical evaluation. The development and flexibility of Library DBMS will be crucial in facilitating access to knowledge and information as libraries negotiate the digital era. For library researchers, experts, practitioners, and legislators, the review's conclusions offer crucial information that serves as a basis for upcoming developments and advancements. Library DBMS is a cornerstone in the dynamic and ever-changing realm of library science, ensuring that libraries continue to be vital hubs for information access and dissemination.

REFERENCE:

- Ashikuzzaman (2024): Remote access to library resources: why it is essential for modern learning. LIS Education network, Library & Information Science Academic blog. [www. lisedunetwork.com/remote-access-to-library-resources](http://www.lisedunetwork.com/remote-access-to-library-resources).
- Bhupendra Katariya (2023): Library Database Management System - A Systematic Literature Review. International Journal of Humanities, Social Science and Management (IJHSSM). Volume 3, Issue 5, Sep.-Oct., 2023, pp: 501-505. www.ijhssm.org.
- Indraji C and Dominic J (2024): Remote Access through Library Automation in Academic Libraries. Journal of Information Technology and Sciences, Vol. 10, Issue 2, May – August 2024, Pp 25-36, ISSN: 2581-849X. Cited 30 Jan 2026 on Researchgate.com
- Ishtiyag H B (2019): Remote access (Off-Campus access) to e-resources via EZproxy and RemoteXs facilities: A case study of Allama Iqbal Library system, University of Kashmir. IP Indian Journal of Library Science and Information Technology, Jan-June, 2019; 4(1), Pp25-30, <http://doi.org/10.18231/j.ijlsit.2019.008>.
- Praveen B et al (2025): Metrics, indicators, mapping and Data visualization in webometrics, informetrics, and scientometrics. B K Book Intl. Pp 578-583. ISBN: 978-81-932517-7-5
- Pratik Dhepe and Dhananjay G (2025): A Study of library mobile application tools and methods. Proceedings of 8th MUCLA National Conference 2025 organized by MUCLA RTMNU Sectional Council, Nagpur in Collaboration with ILA, KRC RTMNU, Nagpur and KRC KKSU Ramtek, Dist. Nagpur on 22-23 February, 2025. Pp 726-738.
- Shaiwale S B (2017): Libraries and Cloud Computing Technology: An overview. Current global reviewer Vol II Issue IX. Pp.27-31. ISSN: 2319-8648. www.rjournals.co.in.
- Thangavel V. (2026) Impact of AI in Research Data Management on Library Administration: VISION- 2035, International Journal of Library and Information Science Studies, Vol 12 Iss.1, Pp 1-19. ISSN: 2059-9064.
- Thangavel. V (2026). Use of E-Resources by the Management Scholars and Faculty in St. Francis Institute of Management and Research in Mumbai, India. International Journal of Library and Information Science (IJLIS), Vol.15, Iss 1, Pp 34-49, ISSN: 2277-3533 / 2277-3584
- TSPlus (2026): The Remote Access Challenge in Modern Education. Cited on 29 Jan 2026. <https://tsplus.net/remote-access-for-education/>
- Aurora: <https://www.discoverygarden.com/> Cited 02 Feb 2026.
- EZproxy (OCLC): <https://www.oclc.org> Cited 2 Feb 2026.
- For Alma: <https://exlibrisgroup.com/products/alma-library-services>. Cited 2 Feb 2026.
- Hopla: <https://www.hopladidigital.com>. Cited 2 Feb 2026.
- INFED: <https://www.infed.inflibnet.ac.in/> Cited 2 Feb 2026.

iPROX/iProx21: <https://www.irpox.cn> Cited 2 Feb 2026.
Knimbus: <https://www.knimbus.com>. Cited 2 Feb 2026.
Libbyapp: <https://www.libbyapp.com> Cited 2 Feb 2026.
LSRemote: <https://www.libsys.co.in/lremote> Cited 2 Feb 2026.
MyLoft: <https://www.standardsinformation.co/myloft-remotexs/> Cited 02 Feb 2026.
NDLI: <https://www.ndli.gov.in> Cited 2 Feb 2026.
OpenAthens: <https://www.openathens.net> Cited 2 Feb 2026.
Refread: <https://www.refread.com>. Cited 2 Feb 2026
Remotelog: <https://www.remotelog.com>. Cited 2 Feb 2026.
Remotexs: <https://www.remotexs.co/> Cited 2 Feb 2026.
Tinda: <https://www.tind.io/da> Cited 02 Feb 2026.
TSPlus: <https://www.tsplus.net>. Cited 2 Feb 2026.
<https://library.louisville.edu/az/databases>
<https://www.lisedunetwork.com>
<https://www.bibliotheca.com>