

## **The Implementation of Koha Web-OPAC: A Study of Assam Don Bosco University Library**

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### **Abstract**

*This paper aims to show the step-by-step process of the customization stages of Koha Web-OPAC (Online Public Access Catalogue), URL: 14.139.209.89 at Assam Don Bosco University Library. A Web-OPAC which acts as a discovery tools for finding the relevant information by the library users. This work is based on the personal experiences gathered during the implementation period. The reason behind the selection of Koha software is because of the GNU license (Open Source). The usage statistic displays a very informative and comprehensive detail of various statistics which will aid the library professionals to take necessary action in further improving its service via OPAC.*

### **Introduction**

The Assam Don Bosco University library management system has undergone a lot of changes over the recent years (2015-18). This is a witness to many new technologies being merged into the current library management system, making the automated workflow with a lot more consistency and up to the mark. The best example is the advent of the Open Source Software (OSS) viz., Koha, an integrated library management system software which was developed in January 2000 by Katipo Communications for the Horowhenua Library Trust in New Zealand. The name Koha comes from a *Māori* term for a gift or donation. As the name itself indicates, it is not only a gift to the librarians, but also a boon to the librarian. Koha covers all the activities of a library in the era of internet and interacting Web 2.0. It gives all the features that can be helpful in providing

the best services to users through its various modules. Koha has a large user base all over the world. In India, most of the premier Institutes are either using Koha, or are switching over from other commercial/open source library management software(s) to Koha. (Sharma, Misra, & Tripathi, n/d.).

Koha contains different modules like Circulation, Patrons, Advanced Search, Lists, Cataloging, Authorities, Serials, Acquisitions, Reports, Tools, Koha administration and About Koha. A library, to be able to live up to its expectation of serving the information needs, thus uses the modules that Koha software provides. OPAC is a part of Koha through which library users can search for various library materials; through the OPAC, users can connect themselves with various e-resources; the OPAC works as a gateway for the library.

"Gone are the days of searching through endless drawers of the card catalogue, trying to perform cross-references on a topic through different subject-headings typed on index cards. Information technology changed the entire environment of the library, including resources, techniques, services, etc. The advent of OPAC (Online Public Access Catalogue) changed the traditional card catalogue system. In the new system, data can be spread within the computer and then the required entry can be retrieved immediately through OPAC system in any format. Now, users can search for information via OPAC and most recently, the internet. Keyword searching and Boolean operators have made this feat even easier to find relevant information according to our needs" (Husain, 2006). Web-OPAC is an important module of a Library Management System. The users from outside of the library can access the Web-OPAC and get the bibliographical information (Chatterjee & Sarkhel 2016).

### **ADBU History and Its Library**

Assam Don Bosco University is a project of the Salesians of Don Bosco (SDB), managed by Don Bosco Society, Azara, Guwahati. Assam Don Bosco University was established in the year 2008. The University started the implementation of Library automation in the year 2013, and it was in the year 2016 that ADBU library started upgrading its self-web-hosted standalone, Koha software from version 3.10.3 which was released

in the year 2013 to an updated version 3.20.9 on March 2016 and later to the current version of 3.16. 05. It was during the year 2016 that the process of migration and data entry took place to ensure that all data were entered accurately into the Integrated Library management software, Koha. The process did not take too long before the cataloguing phase was completed; after this, it enabled the ADBU library to launched its Web-Based OPAC.

The Assam Don Bosco University automated library system using Koha currently functions under a centralised server hosted in one of its campus, *i.e.*, Azara campus. The university is also amongst the few from the North-Eastern States of India to have launched a centralised union catalogue where-by the two library campuses of Azara and Tapesia campuses are connected under one union catalogue; and the process of incorporating its third campus, *i.e.*, Kharguli campus library, is on its way.

### **Literature Review**

The purpose of a catalogue in the library science profession is to create precise bibliographical information of a particular type of information which is presented in the forms of different kinds of information sources. In recent time, an Online Public Access Catalogue (OPAC) was mainly used to cater to the need of various library users thus, enabling them to locate the required information in a short span of time. Assam Don Bosco University (ADBU) Library implemented its Web-OPAC in August 2017.

