MODIFICATION OF KOHA THROUGH ONLINE PUBLIC ACCESS CATALOGUE: AN EXPERIMENTAL BASED STUDY

Abstract

Objective: A library's whole collection of books, documents, and other resources can be found in an online database called an OPAC. Now, OPAC has replaced the outdated card catalog system as a tool for assisting library patrons in finding the information or resources they need. The main motive is to investigate many facets of Koha's OPAC modification.

Methodology: An experimental research methodology was adopted. To alter the front or face view of the OPAC, CSS, HTML, and Java coding have been utilized as commands.

Findings: The Koha OPAC is parted into six portions: the header, right navigation, left (upper and lower) navigation, main user block (the region in the middle of the OPAC where content will be written), and footer. An editing tool that is very interactive is available to library professionals who lack extensive programming experience.

Originality: The purpose of the personalization process is to allows the fellow professionals to become familiar with new characteristics of fully adoptable Koha, while also helping users in knowing relevant open access e-resource links on a single stage. This saves users' time because they don't have to recall the URLs for these e-resource links or databases.

Keywords: Koha, Access Catalogue, OPAC, Extensive Programming, Databases.

Authors

Mr. Amit Kumar
Chief Librarian
Arni University
Kathgarh, Indora, H.P, India.

Dr. Som Raj
Assistant Professor in Economics
Arni University
Kathgarh, Indora, H.P, India.

Mrs. Rachna Devi
Librarian Kshatriya College of Education
Nadaun Indora, Kangra, India.

I. INTRODUCTION

A particular library's resources and items are listed in an online database called an OPAC, or online public access catalogue. It may be viewed using a computer or other electronic devices and is kind of like a catalogue. OPAC may eventually take the role of the traditional card catalogue as a tool for assisting library patrons in finding the materials they need. The database may be searched electronically by users, giving them a quicker and more thorough way to get the information they need. The fact that an OPAC is user-friendly and open to all parties is one of its distinctive features. If assistance is required during a search, the system is set up to provide such aid through a variety of prompts, suggestions, and help whenever necessary, themes. Search results are presented in 3 methods, i.e. standard view, MARC display and ISBD display, which is easy to read and learn. In the 1960s, online catalogues firstly grown and famous. However, it took until the 1970s for the first major scale catalogues to be created (At Ohio State University in 1975 and Dallas Public Library in 1978).

With advent of the first commercial systems throughout the 1980s, a growing number of online catalogues were created. After that, though, enthusiasm dwindled, and during the 1990s the traditional catalogues gradually disappears and online catalogues replace them. Now online catalogues being offered at the many of libraries all over the countries, new methods, techniques and tools have recently brought attention back to OPAC development. Many universities and colleges today use some form of OPAC to aid students in obtaining the data housed in their libraries.

The majority of public library have also created their own OPACs, which give library users easy access to information.

A library user or college/university student must first click into the OPAC after accessing the library's link online or offline. The title, author, publisher, place , date, and even subject can all be used as search criteria.
Results provide a link for rapid digital access or by indicating the exact location of each item.

1. **Objectives:** A few objectives has been look into consideration for the study

   - To design the Koha OPAC by using HTML, Java and CSS commands;
   - To view the output after applying the commands on Koha.

2. **Research Methodology:** For many people, research may consists of reading books or searching reading material and data on internet.

   - In actuality, these tasks represent only a small portion of the whole job.
   - This study investigates several facets of Koha OPAC modification.
   - The project to alter the OPAC has used an experimental research approach.
   - The whole front look of the OPAC can be customized using HTML, Java, and CSS coding.

II. REVIEW OF LITERATURE

Dr. Tripathi noted that Koha allows the Koha admin to edit the OPAC to make it more appealing and instructive in an essay he wrote for his blog about customizing the Koha OPAC. The Koha administrator will benefit from knowing HTML, Java, or CSS coding, although it is not essential to be an expert as these codes can be found online by surfing on internet or the ideal method is to adopt the Koha documentation. The installation of Koha Web-OPAC: A Study of Assam Don Bosco University Library was the subject of a 2018 paper by Bareh & Chanda.

The purpose of this article is to demonstrate the detailed process of Koha Web-OPAC modification phases at Assam University Library. Their work was basically based on the integrated collection of personal experiences made during the implementation phase. The GNU licence was a factor in the decision to use Koha ILMS (Open Source).

In their work titled "Koha Web OPAC-Customizing it to Make a Library Portal -A Case Study of Assam University Library," Sharma, Tripathi, and Mishra (2016) noted that Koha is one of the most well-liked free-source programmes worldover because of its usability, availability for free, and regular updates.

