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Single Window Access to e-Resources at the Manipal University Healt Sciences Library

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Abstracts

E-resources have marked an impressive footprint in managing library and delivering the information services to the end-users. There are few technical hurdles such as performance of technology, timely access; user interfaces, troubleshooting, skilled manpower etc. which have made e-resources more complex in managing information and delivering services. To overcome these issues, the library and information system require an effective and efficient Electronic Resource Management System to assist the librarian in managing the e-resources. Since the last two decades, the information and communication technologies have equipped the librarian with certain e-tools to provide the e-resources services to the end-users in an effective and efficient manner.

The Health Sciences Library of Manipal University, Manipal, is a pioneer in providing services to the faculties and students of various disciplines. The library has large volume of e-resources in terms of book, journals, and online databases to cater to the need of library users. This paper makes an effort in providing the details on the ERMSS - an integrated e-resources management and search solution software which has provided for effective management of e-resources held by the Health Sciences Library.

Keywords: Internet; E-Resources; Single window access; Health Sciences Library; Library users; ERMSS.

Introduction

A library is a place where all the resources, i.e. books, journals, theses, projects, etc. are stored. Libraries now have electronic/web resources, Internet-based subscribed resources, open access e-contents like e-books, e-journals and many more. A library just can't maintain a stock of the resources if it does not make these available to the users. Until and unless the users find their desired information which they are seeking without wasting time, the e-resources available from the library portal are of no use.

E-resources have marked an impressive footprint in managing library and delivering the information services to the end-users. E-resource has crossed all geographical boundaries in providing easy and global access of knowledge to the end-users. The instant access of knowledge through these resources has not only increased the user's interest in utilizing it, but has also improved the quality of multidisciplinary research. There are few technical hurdles such as performance of technology, timely access, user interface, troubleshooting, skilled manpower etc. that have made e-resources more complex in managing information and delivering services. To overcome these issues the library and information system require an effective and efficient Electronic Resource Management System (ERMS) to assist the librarian in managing the e-resources.

Electronic resources management (ERM) is the practice and the software system used by libraries to keep track of important information about electronic information resources, especially Internet-based resources such as electronic journals, databases and electronic books. Management of e-resources has become a more challenging and daunting

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task. As the library responds to the enormously increasing online resources and the users' rising demand for the resources, the acquisition, metadata organization and system management of e-resources becomes increasingly complicated due to various types of publishers, and online interface provider, frequent changes in available journals and its issues within aggregated databases, and the variety in the scope of fair use for each of the license agreements.

Need of the single window access to E-resources

Single window access may cater to the specific needs of a library user. It provides easy access to e-resources subscribed by the library. It makes the task of the user simpler to access the multiple resources through a single window search interface. It also provides relevant and quick retrieval of information. Integrated access solution has several advantages, e.g. the search results generated from it are more reliable. The user can access the e-resources from anywhere. The libraries can make optimum use of their e-resources.

The purpose of single window access for effective searching of e-resources subscribed in a library is for meeting issues of the library management. There are many hurdles that are faced by the librarians in order to make the e-resources available to its users without wasting their time. Single window access to e-resources could help the libraries in greater ways if the library has:

- Full text collections from any publisher
- Full text databases
- Full text electronic journals, electronic books, individual titles
- Open access linking to titles to which library does not subscribe
- Free internet titles
- Direct access to library's catalog, OPAC, databases and other e-resources

Manipal University, Manipal, India

Manipal, today, is a knowledge powerhouse and a brand name in higher education. Over five and a half decades ago, one man, Dr Tonse Madhava Anantha Pai, had a vision which ensured that everything he did then was consigned to posterity, making sure that generation after generation of students enjoyed the fruits of his labour till eternity on this lateritic plateau, and the students would, forever, have one name on their lips; Manipal.

Manipal University is a name to remember, not just across the length and breadth of India but worldwide. The fact that students from 52 countries are studying here is a testimony to this fame.

Located on the west coast of South India, Manipal was a barren wasteland, a plateau with wild animals. It was this plateau that Dr TMA Pai decided to change. His vision for Manipal covered a wide spectrum of interests because he himself donned many hats. He was a physician, an educationist, a banker and, above all, a philanthropist at heart.

However, it all started with the vision of Dr. TMA Pai, who is regarded as one of the founders of modern India, and was facilitated with Padmashri and a commutative stamp by Govt. of India. The establishment of Kasturba Medical College, Manipal, in 1953, set the platform for global education in India. This was followed by many flagship institutions, like Manipal Institute of Technology (MIT), Manipal College of Dental Sciences and many other world class institutions.

Then, in 1993, MAHE was accorded a deemed university status under Section 3 of the UGC Act 1956, by the Ministry of Human Resource Development, Government of India. Today, it has 20 constituent institutions comprising medical, dental, engineering, architecture, nursing, allied health, pharmacy, management, communication, information science, hotel management, biotechnology, regenerative medicine etc. The university offers Bachelors', Masters' and Doctoral degrees in various specialties.

At the time of receiving the deemed university status, only five professional institutions existed. Encouraged by the new status, the university grew by leaps and bounds. The emphasis has always been, and still is, on quality education, which is why the degrees offered by the university are recognized the world over. The university provides excellent educational facilities to over 17,000 students in its constituent colleges. It also has an active alumni base of over 65,000 students across the world.

Manipal University (MU) has branch campuses in Bangalore, Malaysia, Dubai and Antigua in the Caribbean Island. There is also a campus in Mangalore with a medical college, a dental college and a nursing college with attached teaching hospitals. MU has an international academic collaboration for twinning programmes in engineering with universities in the US, UK, Australia and other countries.

Manipal Group institutions are located on scenic campuses, which provide high quality lifestyle and are ideal environment for study. All campuses have excellent infrastructure for academic activities, sports and other extracurricular activities. The infrastructure includes air-conditioned lecture halls, skills lab, air-conditioned hostels, and multicuisine food court and state-of-the-art health sciences library. The latest addition to the facilities, a Simulation Lab with computer driven mannequins, is an achievement which the university is proud of. It is of considerable help to students in the field of health care.

Besides being an ISO 9001:2008 and ISO 14001: 2004 certified university, it is home to top 10 ranked institutions of India. Manipal University has won the prestigious IMC Ramkrishna Bajaj National Quality Award and International Asia Pacific Quality Award during 2007- 2008.

Manipal University Health Sciences Library

Manipal University has an excellent health sciences library, perhaps the best among all health sciences libraries in India. The state-of-the-art library stretching over 1.5 lakh square feet on five levels is a domain for information seekers, be it students, faculty or researchers.

Fig 1: Home Page of Health Sciences Library Intranet Web Page

It has the capacity to accommodate 1300 students at a time. Besides the comfortable seating and reading environment, the library is well equipped with modern facilities such as e-learning, access to Internet and web resources, including online journals and e-books. The library provides a growing range of databases available in electronic form on the campus network. All the library services have been automated on modern lines. The library has fully computerized collection which is accessible through OPAC. The library is enabled with Wi-Fi technology and security systems like Closed Circuit Television System (CCTV). There is a separate audio-visual room, computer lab, group study area and private study area in the library. The library has all the facilities for the students to learn. The Health Sciences Library is committed to providing world-class information support to its users.

The library has over 57,000 books and subscribes to 570 print journals, 34,600 back volumes of journals, 925 audio and visual cassettes, 500 CDs, 5000 theses, 2000 WHO publications, etc.

An e-resource is any resource which is accessed via the Internet. The library provides access to a wide variety of e-resources

Table 1: Subscribed e-resources of the Health Sciences Library

Names of the e-resources subscribed
Science Direct
Scopus
MD Consult
OvidSP
ProQuest Medical Library
IDIS Drug Information Database
CINHAL Plus with Full Text
Net Anatomy Educational Web Site
Online Journals of Various Publishers (Elsevier Science, Lippincott, Wiley-Blackwell, Springer Link, Informa Healthcare, Karger, Thieme, BMJ, Oxford University Press, Sage, Nature etc.)
e-Books of Various Publishers (Elsevier Science, Lippincott etc.)

Table 2: Open access resources made available at the Health Sciences Library

Names of the open access (free) e-resources
Bioline International
BioMed Central
Cochrane Library Online
DOAJ – Directory of Open Access Journals
Free Medical Journals
FreeBooks4Doctors
MedIND
Medknow Journals
Medline Plus
PLoS
Priory Medical Journals
PubMed Central
PubMed/MEDLINE

including e-books, online journals, digital collections, online databases and websites. All library e-resources can be accessed on campus. A variety of e-resources, including 9 online databases, more than 3200 online journals and e-books can be accessed from computers in the library on campus network.

The collection of the Health Sciences Library in the area of medical sciences, dental sciences, nursing sciences, pharmaceutical sciences, allied health sciences and life sciences is very strong. The library has an international examination resource centre that helps the students to take several competitive examinations that are held both in India and abroad. The library has a webpage and users can browse e-journals, e-books and online databases and other e-resources in intranet environment in the campus.

Statement of the Problem

The Health Sciences Library of Manipal University had earlier access to plenty of e-resources and while performing a search on library website/portal, a user had to browse through multiple links to access e-resources available in the library. There was no single window access to all the e-resources available in the library. As the number of e-resources continued to increase, the library found it ever so complicated to catalog these resources. Users, frustrated by having to access and search multiple databases with different user interfaces and log-in methods, were often deterred from using these resources altogether. It had become very clear that the university needed a more efficient and effective system for its users to perform fast and interdisciplinary searches across various resources from different providers.

To overcome this situation, the Health Sciences Library began its quest for a single window access solution by identifying a number of requirements, such as establishing a single point of entry to the library's many e-resources and categorizing the databases so that users could establish the best place from where to begin their search. The library began comparing available single point access solution and found that ERMSS (e-Resources Management and Search Solution) best met all of library requirements.

The ERMSS software

ERMSS is a comprehensive search solution which has parameterized search functionalities. It can perform search on titles of e-resources (e-journals, e-books and online databases) integrated with the solutions which provides integrated and mapped results from e-resources. User can access the e-resources and their content from anywhere, any place in the campus through intranet. This solution provides linking of all of the e-resources (e-journals, e-books and online databases) subscribed by the library as well as open access resources. In this solution A-Z listing has been done for all e-resources.