### **Online Public Access Catalogue (OPAC)**

OPAC stands for Online Public Access Catalogue which is made available in a Local Area Network basically limited to in-house access or within campus/institute. An OPAC contains locally all the bibliographic information of an information centre or one can say it is a gateway to information centre's collection. Yesmin and Ahmed (2016) observed that,

An OPAC is often considered to be the heart of the library's operations and the gateway to library services, as it facilitates access by the patrons to various services of the library. There have been many research studies conducted on the growth, development, functionalities, features and overall performance of various OPAC systems, as well as user experience and satisfaction with OPACs (pp. 685).

OPAC is the modern and flexible form of the catalogue, usually instantaneous and sophisticated access to any recorded information within a computer. An Online Dictionary for Library and Information Science (ODLIS) defines OPAC as,

An acronym for Online Public Access Catalog, a computer catalog of the books and other materials owned by a library. In most libraries, the largest concentration of OPAC terminals or workstations is located near the reference desk to make it easier for reference librarians to provide assistance. Synonymous with online catalog. Compare with WebPac (Reitz 2004: 469).

### **Web-OPAC (Online Public Access Catalogue)**

Koha is an Open Source Software (OSS); by open source software, it means the availability of a software source code openly or freely of a particular software or programmes. In this paper, a study is focused on of the one of the leading services provided by Koha, the Web-OPAC. Web-OPAC is an online database of materials held by a library or group of libraries and is made available at all time over the internet (Chaterjee and Sarkhel, 2016). Users can search an online library catalogue principally to locate books and reference or other material physically located in the library or virtually available on the web. According to Mishra and Thakur (2015) Web-OPACs are the interfaces that add valuable extensions to the functionality that help user communicate with the collections of a library. In other words, Web OPAC is an online computer catalogue of books and other materials owned by a library. In most libraries, the largest concentration of OPAC terminals or workstations is located near the reference desk to make it easier for reference librarians to provide assistance.

Web-OPAC is an OPAC, which is provided on the web and with the help of internet anybody can access it from anywhere. According to Washington University in St. Louis, “A Web-OPAC interfaces, which uses the World Wide Web (WWW) protocol to act as an OPAC.” According to ODLIS, *An Online Public Access Catalogue (OPAC) that uses a graphical user interface (GUI) accessible via the World Wide Web, as opposed to a text-based interface accessible via telnet.* Web-OPAC is an independent program designed separately from the library program. It is programmed to

facilitate members to access the OPAC, through their own search, for the ease of borrowing, instead of searching through the card catalogue. Also as pointed out by Bhattacharya (2016), 'members can request for the information about borrowing, reservation, etc. related to their own library profile, as well as to make automatic reservations.'

### Differences between OPAC & Web-OPAC

Husain & Ansari (2006) In their work 'from Card Catalogue to Web OPACs,' mentioned that OPAC and Web-OPAC are same in some aspects like searching and browsing in both the cases provides pre-coordinated as well as post-coordinated phrases options.

Let us discussed the differences exists in-between the OPAC and Web-OPAC are mentioned in the given table:

<b>Table: Difference between OPAC and Web OPAC</b>	
<b>OPAC</b>	<b>Web-OPAC</b>
OPAC accessibility is limited to a local Area Network or Intranet, within a campus or an institution.	Web-OPAC accessibility is not just limited to campus access alone, but anywhere, as long as there is an internet connection.
OPAC features are limited to few in house links added into the main page of the OPAC with less content structure.	The content structure is not just limited to few intranet links of a particular institution but worldwide on the global scale.
Does not aid in sharing information globally thus, hindering the possibility to collaborate amongst libraries.	Increase the possibility to share information and hence, prompt for collaboration service like inter-library loan among libraries or the formation of a consortium.