Web-OPAC customization function of Koha can be used by librarians and Koha administrators without them needing to know anything about HTML coding or web page design. The Web-OPAC of Arni University's Central Library is the subject of a case study in the current paper.

In this paper, an effort has been made to share Arni University's day to day experiences so that other librarians can personalize their Web-OPAC and make their library materials available to users on their desktops with easy to use and access.

In this research paper "Using Search Engine Techniques to Improvise Library Catalogs," Lewandowski (2010) discussed how search engine technology could be used in online public access library catalogues (OPAC) to enhance user experiences, identify users' intents, and indicate how it can be applied from the perspective of the library, as well as how sophisticated ranking criteria can be applied to the online library catalogue. It is believed that before adding further features, OPAC development should become search-focused.

However, the suggestions regarding user intentions and ranking functionality are still hypothetical and have not yet been implemented in a library catalogue.

III. MORE ABOUT KOHA

The Horowhenua Library Trust in New Zealand commissioned Katipo Communications to develop Koha, an open-source library automation system. The very first installation was made live in Jan 2000.

Koha is an Integrated Library Syatem that is available over the web and has a SQL database back end or MySQL are preferable. The cataloguing data is saved in MARC and is

accessed via Z39.50. Perl, JavaScript, and HTML are all used in the creation of Koha. Koha is the only operating system that it supports.

Many libraries use Koha, and its development is monitored and guided by a growing user community that works together to find their technological goals. The feature set of Koha is continuously developing and growing to suit the requirements of its user users.

Clients, Advanced Search, List, Cataloging, Permissions, Serials, Acquisitions, Statistics, Tools, Data, Koha administration are the modules that are offered by Koha.

Label printing, notices in many formats, offline circulation when internet connectivity isn't available, and many other Koha features are very interesting.

Koha can be used for multi-branch and single-branch libraries, as well as consortia of any size. There are numerous languages supported by Koha, and new ones are added yearly. Koha has a full-text, robust search feature and an improved display catalogue that can access reading materials from a different of sources, including Open library, Ebay, LibraryThing, Google Library, Google, NDL, Pdf Books and many more databases etc.

When support current workflows and tools, Koha is developed utilising library standards, morms and protocols including MARC 21, UNIMARC, z39.50, SRU/SW, SIP2, and SIP/NCIP. This ensures interchange between Koha and other systems and technologies. Because Koha is built using standards-compliant W WW technologies (XHTML, CSS, and Javascript) for its Online Public Access Catalogue, in-out management, and self-checkout interfaces, it is a true cross-platform solution.

The Free Software General Public License (GPL) version 3 or later governs the distribution of Koha. Most crucially, there is no need of vendor; libraries and library professionals are free to install and use Koha on their own. If one have the internal competence or to hire the best providers of support or development services.
Make sure your support provider permits libraries to export their data and switch support providers at any moment. (https://koha-community.org/about/).

Koha OPAC-Online Public Access Catalogue: The Koha OPAC is divided in four sections: the header, right navigation, footer, main user block (the region in the middle of the OPAC where information will be written), and left navigation.

You can use HTML, Java, and CSS in any of the aforementioned OPAC sections. See the illustration below:

Table 1: Blockwise Partitioning of Koha OPAC.

Header (*opacheader*)		
Left Navigation (*OpacNav*)	**Main User Block** (*OpacMainUserBlock*)	**Right Navigation** (*OpacNavRight*)
Footer (*opaccredits*)		

First we click on step by step as Koha Administration - Global system preferences - OPAC can be used to change the aforementioned regions (available in the left navigation menu). There is a one needs to be a super librarian in Koha with access to all library features and a working knowledge of HTML, Java, and CSS coding in order to edit OPAC. Knowing HTML, Java, and CSS will make OPAC modification simple.

IV. MODIFICATION OF KOHA ONLINE PUBLIC ACCESS CATALOGUE (OPAC)

The first step in customizing Koha OPAC is to log in as a superlibrarian using the username and password. All the modules in Koha will show following a successful login; click on the Koha administration module, then select Global System Preferences, and finally select OPAC from the left navigation menu. After selecting OPAC, all of the OPAC choices will be displayed; however, only a small number of preferences need to be changed in order to personalize the OPAC page.

Every time an HTML command is entered into a field that is necessary, the Koha administrator must save the command in order for the effects to show up on the Koha OPAC page. The "Save all OPAC preferences" tab, which is located directly downside of the OPAC preferences, must be clicked by the administrator in order to save the commands.

1. **Name of Library:** First, one must be modify the Library Name so under "Appearance" submenu.