ERMSS is built on highly scalable and flexible technology platform. This solution is backed by online help for all users. Online help provides the complete information to use the ERMSS. Some key benefits of ERMSS are as follows:

- Provides a single window access for all library's e-resources
- Allows patrons to search any or all of the library's databases
- Provides easy-to-navigate and searchable interface
- Integrated solution for linking of all e-resources subscribed by the library as well as other e-resources available free on the web
- Customized solutions for the management and access of e-resources
- Integration with library existing web portal and web OPAC
- Enables access to favorites or specific information on specific subject areas of a user
- Link to other websites or search engines
- Frees up valuable staff time

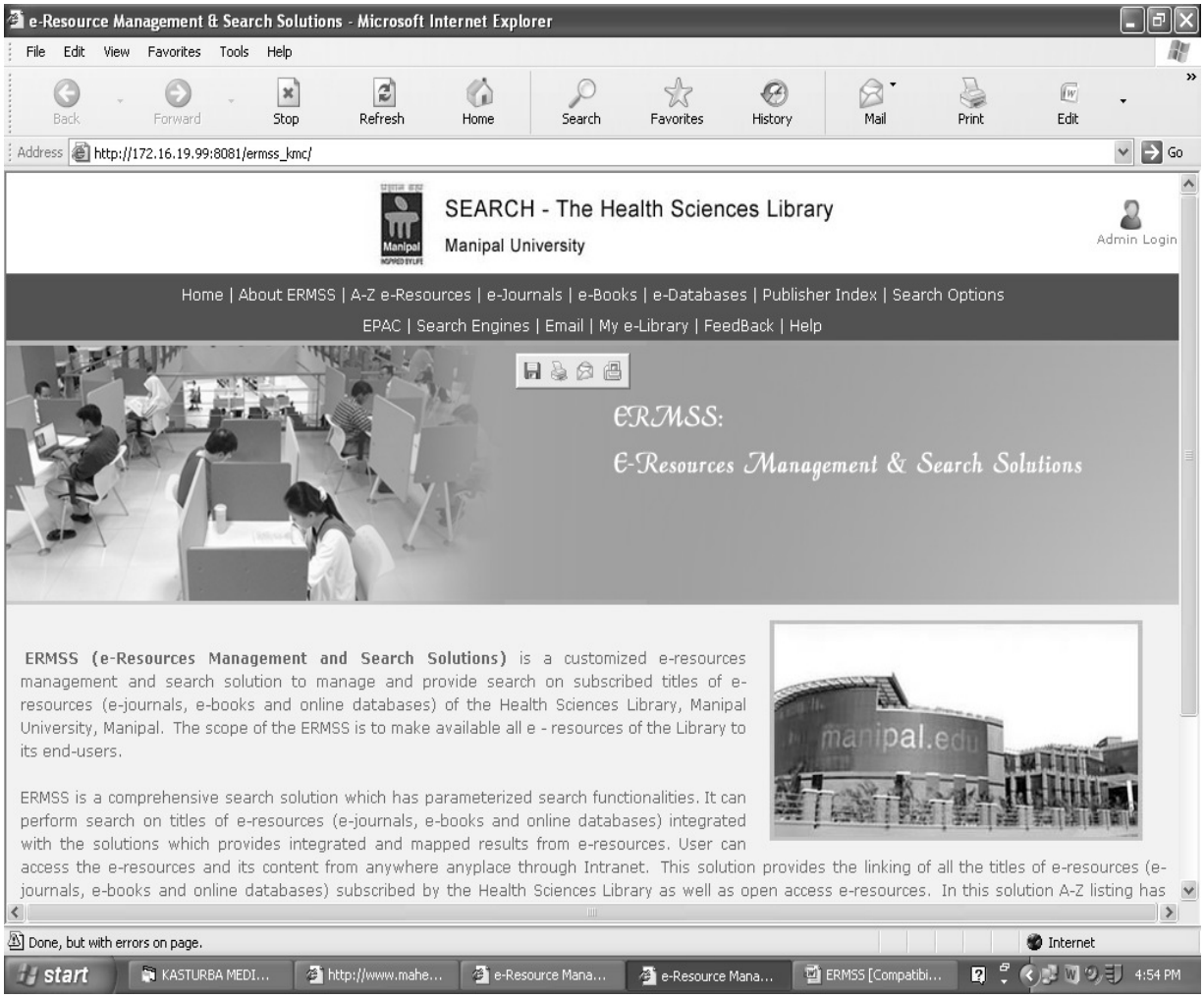
Using a phased approach, the library initially offered a small selection of its e-resources via ERMSS and then increased the number of these resources over time. Today, through ERMSS, users access almost all of the library's databases and e-resources-previously accessible only through different interfaces-via a single entry point. When entering ERMSS, the user is presented with eight collection categories, each containing the most relevant resources for a certain field. ERMSS also provides lists of databases and e-resources structured by subject areas, which enable users to create personalized, tailor-made search sets. Before the library used ERMSS, it was almost impossible for users to know where to start looking for the e-resources they needed. Now they can identify the closest point of access with ease and focus their search in the right place.

Getting Into ERMSS

The implementation of ERMSS started at the Manipal University Health Sciences Library in the month of March, 2008 and system went live in the month of June, 2008. Health Sciences Library has provided both subscribed e-resources and open access (free) resources for integration in the ERMSS.

ERMSS is composed of various modules, such as "Home, About ERMSS, A-Z e-Resources, e-Journals, e-Books, e-Databases, Publishers Index, Search Options, EPAC, Search Engines, e-Mail Alerts, My e-Library, Feed Back, Help, Admin Login". With these

Fig 2: Home page of ERMSS implemented at the Health Sciences Library, Manipal University



modules, Health Sciences Library has managed all its e-resources in one place, including:

- Full text collections from any publisher
- Full text databases
- Full text e-journals, e-books and individual titles
- Open access linking to titles to which library does not subscribe
- Library's catalog, OPAC
- Print resources (books, journals, back volumes of journals, WHO publications, etc.)
- Link to other websites, bibliographic database, search engines
- Online help to users to use the ERMSS
- Administration panel services like resource management (add/modify/edit/delete any e-resources), category management (add/modify/edit/delete any subjects), usage statistics (e-resources/databases), etc.

How ERMSS Works?

Functions of ERMSS software can be divided into the following two categories:

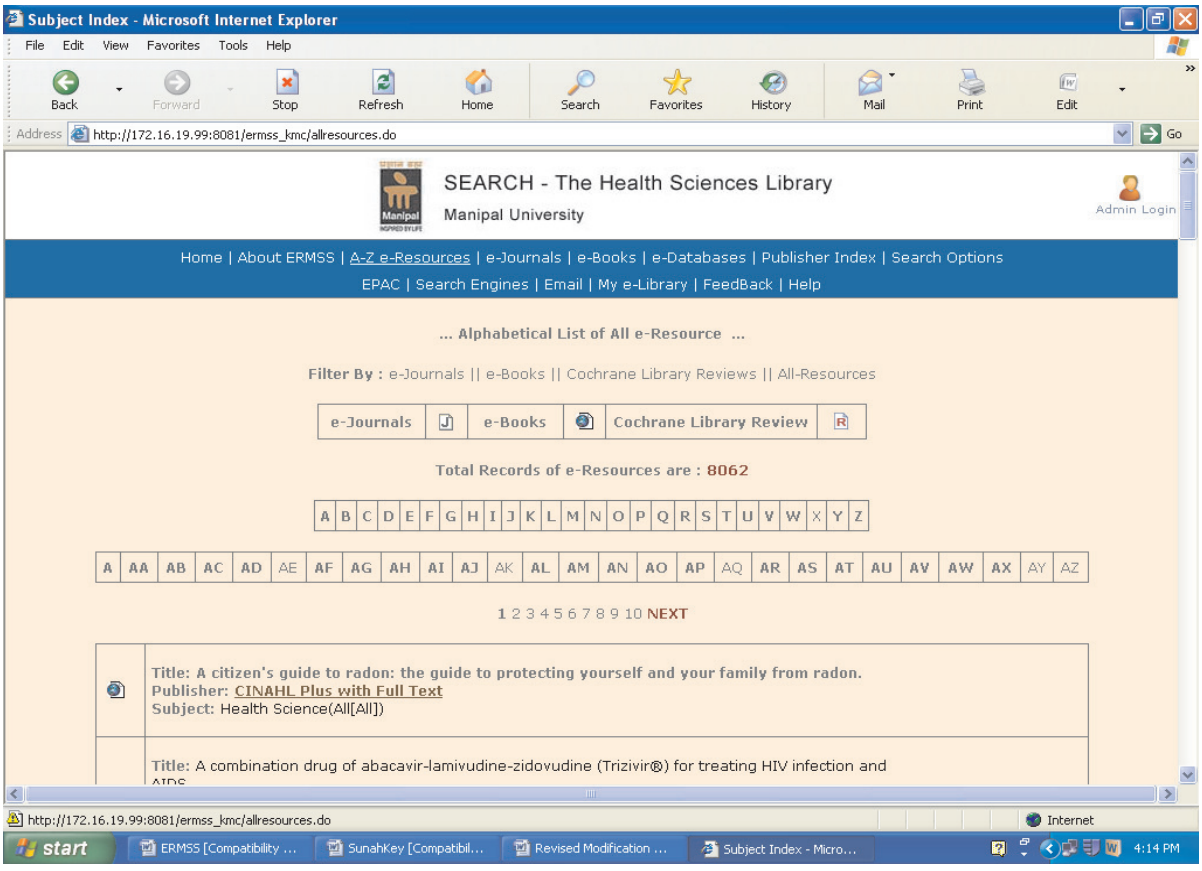
A) User panel services

B) Administration panel services

A) User Panel Services

ERMSS solution provides the linking of all the titles of the e-resources subscribed by the library and open access resources. It is useful for the library users and all knowledge seekers. They can easily view, access and search within all the e-resource contents with the same interface. User site of ERMSS is comprised of various user panel services. Following are the complete view of the functioning of each icon of the user panel services of the ERMSS.

Fig 3: A-Z e-resources



i) A-Z e-Resources

All the integrated e-resources are alphabetically arranged here. Listing of the e-resources has been provided by three parameters: Title Listing, Publisher Listing and Subject Listing. By clicking on "A-Z e-Resources", it shows/displays the alphabetical list of all the e-resources such as e-journals, e-books and cochrane library reviews. All the e-resources are symbolized differently: e-journals, e-books, cochrane library reviews.