A Web-OPAC may be well presented but if the content or the hyperlink is not properly structured, it will not appeal to the users who browse through the main page. Therefore, to acquire maximum user experience in the entire information collection through the virtual experience of the OPAC, one needs to keep in mind the simple yet effective

and content rich webpage of the Web-OPAC. All these elements should be taken into account when making customizations to the Web-OPAC. It is also to be noted the essentiality to design user friendly OPACs and to test them for usability on a regular basis for which the author cum designer has set up a webpage hit feature in the main webpage.

Ruzegea (2012) also supported the idea of a simple user interface with high interactivity to allow ease of use and stated that:

Due to the increase in web technology, designers in user-interface industry compete in making different designs to allow ease-of-use of these interfaces so that users can have access to information they need. Yet, most of the designs of OPACs' interfaces are not that much effective in helping the users during their search for information. Some interface designs in university libraries' OPACs are less user-friendly and would not allow interactivity with the user during search sessions rendered them less effective, inefficient and bring low satisfaction on users. Libraries' Online Public Access Catalogs (OPACs) are one of the highly visible end user searching tools (pp. 42).

ADBU Library has implemented their design Web-OPAC user interface using Koha software in the month of July 2017. The purpose is to enable its patrons/users the ability to access the wealth of resources readily available online from all corner @ the IP address: <http://14.139.209.89> . After months of successful implementation of the Web-OPAC user interface, lets us discussed below the author experiences of the pros and cons of ADBU Web-OPAC.

#### **Advantage of ADBU Web-OPAC**

- i. It is accessible at any time from all corner of the globe;
- ii. Create awareness to all the ADBU community about the various resources available in the library;
- iii. Through the search features by author/title/keywords. It enables the ADBU users to conveniently search in the entire online catalogue by choice made available to them;

- iv. Upon login, ADBU users will be able to check their account details, total the amount due, circulation history and made purchase suggestion if required;
- v. The online catalogue in the ADBU Web-OPAC will also highlight the table of contents, availability of the book for loan and the number of copy kept in both the reference section and the general subject-wise collection;
- vi. One of the distinctive features is the online centralised catalogue of ADBU which is made available to all the three campuses. This feature enabled the ADBU users to borrow any books from any of the three campuses of ADBU library as long as it does not exceed the maximum checked out under their respective account.

### **Disadvantage of ADBU Web-OPAC**

The Web-OPAC is a dynamic feature in koha that allows the library to offer the users, the relevant search results; collections of useful hyperlinks; membership associated publishers link or links to other organizations, also subjected to few disadvantages which is mentioned below:

- i. The customization of the Web-OPAC can be a constant series of updates since koha (Open source software) is subjected to up gradation.
- ii. The introduction of the Web-OPAC for the first time will further require or to adopt changes to the existing Web-OPAC.
- iii. It is found to be lacking online thesaurus which is used to identify narrow terms and broader terms.
- iv. Do not provide ranking into the search hits in the retrieval page.

### **Web-OPAC Customization in Koha 16.05**

Koha's most impressive feature as an open source is that it enables the Koha Administrator to customize the Online Public Access Catalogue (OPAC) and convert it into a content management software giving it the touch of a lightweight website, thereby making it attractive and informative.

OPAC customization is done through the system preferences for the OPAC. OPAC customization does require a little knowledge of simple HTML to make many of the graphical displays work. Knowledge of coding in HTML, Java or CSS will be an advantage to the Koha Administrator, but it is not necessary to know everything as these HTML, Java and CSS codes can be gathered from the internet using any search (Tripathi, 2018).

The customization is need-based, and the requirements of every library are different, and every librarian has a different mindset. But it is true that by just applying commonsense, a good Web-OPAC can be designed after seeing the HTML language of different libraries or going to the tutorials available on the internet. Also, if a Librarian is not willing to customize his Web-OPAC, then it can be left as default and, slowly, when the librarian completes the customization of Koha, the librarian can then customize the Web-OPAC." (Sharma et al. n/d). The purpose of a web-based design is to enable data display interface to help readers to find, identify, select and obtain bibliographic resources. By clicking the desired information, the interface demonstrates the hierarchical structure of entities, attributes, and relationships of bibliographic records (Chang et al. 2013:17). In the case of ADBU Library, the tutorials and references from the website, <https://www.w3schools.com> of the world's largest web developer site were taken to customize the HTML and CSS code being used in the Web-OPAC customization.