    Whenever anyone opens the OPAC in a browser, the name of the library will be displayed in the header. Click on the "Save all OPAC preferences" tab, which is set immediately below the OPAC preferences, after altering the library name.

2. **Opac Credits**

Table 2: OPAC Credits Commands

<p   align="center">Central   Library Arni University</br>Kathgarh, Himachal Pradesh</p>   <p align="right">   </br></p>   <p align="right">OPAC Customized by Mr. Amit Kumar, Librarian, Arni University Email:: amit.arni@rediffmail.com</br></p>

Click on the 'Save all OPAC preferences' tab which is available just below the OPAC preferences. <hr size=10>

Central Library **Arni University** **Kathgarh, Himachal Pradesh** **OPAC Customized by Mr. Amit Kumar, Librarian, Arni University** **Email:: amit.arni@rediffmail.com**

Figure 1: OPAC Credits Output

3. **Opac Header:** OPAC headers may include a header image and a few URL links for the users' use.

   The picture needs to be a banner with the library's name, address, emblem, etc. on it. First, create an image, rename it, and use the same name in the HTML command to set the picture in the header section of the OPAC. Next, copy the image and place it in the 'htdocs' folder.

   Following are the procedures to paste the image in the htdocs folder:

   - Press Ctrl+Alt+T to open the terminal.
   - Type sudo su - enter the Linux password (same password which has been set up during linux installation)

   In the window that appears, click on home-usr-share-koha-opac-htdocs folder and then paste the image there.

   They enter the following command in Koha's opacheader menu: Modify height and width as necessary.

Table 3: OPAC Header Command for Inserting Image in the Header

```
<style type="text/css">
#lib-logo{
background:#CC0000;
padding-left: 5px;
margin:-10px -10px 0 -10px;
font-weight:bold;
font-size: 0px;
color: #550000;
}
</style> <div id="lib-logo"><center>.</center>
<img        src="http://172.16.7.24/jspui/image/dspace-blue.png"        width="25%"
height="10%" align="center">
```

   Type the following command in the "opac header" box and add the URL link as needed to add helpful links to the OPAC header.
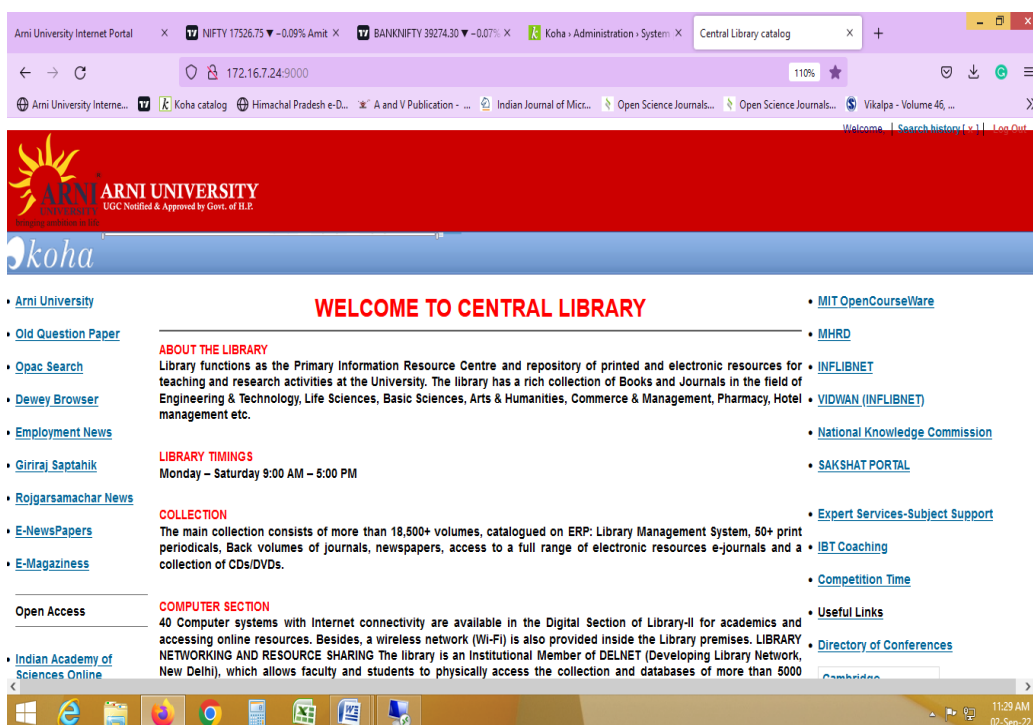
Figure 2: OPAC header Output

Table 4: Opac MainUserBlock Command for Inserting Useful URL Links in the block

This website contains useful information about library services. The website is updated regularly in order to cater for the needs of the users.