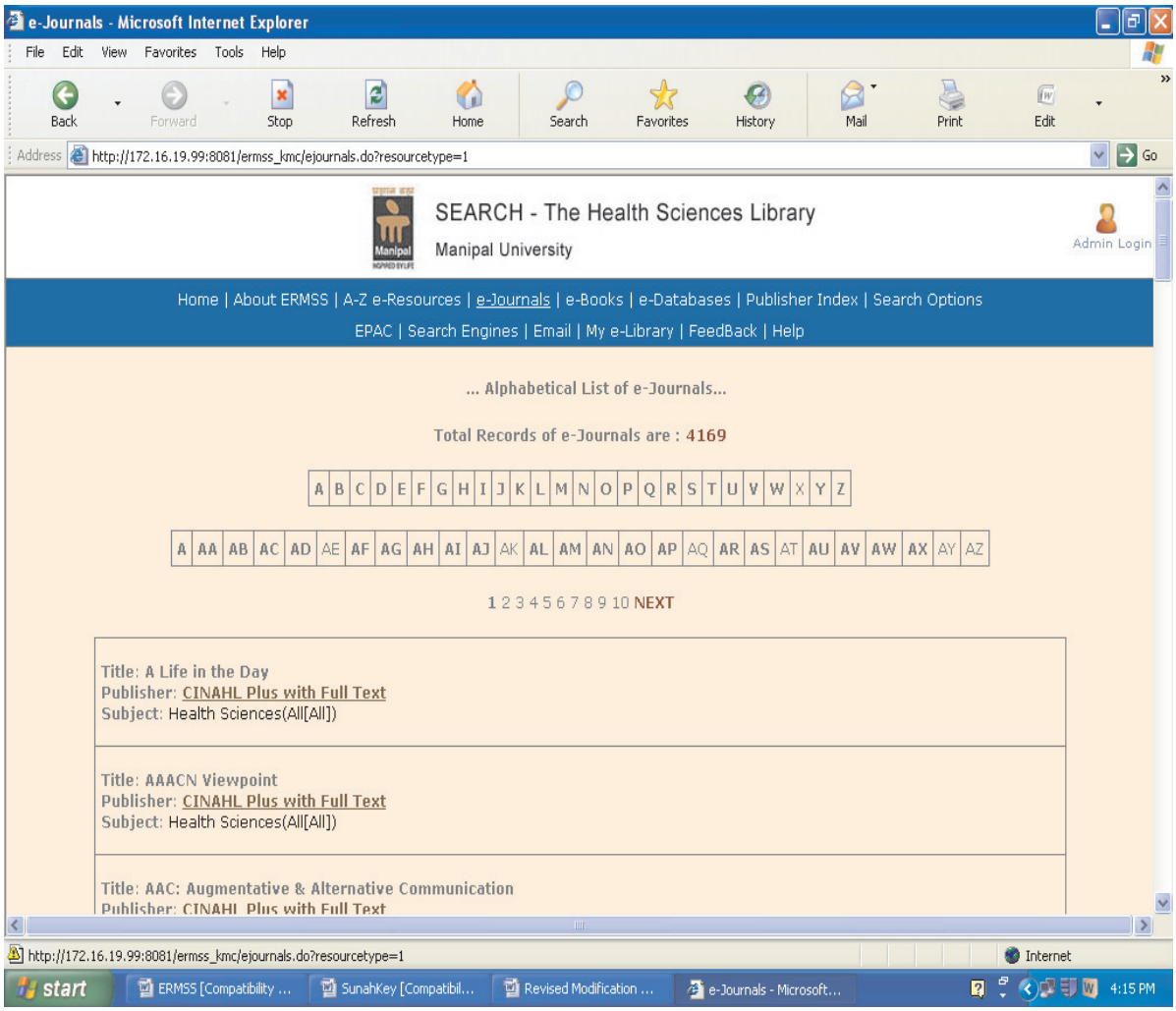
ii) e-Journals

This provides the alphabetical list of e-journals and the search result is displayed: Title wise, Publisher wise and Subject wise.

iii) e-Books

This icon provides the alphabetical list of e-books and the search result is displayed: Title wise, Publisher wise and Subject wise

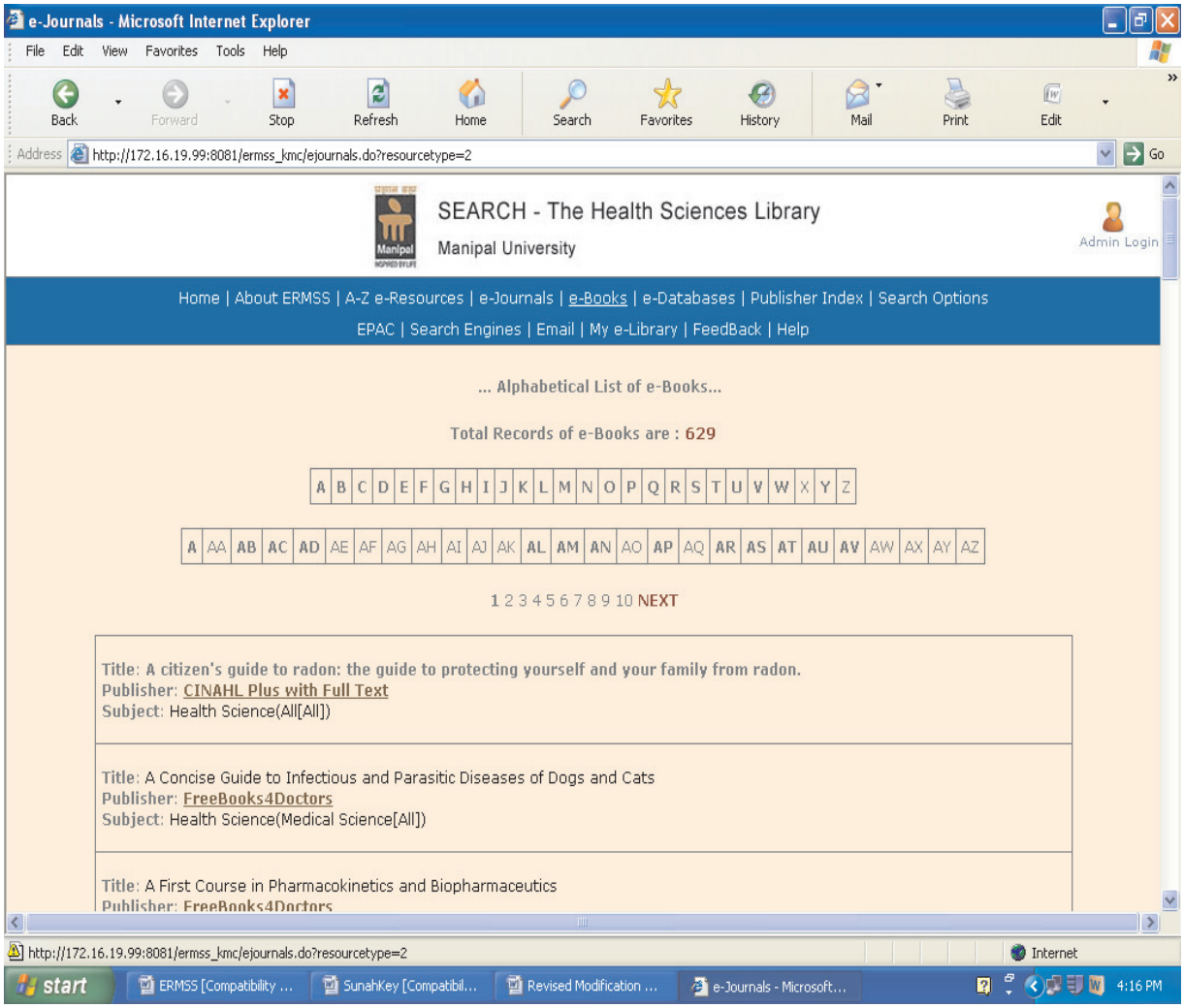
Fig 4: e-Journals



iv) e- Databases

This provides the alphabetical list of subscribed databases such as CINAHL Plus with Full Text, Cochrane Library Online, DELNET Online, DynaMed, IDIS - Iowa drug information service, MD Consult, Net Anatomy Educational Website, OvidSP, ProQuest Medical Library, PubMed/Medline, Science Direct, Scopus and open access databases such as Bioline International,

Fig 5: e-Books



BioMed Central, DOAJ – Directory of open access journals, Free Books 4 Doctors, Free Medical Journals, MedIND, Medknow Journals, Medline Plus, PLoS, Priory Medical Journals, PubMed Central.

v) Publishers Index

This icon provides the alphabetical listing of all the publishers. Some of them are American Medical Association, BMJ, HighWire Press, Informa Healthcare, Ingenta Conect, John Wiley, Karger, Quintessence, Sage, Springer, Thieme, Wiley-Blackwell, etc.

vi) Search Options (Basic, Subject and Advanced)

Basic Search provides link to full text of e-journals, e-books and online databases. User can search information in fields like journal title, publisher, subject category, etc. User can search on a single search field or multiple search parameters

Subject Search facility enables single window search to all e-resources available through ERMSS. Here, the user can find information about a specific field/subject on a single window itself rather than visiting hundreds of e-journals, e-books and online databases subscribed by the library.