<p align="justify">Quick Links

  PDF Books

 India Citation Index

  NPTEL

 DELNET

To display the name of the library or institution type the following command which will move in the OPAC header.

Table 5: OPAC Header Command for Inserting Welcome Message in the Header

```
<h1 id="libraryname">
<a href="/cgi-bin/koha/opac-main.pl">ARNI UNIVERSITY</a>
</h1>
background:transparent url(../../images/koha-logo.gif) no-repeat scroll 0 500%;
```

After adding each HTML command to the "opacheader," select "Save all OPAC Preferences" from the menu that appears immediately underneath the OPAC Preferences.
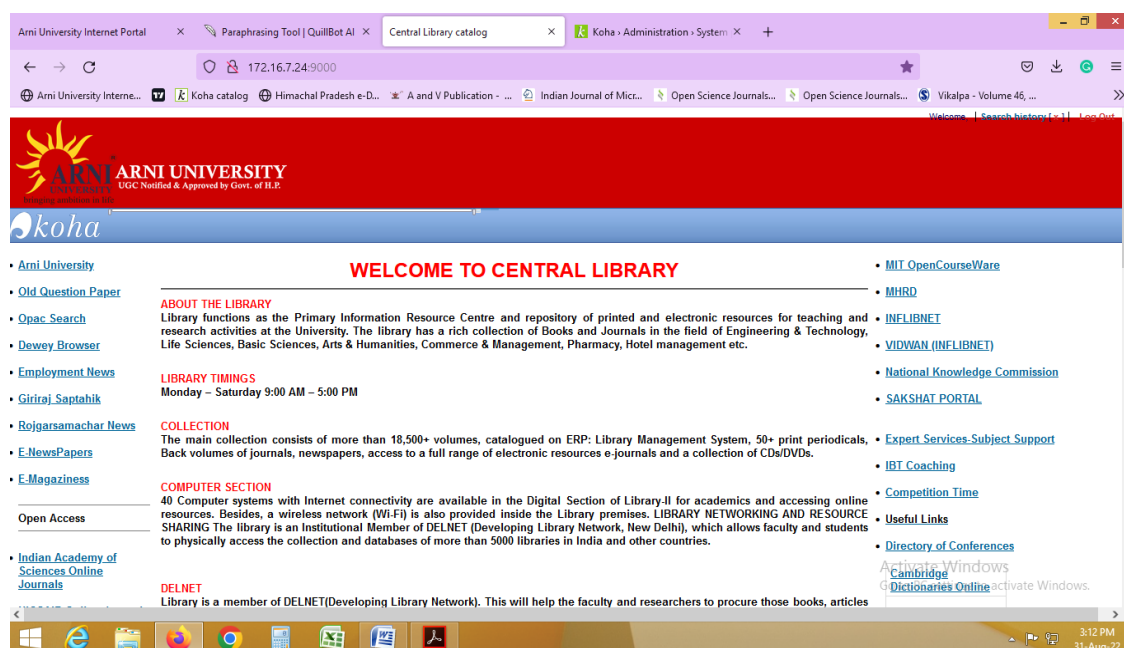

Figure 3: OPAC Header Display

4. **Opac Main User Block:** The administrator can also insert photographs in the online public access main user block area. The OPAC main user block area can contain information about the library or any other relevant information. You can add the following command to the "OpacMainUserBlock."

The picture name must match the name specified in the command for the image to appear in the OPAC. The administration is free to include as many photos as they choose. You can modify the front's size, width, and border as necessary.

Table 6: OPAC Main User Block Command for Inserting useful links and Information of the library in the OPAC Main User Block

```
<!---Welcome section Begins-->

<font size="5" color="#FF0000"><center><b>WELCOME TO CENTRAL
LIBRARY</b></center></font>
<hr>
<left>
<h6 align="justify"><justify><strong><font color="Red"><p align="justify">ABOUT
THE LIBRARY</strong></font color>
<br />
Library working as the Primary Information Resource Centre and repository of printed
and electronic resources for teaching and research activities at the University. The library
has a rich collection of Books and Journals in the field of Engineering & Technology,
Life Sciences, Basic Sciences, Arts & Humanities, Commerce & Management,
Pharmacy, Hotel management etc.
<br>

<br>
<strong><font color="Red"><palign="justify">LIBRARY TIMINGS</strong></font
color>
<br />

Monday – Saturday 9:00 AM – 7:00 PM

<br>

<br>
<strong><font color="Red"><p align="justify">COLLECTION</strong></font color>
<br />

The main collection consists of more than 18,500+ volumes, catalogued on ERP: Library
Management System, 50+ print periodicals, Back volumes of journals, newspapers,
access to a full range of electronic resources e-journals and a collection of CDs/DVDs.
<br>

<br>
<strong><font color="Red"><p align="justify">COMPUTER SECTION
</strong></font color>
<br />

40 Computer systems with Internet connectivity are available in the Digital Section of
Library-II for academics and accessing online resources. Besides, a wireless network
(Wi-Fi) is also provided inside the Library premises.
LIBRARY NETWORKING AND RESOURCE SHARING
The library is an Institutional Member of DELNET (Developing Library Network, New
Delhi), which allows faculty and students to physically access the collection and
```