Fig 6: e-Databases

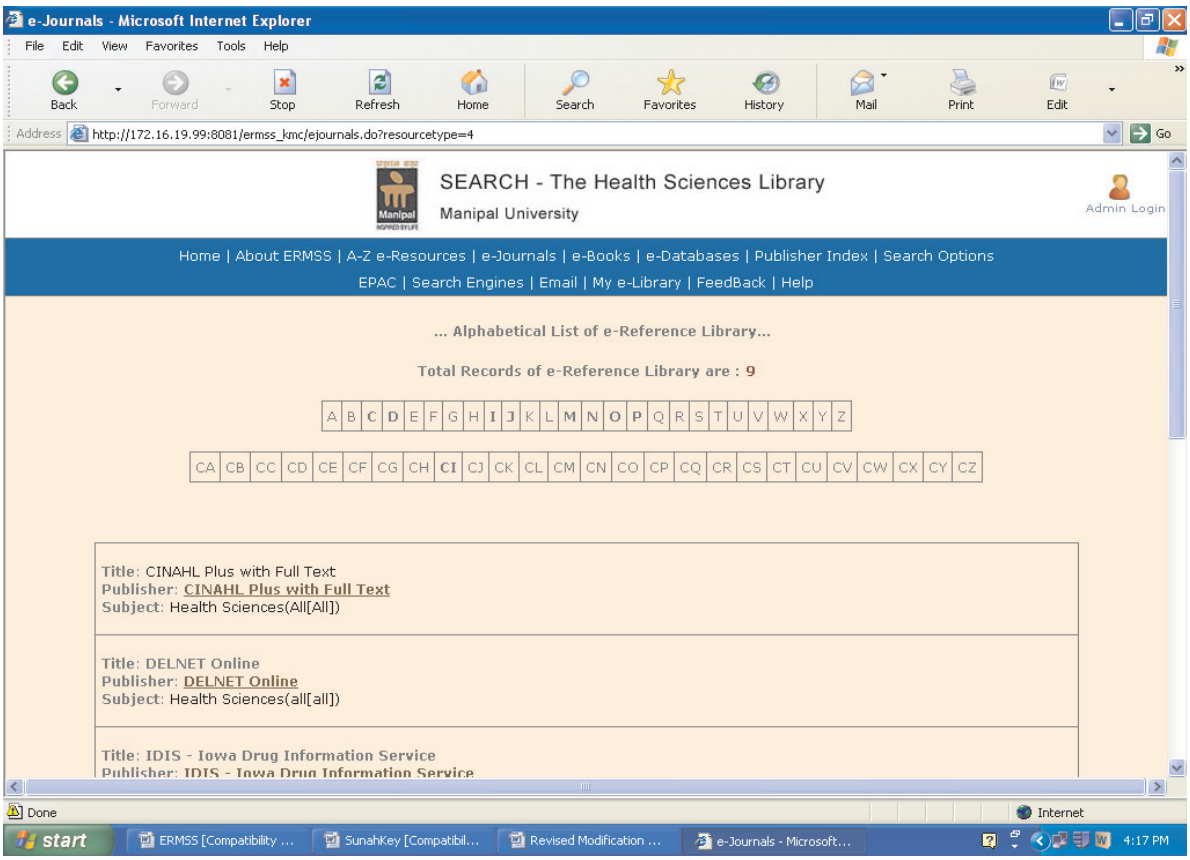


Fig 7: Publishers index

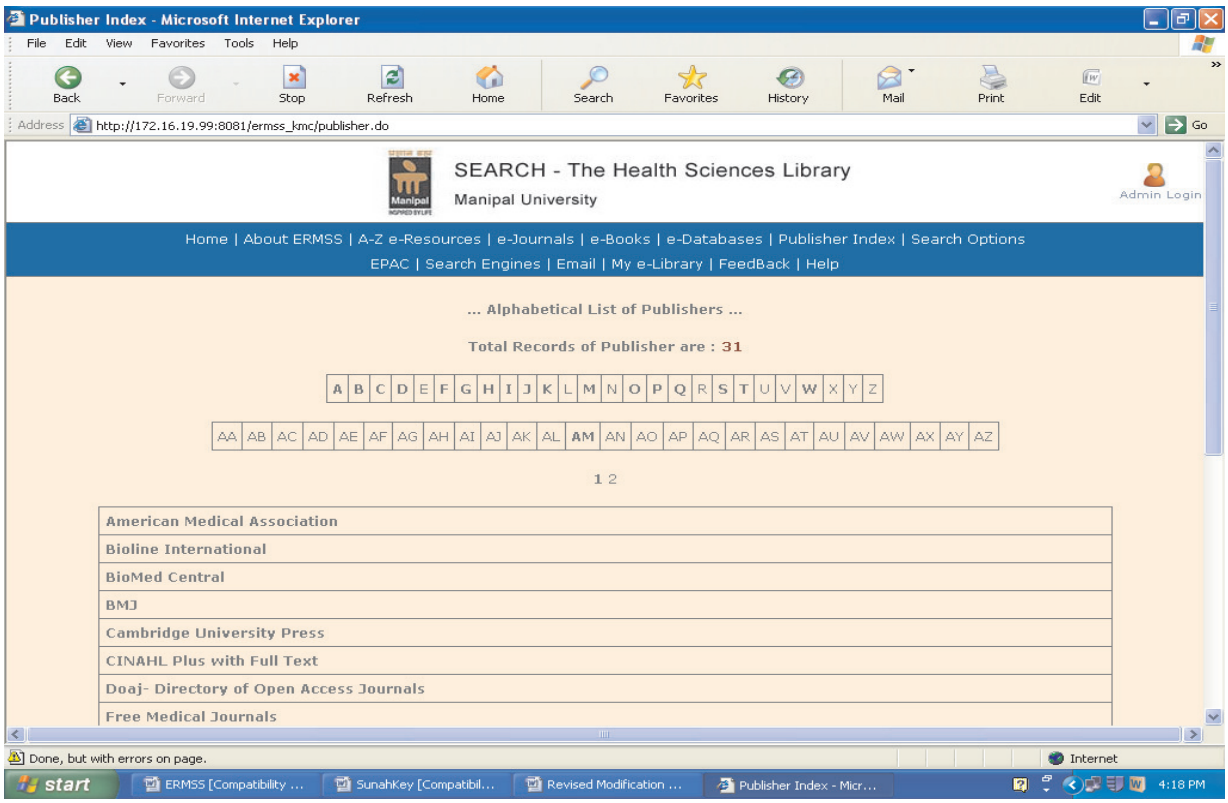


Fig 8: Basic search

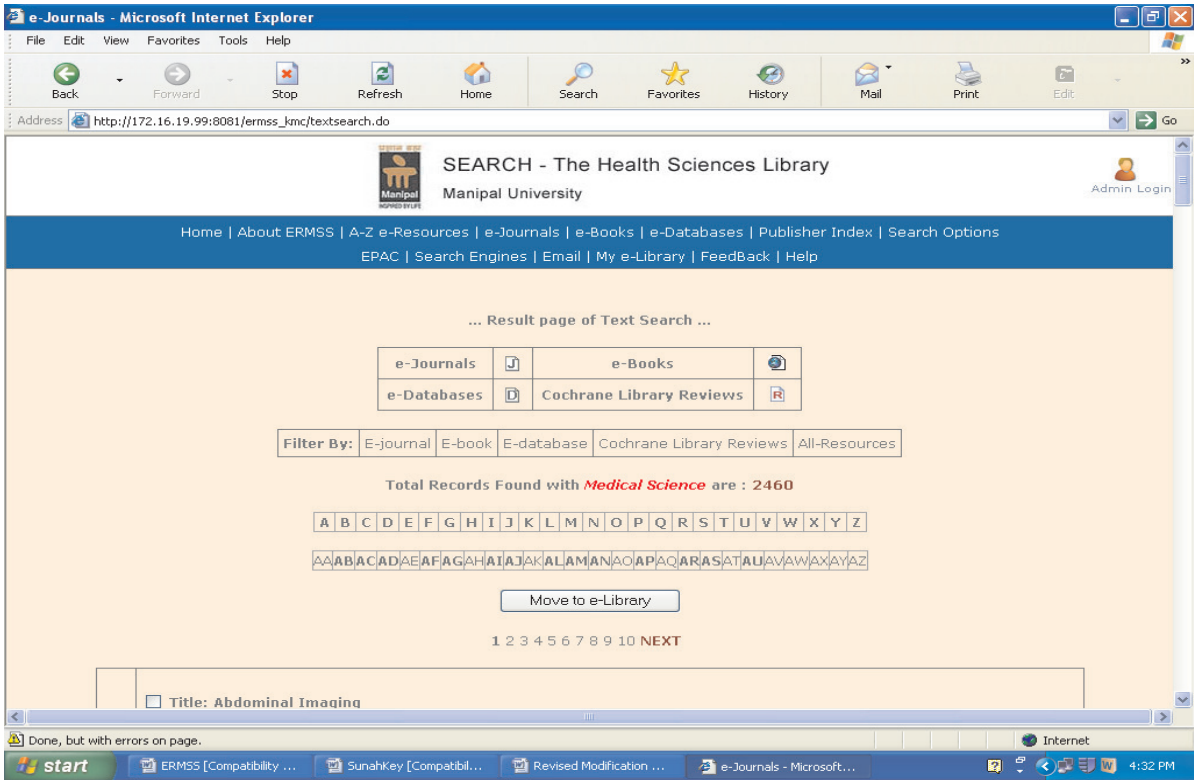


Fig 9: Subject search

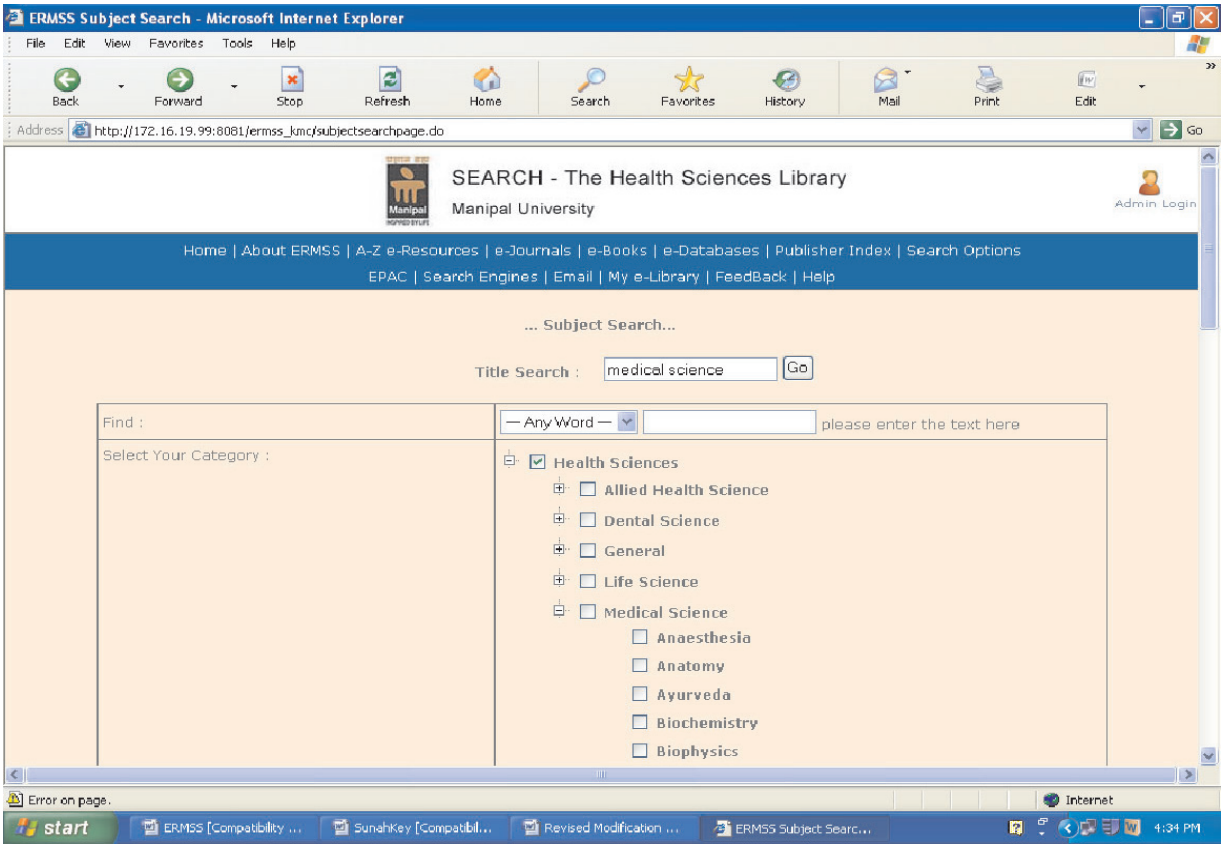


Fig 10: Advanced search

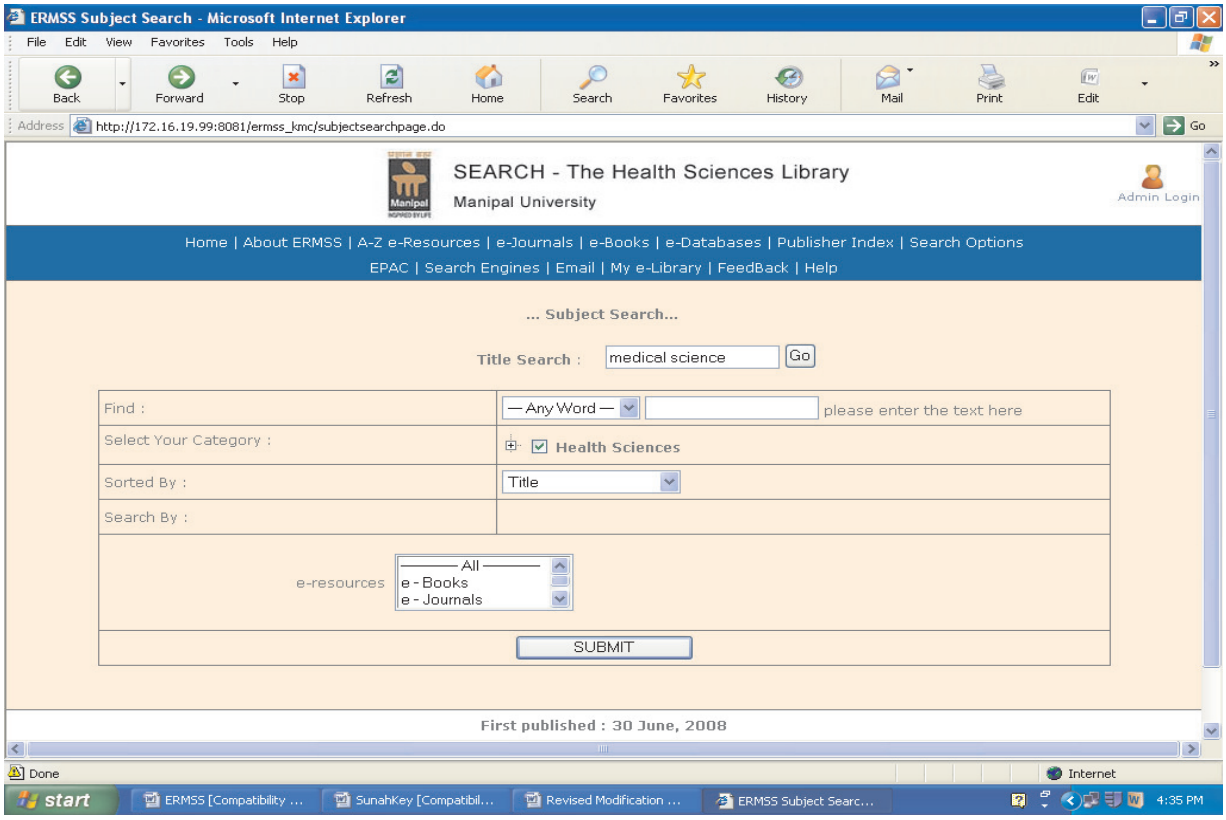