databases of more than 5000 libraries in India and other countries.

<p align="justify">DELNET

Library is a member of DELNET(Developing Library Network). This will help the faculty and researchers to procure those books, articles and documents from other educational Institutions through DELNET which are not available at our University. Library users can access DELNET by using User Name: hpauk and Password: auk8822.

 DELNET

<p align="justify">OPAC (Online Public Access Catalogue)

The Online Public Access Catalogue (OPAC) which is in the public domain enables users to search documents in possession of the library. It helps the users to search documents from the library holding and guides them to their location on stacks.

<p align="justify">LIBRARY WEBSITE

The library has its own webpage. The address of this webpage is http://172.16.7.24:9000/ access within the campus.

This website contains useful information about library services. The website is updated regularly in order to cater for the needs of the users.

 <p align="justify">Quick Links

 PDF Books

 India Citation Index

 NPTEL

 DELNET

```
<br>
<li><a           href="http://community.worldlibrary.in/?AffiliateKey=NDL-WC1724"
target="blank"><font color="black"> World eBook Library</font></a></li><br>

<li><a href="http://shodhganga.inflibnet.ac.in/" target="_blank"><font color="black">
Shodhganga </font></a></li><br>
<li><a href="http://www.southasiaarchive.com/unauthenticated" target="_blank"><font
color="black"> South Asia Archive</font></a></li><br>

<br>
<li><a href="http://www.nationallibrary.gov.in/" target="_blank"><font color="black">
National Library</font></a></li><br>
<li><a href="http://ndl.iitkgp.ac.in//" target="_blank"><font color="black"> NDL :
National Digital Library </font></a></li><br>
<li><a href="https://swayam.gov.in/About" target="_blank"><font color="black">
Sawyam </font></a></li><br>

<br>
<li><a         href="https://journals.sagepub.com/home/vik"        target="_blank"><font
color="black"> Vikalpa: The Journal for Decision Makers </font></a></li><br>
<li><a href="http://172.16.7.24/jspui/" target="_blank"><font color="black"> My
Institutional Repository </font></a></li><br>

<br>
<li><a         href="https://www.biospectrumindia.com//"         target="_blank"><font
color="black"> BioSpectrum </font></a></li><br>
<br>
<li><a              href="http://172.16.2.9/40/Library/WebOpac.aspx"target="_blank"
target="_blank"><font color="black"> OPAC Search </font></a></li><br>

<br>
<li><a href="https://epgp.inflibnet.ac.in/" target="_blank"><font color="Black"> E-PG-
Pathshala</a></li><br>
<br>
<li><a     href="https://www.gutenberg.org/"     target="_blank"><font     color="black">
Project Gutenberg is a library of over 60,000 free eBooks </font></a></li><br>
```

Click on the 'Save all OPAC preferences' tab which is available just below the OPAC preferences.
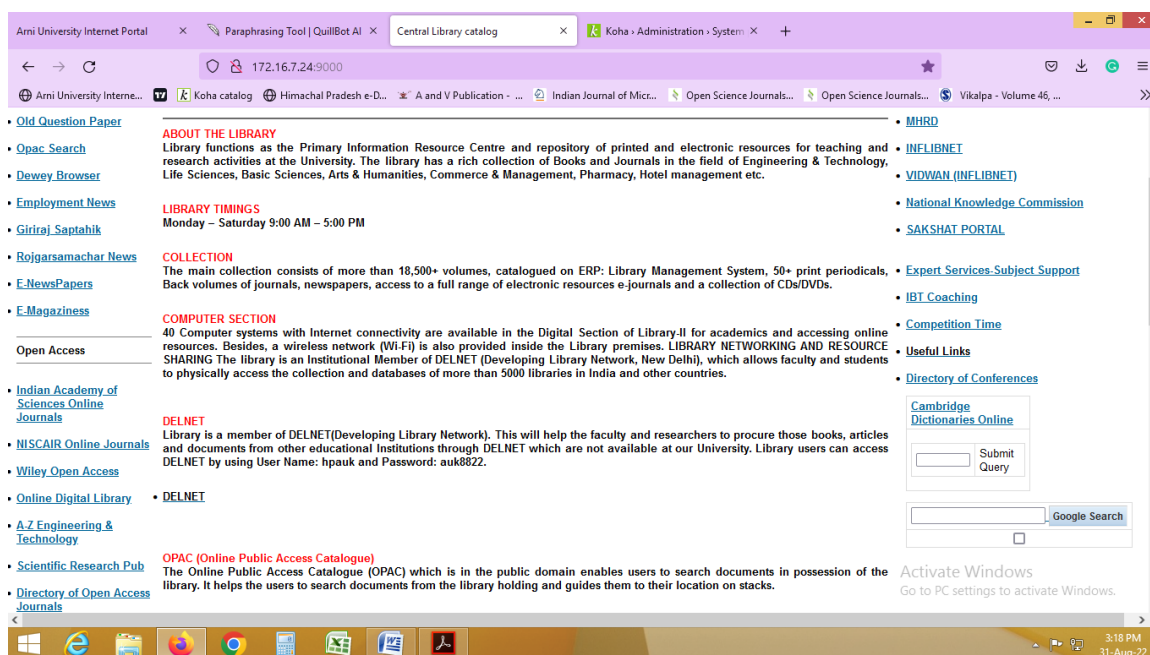
Figure 4: OPAC Main User Block Output

5. **Opac Left Navigation Upper (OpacNav):** This section of the Koha OPAC is mostly used for significant links, and the admin can add some helpful links that are simple to access by library customers. These links may include links to open access e-resources, databases, and other resources.

   The administrator is free to insert any number of links.

   You can use the following commands to add links to the 'OpacNav' section.