Fig 11: EPAC

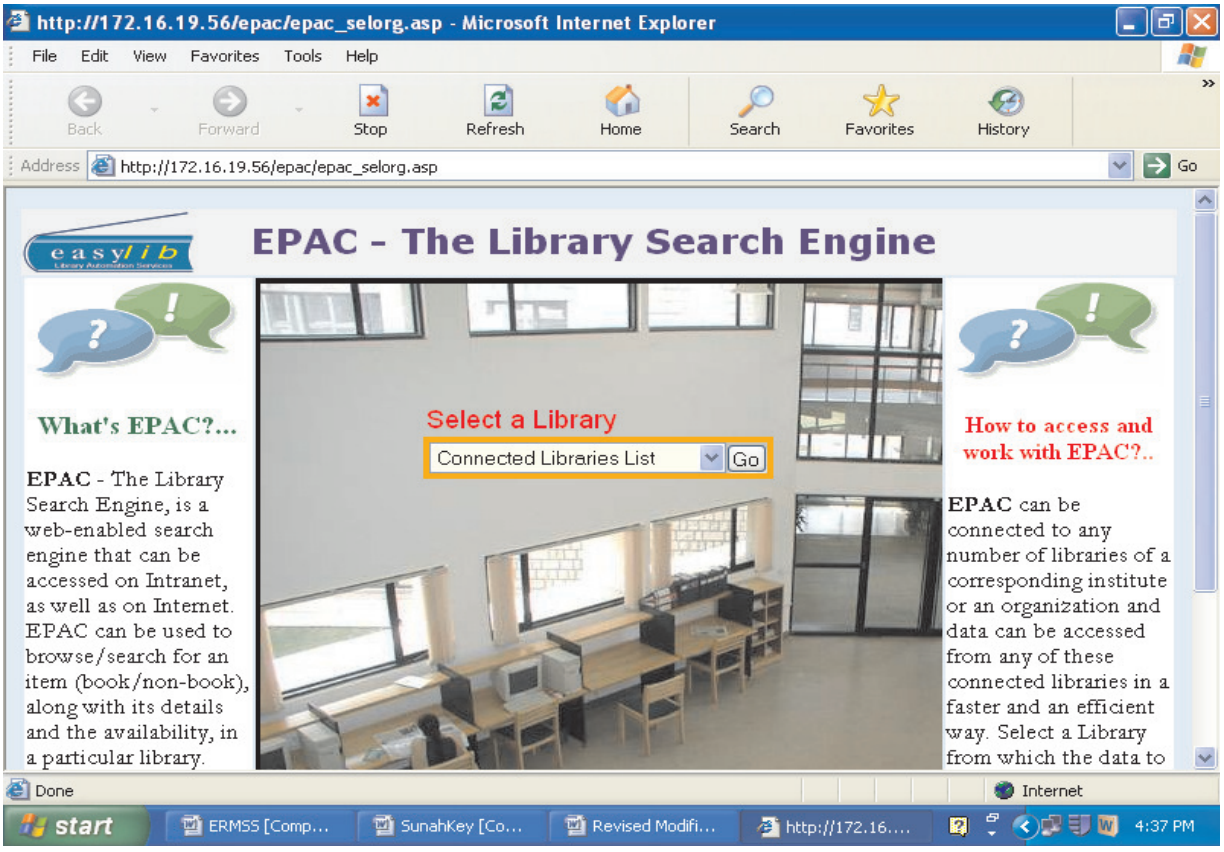


Fig 12: My e-library

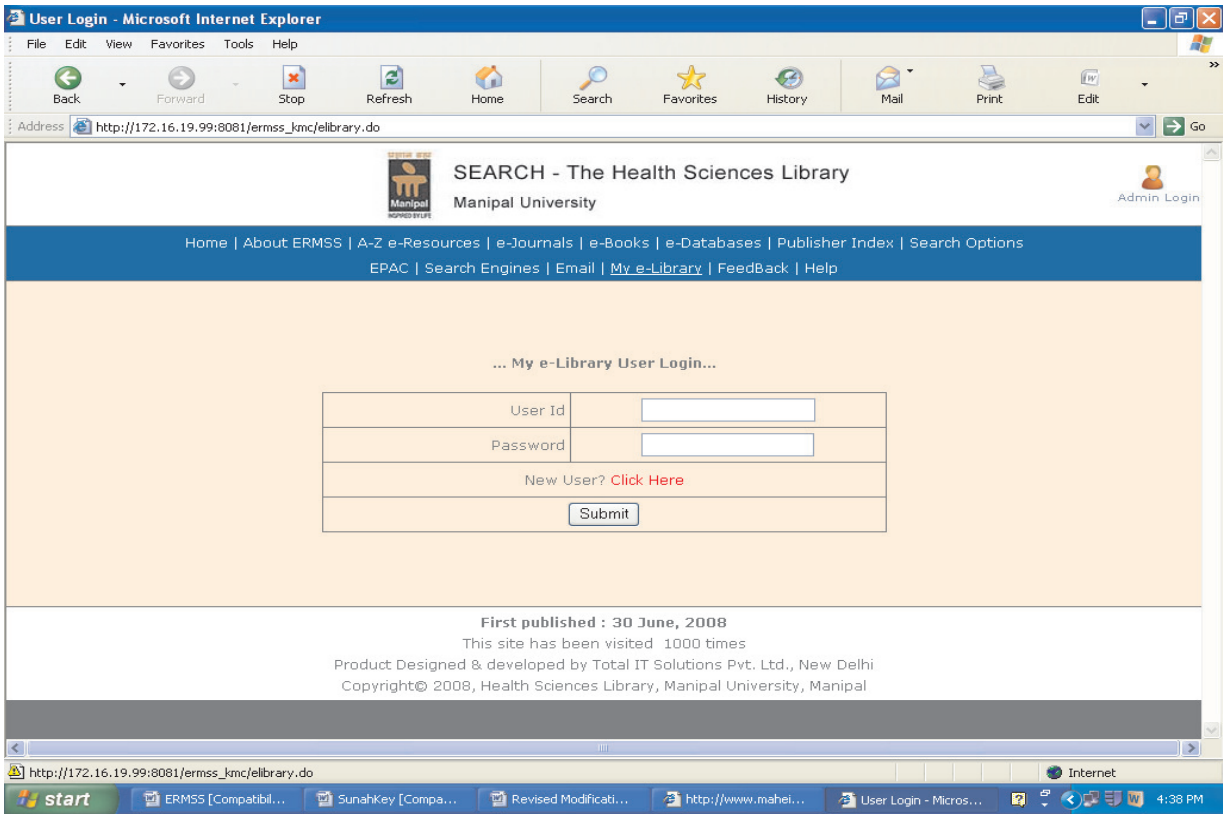


Fig 13: Feedback

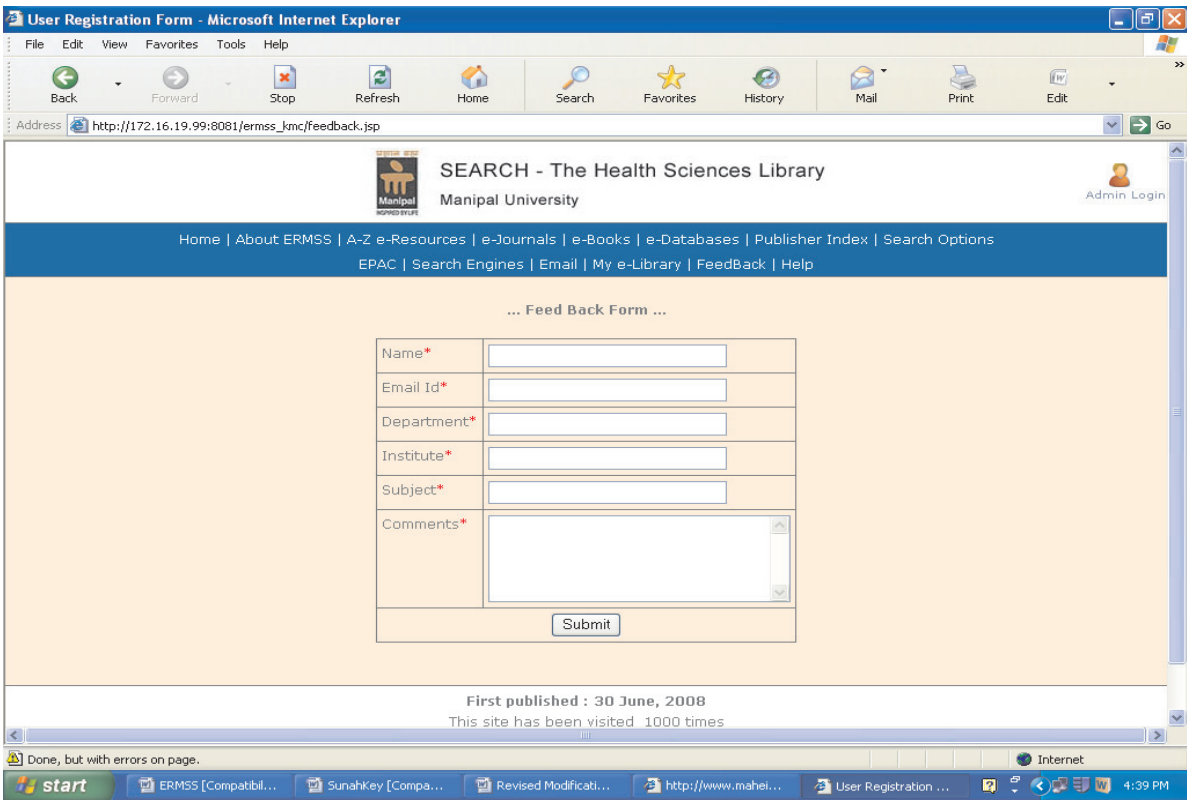
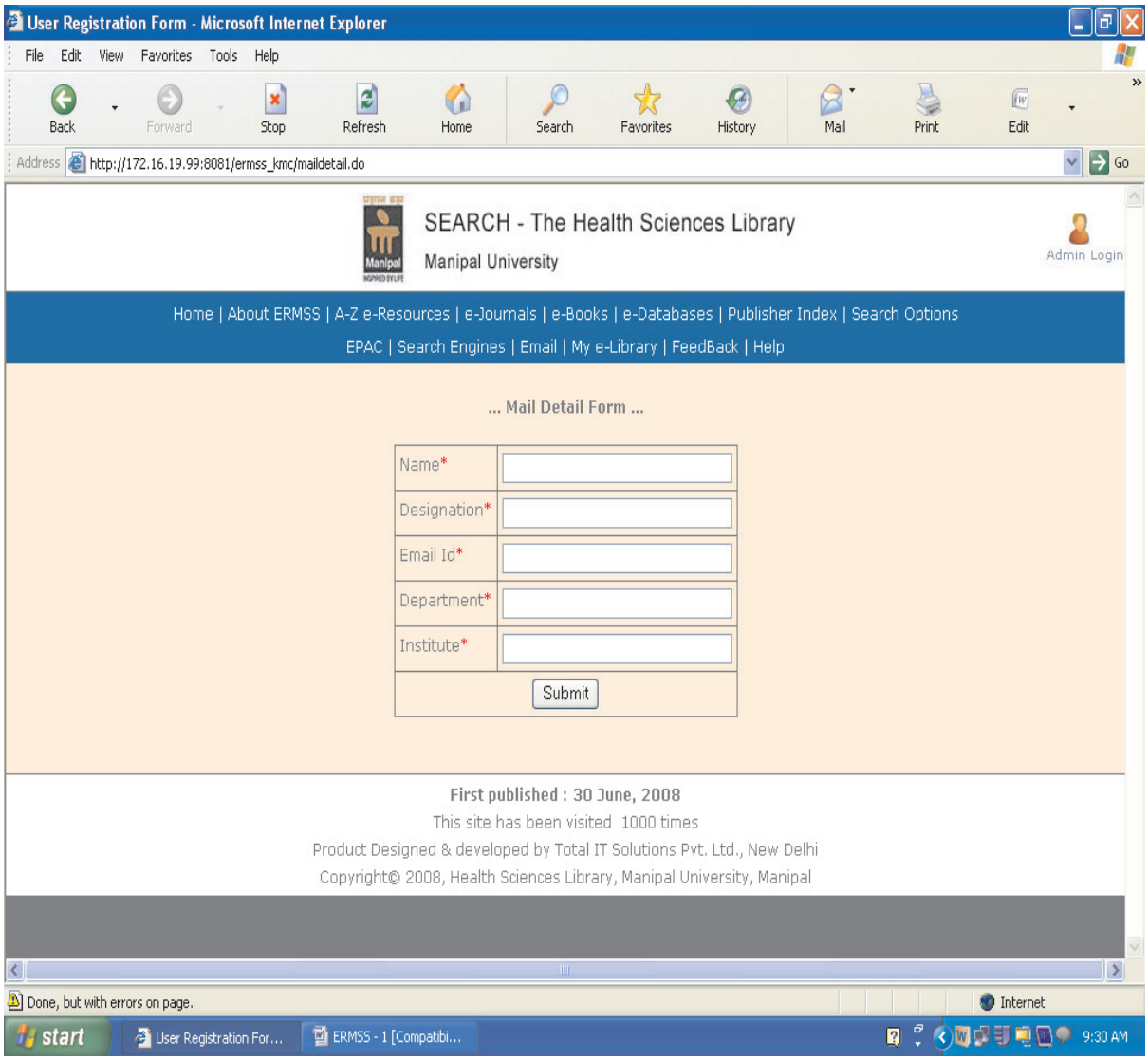


Fig 14: e-Mail alerts



Advanced Search is basically boolean search. Users can search on others fields apart from having all search facility included in basic search.

vii) EPAC

This is Electronic Public Access Catalogue of Health Sciences Library. Users can search all the print resources (books, journals, back volumes of journals, dissertations, WHO publications, etc.) of the Health Sciences Library here.