Table 7: OPAC Rightt Navigation Command for Inserting Useful Links in the OPAC Rightt Navigation Upper

```
<li><a
href="http://myeducationpath.com/providers/24/MIT+OpenCourseWare+%28OCW%2
9.htm//"  target="_blank">MIT OpenCourseWare</a></li>
<br>
<li><a href="http://mhrd.gov.in//"  target="_blank">MHRD</a></li>
<br>
<li><a href="http://www.inflibnet.ac.in///"  target="_blank">INFLIBNET</a></li>
<br>
<li><a         href="http://vidwan.inflibnet.ac.in//"         target="_blank">VIDWAN
(INFLIBNET) </a></li>
<br>
<li><a     href="http://knowledgecommission.gov.in//"        target="_blank">National
Knowledge Commission</a></li>
<br>
<li><a         href="http://www.sakshat.ac.in///"            target="_blank">SAKSHAT
```

```
PORTAL</a></li>
<br>
<br>
<li><a              href="http://http://www.juit.ac.in/lrc/Expert_ServicesSubject.php///"
target="_blank">Expert Services-Subject Support</a></li>
<br>
<li><a href="http://www.ibtindia.com//"  target="_blank">IBT Coaching</a></li>
<br>
<li><a    href="http://www.competitiontime.com//"        target="_blank">Competition
Time</a></li>
<br>
<li><a    href="http://www.sciencedirect.com/science/article/pii/S0927025612005538/"
target="_blank">
<font color="black">Useful Links</font></a></li>
<br>

<li><a   href="http://www.allconferences.com/"        target="_blank"> Directory of
Conferences</a></li>
<br>
<div               id="opacrightsidebar"               class="container"><form
action="http://dictionary.cambridge.org/search/british/"        method="post"><table
style="border-style: solid; border-width: 1px;" width="10" border="0" cellpadding="0"
cellspacing="0"><tbody><tr><td><img
src="http://dictionary.cambridge.org/external/images/sitesearch_header_new.gif"
alt="Cambridge      Dictionaries      Online"      width="130"      border="1"
height="31"></a></td></tr><tr><td><table width="135" border="0" cellpadding="3"
cellspacing="0"><tbody><tr><td    nowrap="nowrap"><input    name="q"    size="8"
style="width:     60px;     font-size:     10px;"     type="text"></td><td><input
src="http://dictionary.cambridge.org/external/images/search_FFFFFF.gif"
type="image"
border="0"></td></tr></tbody></table></td></tr></tbody></table></form></div>
</div>
<form method="get" action="http://www.google.com/search">
<div style="border:"1" solid;padding:4px;width:15em;">
<table border="0" cellpadding="0">

<tr><td>
<input type="text"   name="q" size="19"
maxlength="130" value="" />
<input type="submit" value="Google Search" /></td></tr>
<tr><td align="center" style="font-size:75%">
<input type="checkbox"  name="sitesearch"
<br />
</td></tr></table>
</div>
</form>
```
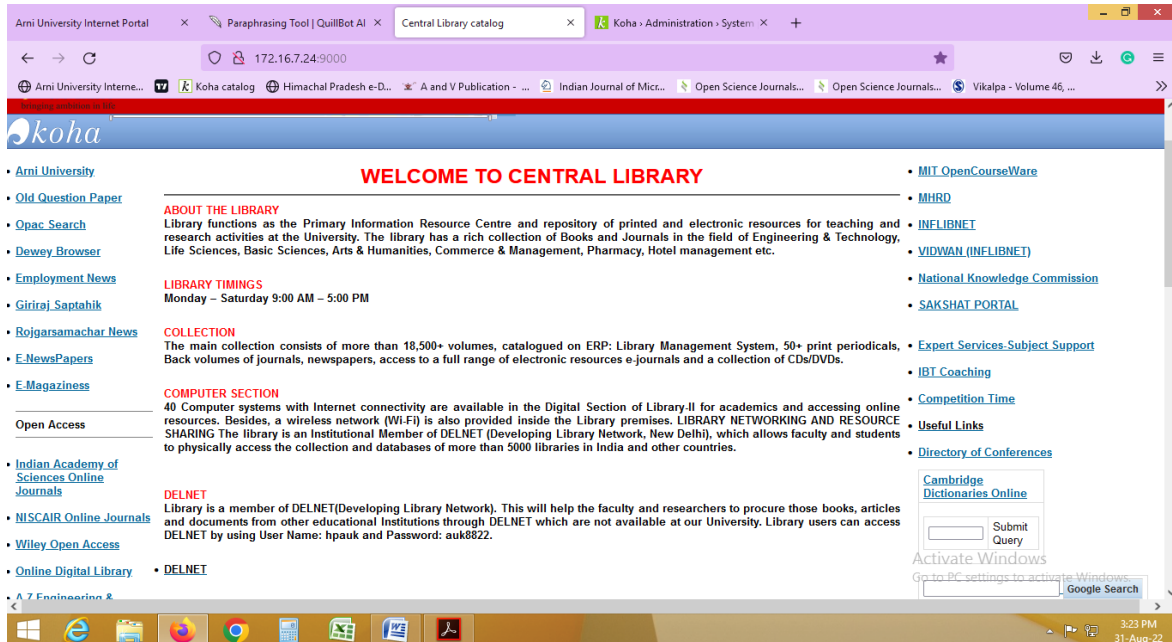
Click on the 'Save all OPAC preferences' tab which is available just below the OPAC preferences.

Figure 5: OPAC Left Navigation Block Output

6. **Opac Left Navigation (OpacNav):** The OPAC left navigational bottom is identical to the OPAC left navigation upper; with HTML coding, the administrator can also include some helpful links as well as any other type of information, such as library hours and circulation policies. You can adjust the backdrop colour, height, and width as necessary.

Table 8: OPAC Left Navigation Buttom Block Command for Inserting Useful Links in the OPAC Left Navigation Bottom

Arni University

Old Question Paper

 Opac Search

 Dewey Browser


```
<li><a    href="http://employmentnews.gov.in/"         target="_blank"> Employment
News</a></li>
<br>

<li><a href="http://himachalpr.gov.in/"  target="_blank"> Giriraj Saptahik</a></li>
<br>

<li><a   href="http://rojgarsamachar.gov.in/"        target="_blank">  Rojgarsamachar
News</a></li>
<br>
<li><a      href="https://onlinenewspapers.com/index.shtml"   target="_blank">      E-
NewsPapers</a></li><br>

<li><a   href="https://onlinenewspapers.com/magazines/index.shtml"  target="_blank">
E-Magaziness</a></li><br>

<hr size=1>
<b>Open Access</b>
<hr size=1>
<br>
<li><a      href="https://www.ias.ac.in/Journals/Overview/"target="_blank">      Indian
Academy of Sciences Online Journals</a></li><br>
<li><a   href="http://nopr.niscpr.res.in/"        target="_blank">  NISCAIR   Online
Journals</a></li><br>

<li><a      href="http://www.wileyopenaccess.com"target="_blank">    Wiley    Open
Access</a></li><br>
<li><a     href="http://www.dli.gov.in/"         target="_blank">   Online   Digital
Library</a></li><br>
<li><a     href="http://www.intute.ac.uk/sciences/engineering/"    target="_blank">A-Z
Engineering & Technology</a></li><br>
<li><a     href="http://www.scirp.org/journal/Index.aspx"    target="_blank">Scientific
Research Pub</a></li><br>

<li><a     href="http://doaj.org/"    target="_blank">Directory    of    Open    Access
Journals</a></li><br>

<li><a      href="http://www.advocatekhoj.com/library/index.php"     target="_blank">
AdvocateKhoj Law </a></li><br>

<li><a href="http://lu.com/odlis/odlis_g.cfm"   target="_blank"> Online Dictionary for
Library and Information Science </a></li>
<br>
<li><a     href="http://www.onlinecourses.com/lectures//"    target="_blank">Lecture
Fox</a></li><br>
<li><a href="http://nroer.gov.in/home//" target="_blank">National Repository of Open
Education Resources </a></li><br>
```

Click on the 'Save all OPAC preferences' tab which is available just below the OPAC preferences.
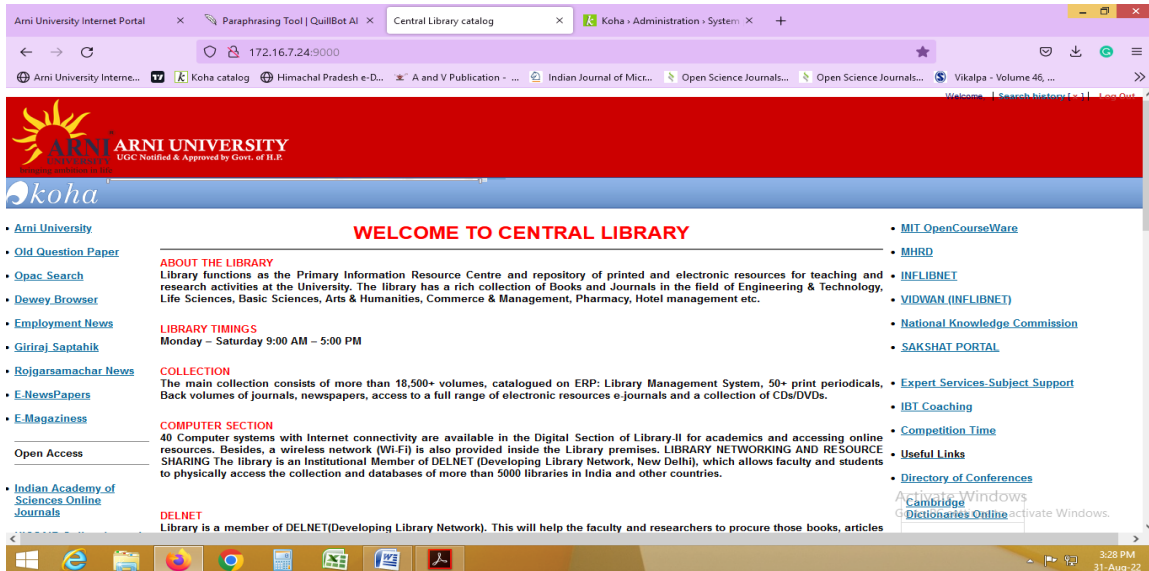

Figure 6: OPAC Left Navigation Bottom Block Output

V. SUGGESTION

We needs to understand the fundamentals of HTML, Java, and CSS to customise Koha OPAC interface; without this knowledge, customization is not recommended. Administrators must save their commands after inputting them, then run the instructions by refreshing the OPAC page after returning to ensure that the commands were correctly inserted. The output will not be accurately shown if the instructions are not successfully input. Please thoroughly review the commands before making any modifications because they can be different for upgraded versions of Koha.

VI. CONCLUSION

An editing tool that is very interactive is available to library professionals who lack extensive programming experience knowing the user's intent in full is crucial for optimizing the OPAC. OPAC should have a clean, appealing design so that users are able to find the information they need.

The customization method allows the library professionals to become familiar with new features to use Koha effectively, and it also help the users in finding the helpful open access e-resource links in one platform or stage. Users can normally search through a single click, which will save their time and eliminate the need to recall the URL for these e-resource portals, links or databases. Finally, if the OPAC has a good appearance, it will draw in more and more people.

The root benefit of Koha that it is Open Source Software. Anyone who is familiar with HTML, Java, and CSS may customize and configure any Koha module. The

administrator can set up anything in Koha, including the OPAC, the Patrons card, the Barcode generator, the Spine Label creator, etc. Now Koha is one of the most popular library management systems-LMS in the world because of its simple and convenient features.

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