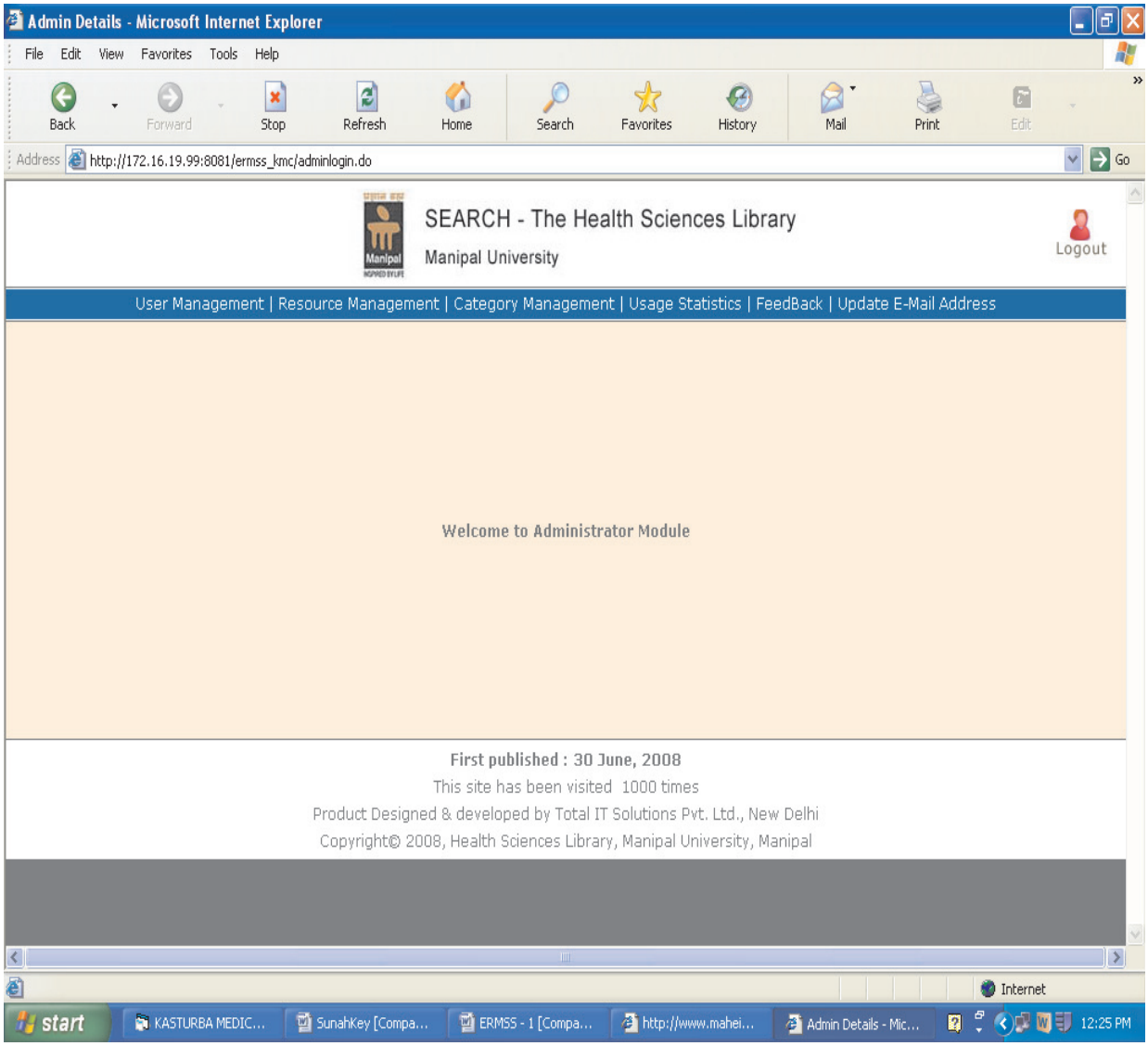
viii) My e-Library

Here, each user can create own e-library for future reference. It is like an e-mail account, wherein a user can maintain his/her own library by saving the search results of the resources which can be used in future. This would mean that users can maintain these themselves and can place information in it. For this purpose, they get an ID. So their material is safe. e-Library is same as any other account on the web.

ix) Feedback

Feedback form can be filled by the user for giving suggestions, etc. to the Health Sciences

Fig 15: Administration panel services



Library regarding the access of e-resources using ERMSS software.

x) e-Mail Alerts

This is the facility which is given to the registered users. For availing this facility, first the user needs to get registered through the e-mail alert form. After getting registered, users would be able to receive all types of insertions, updations and deletions done by the administrator/librarian.

B) Administration Panel Services

Admin site of ERMSS is comprised of various administration panel services. Following are the complete view of the functioning of each icon of the administration panel services of the ERMSS.

i) User Management

User management is used to fix the authority level of administrators/librarians. This part is composed of user group management which gives the same authority to certain user group, menu management for each user group and

Fig 16: User management

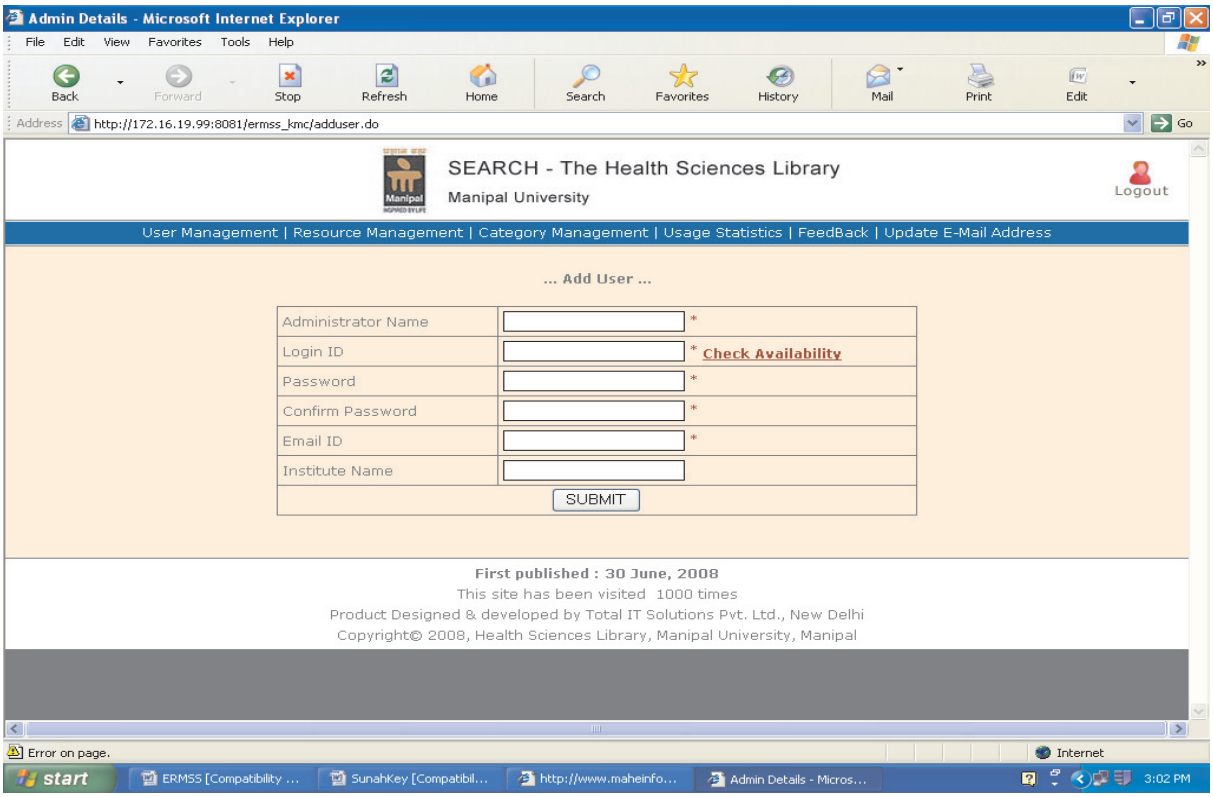


Fig 17: Add resources

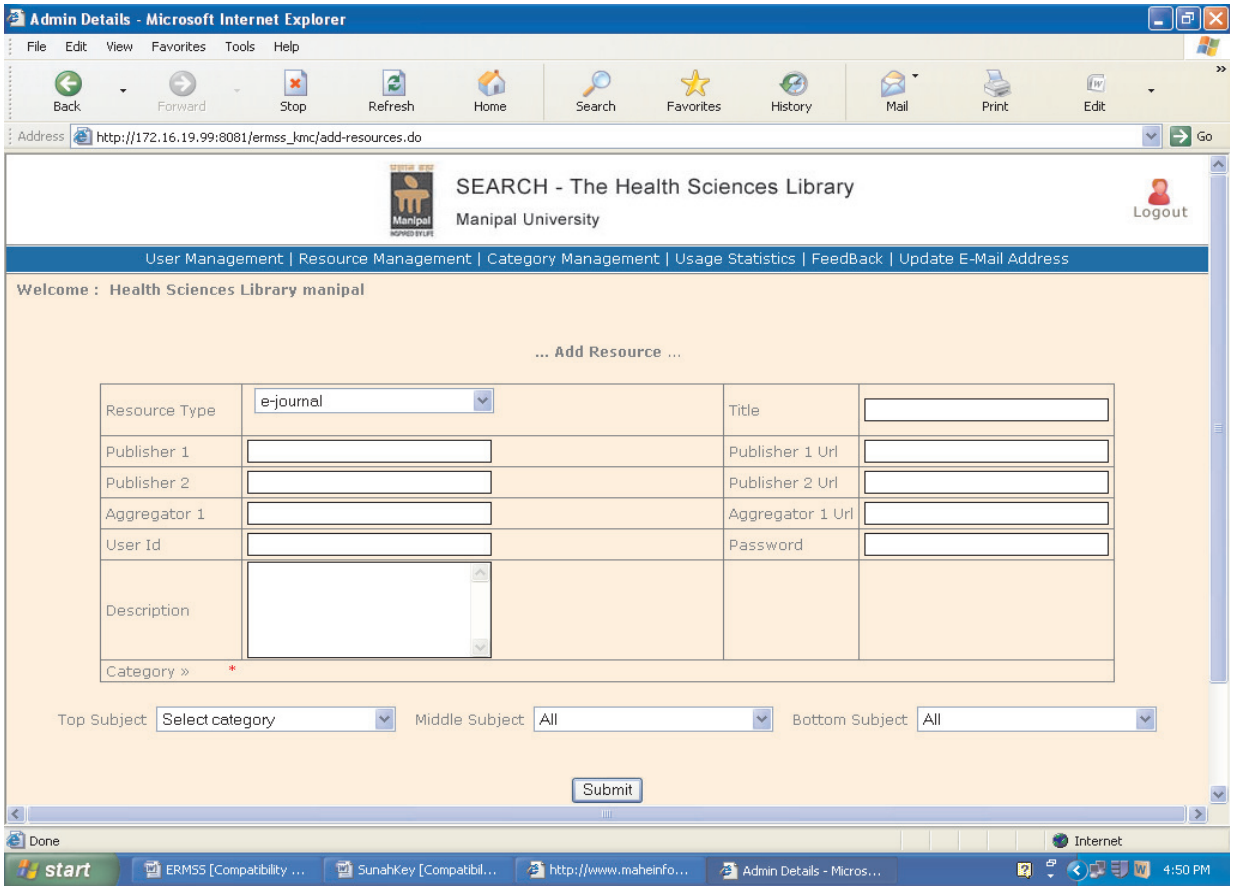


Fig 18: Modify resources

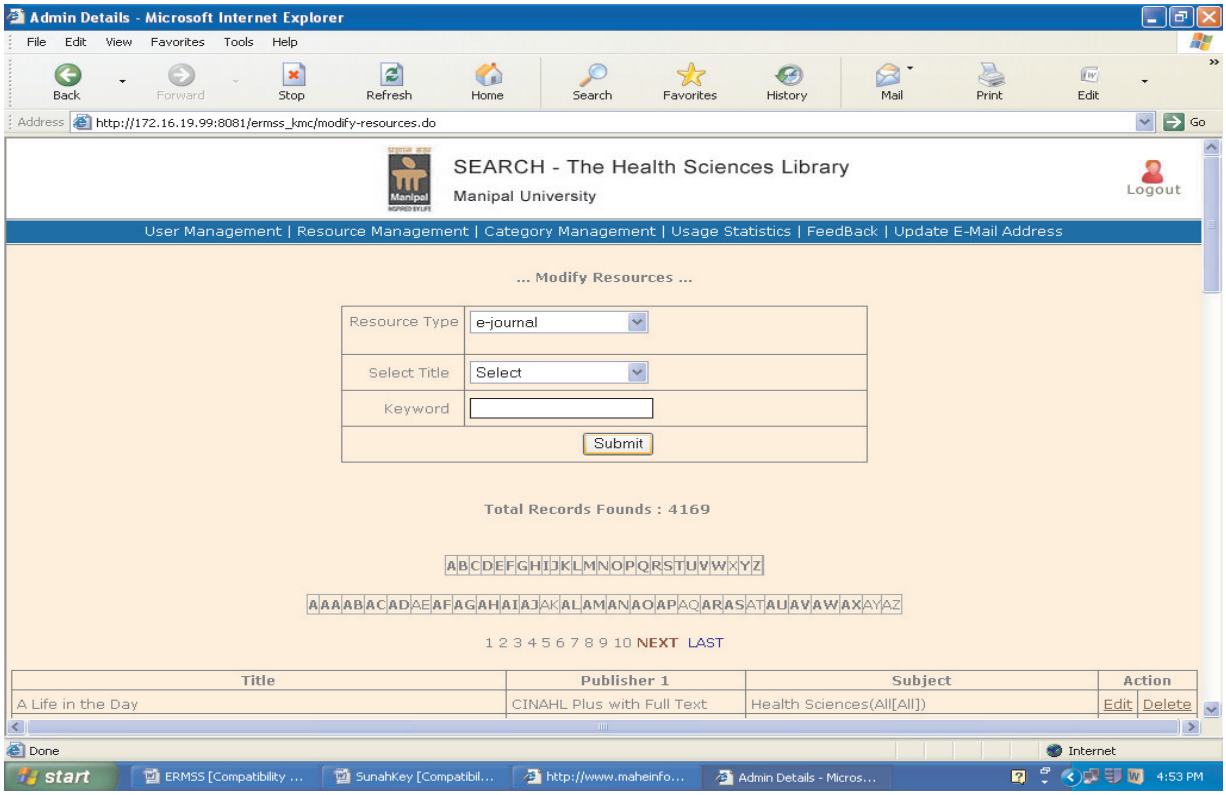


Fig 19: Category management

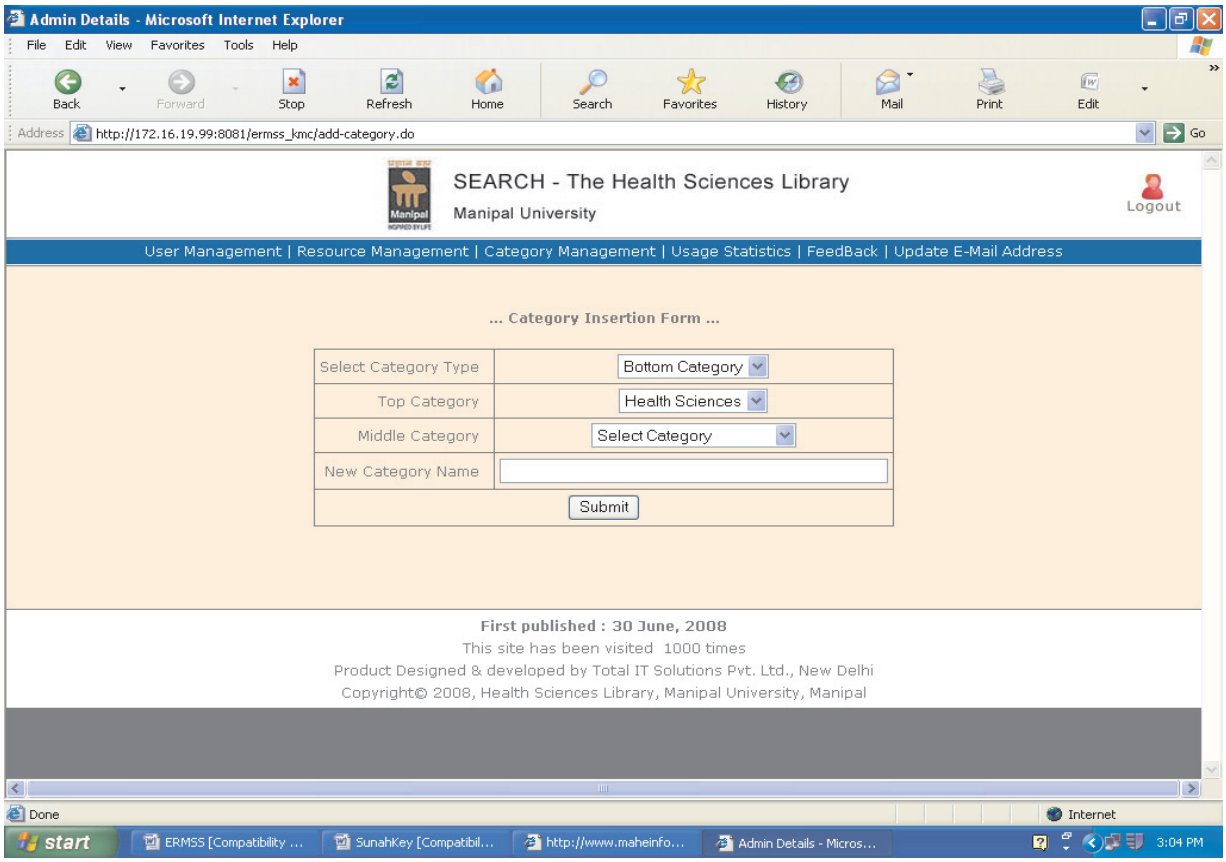
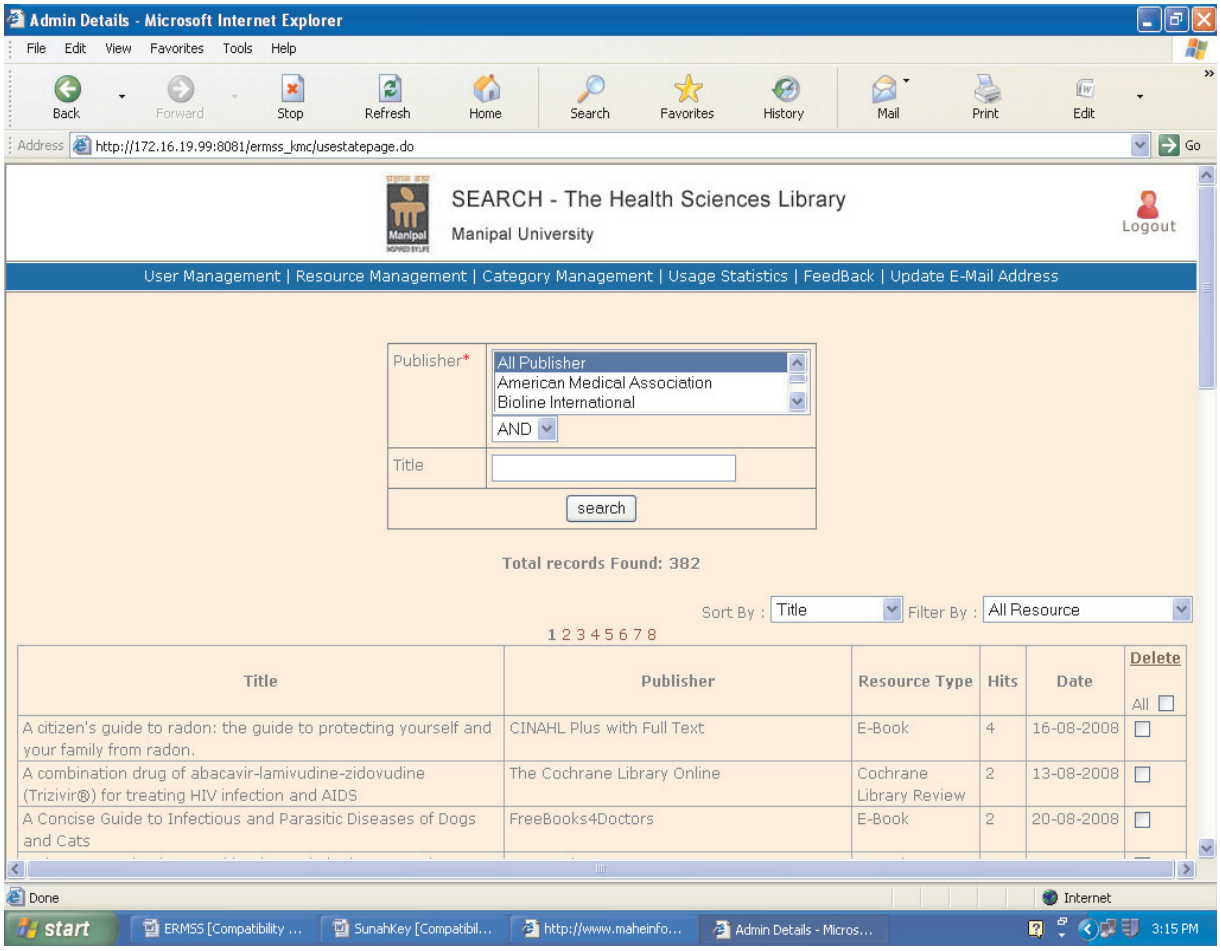


Fig 20: Usage statistics



user management to give special authority to some persons.

ii) Resource Management – Add Resources

This is basically used by administrator/ librarian to add resource whether it could be an e-journal, e-book, e-database or any other e-resource respectively with its details.

iii) Resource Management – Modify Resources

This is used by administrator/librarian to modify the details of the resources for the respective e-journal, e-book or e-database. Through this, the administrator/librarian can easily edit/delete the details.

iv) Category Management

This is used by the administrator/librarian to add, modify or delete subjects in top category, middle category and bottom category

v) Usage Statistics

Here the administrator/librarian can see the usage statistics reports for each e-journal, e-book, e-database and publisher. Usage statistics facility helps the administrator/ librarian to take future decisions.

Conclusion

The ERMSS is an effective management and search tool for the information seekers like faculty members, researchers and students.

ERMSS enables users to quickly and easily find the resource they need, whether from an e-journal or a database. Users can search and access e-resources as a stand-along content. They can easily access e-books, e-journals and online databases combined. In a single platform, they can search across the library's resources including free and paid databases such as journals and e-books and other resources.

The ERMSS linking capability has proven immensely helpful to Manipal University Health Sciences Library. Features such as e-mail alerts, my e-library, feedback form, admin login, increased customization and enabling users to choose whether to display results by relevance or chronological order will make the system even more effective for library staff and library users. Currently, allmost all the library's e-resources can be reached using ERMSS and library statistics show rapidly increasing use of those e-resources.

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