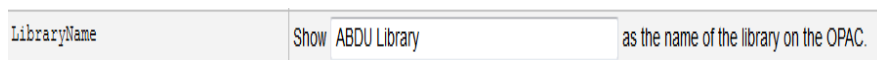
Koha OPAC is divided into many parts, namely, Header, left (Upper & Bottom) navigation, Main User Block (the center area of the OPAC where content will be written), right navigation and footer. The ADBU library has made some modifications in these files by adding the HTML, CSS into the editable interface of the web-OPAC under the administrative section. The Web-OPAC are customized under the following Table 1. ADBU Web-OPAC was operational in August 2017. Let us take a look at a series of screenshots given below which will provide some further detail to our OPAC customization. The HTML and CSS can be applied in any part of the OPAC mentioned below.



Table 1: Parts of Koha OPAC

Header (opacheader)		
Upper left Navigation (OpacNav)	Main User Block (OpacMainUserBlock)	Right Navigation (OpacNavRight)
Bottom Left navigation (OpacNavBottom)		
Footer (opaccredits)		

The above-mentioned areas can be customized using Koha administration - Global system preferences - OPAC. Under OPAC preferences various headings are there; go to the particular option which you want to customize. The following are the processes on how to customize the OPAC.



**I. Library Name:** Library name is one of the most important things which will appear in the OPAC browser window. To insert the library name in the OPAC the steps are:

Open Koha -- Koha administration -- Global system preferences -- OPAC -- LibraryName.

Type your library name and click on 'Save all OPAC preferences' (Upper left side). For example:

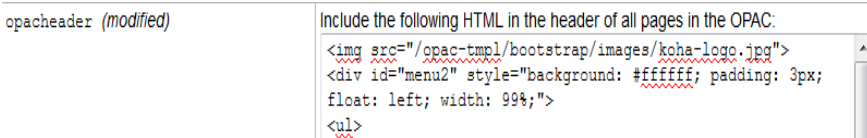
**II. Header:** To customize OPAC header, e.g., to insert header image (Banner) in the OPAC and to insert various useful links in the OPAC header.

**a. Insert Image (Banner):** Take the image in the pen drive or any other storage media, open the terminal either by using 'Ctrl+Alt+T' in the ubuntu OS, type 'sudo su' type the root password, than type 'gksudo nautilus'; after that one file system will open, copy the image from storage media and paste it in user/share/koha/opac/htdocs (inside the htdoc folder). Rename the image file as koha-logo.jpg. Then open Koha -- Koha administration -- Global system preferences -- OPAC -- *opacheader* (Click on 'Click to Edit') and type; for eg, the codes are:

```

<div id="menu2" style="background: #ffffff;
padding: 3px; float: left; width: 99%;">
<ul>
```

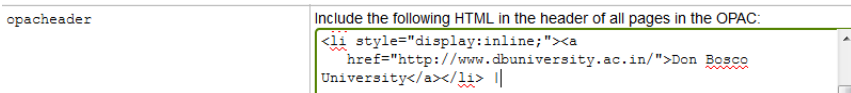
Click on ‘Save all OPAC preferences’ (Upper left side)



**b. Insert Links:** To insert any link to the OPAC header, open Koha -- Koha administration -- Global system preferences – OPAC – *opacheader* (Click on 'Click to Edit') and type; For eg, The codes are:

```
<li style="display:inline;"><a
href="website address">NAME</a></li> |
```

Click on ‘Save all OPAC preferences’ (Upper left side)



**c. Insert message:** To insert any message in the OPAC header, open Koha -- Koha administration -- Global system preferences – OPAC – *opacheader* (Click on 'Click to Edit') and type; for eg, The codes are:

```
<div id="Welcome">
<h1><centre><marquee>Welcome to Assam Don
Bosco University Library, Online Public Access
Catalogue (OPAC)</marquee></centre></h1>
</div>
```

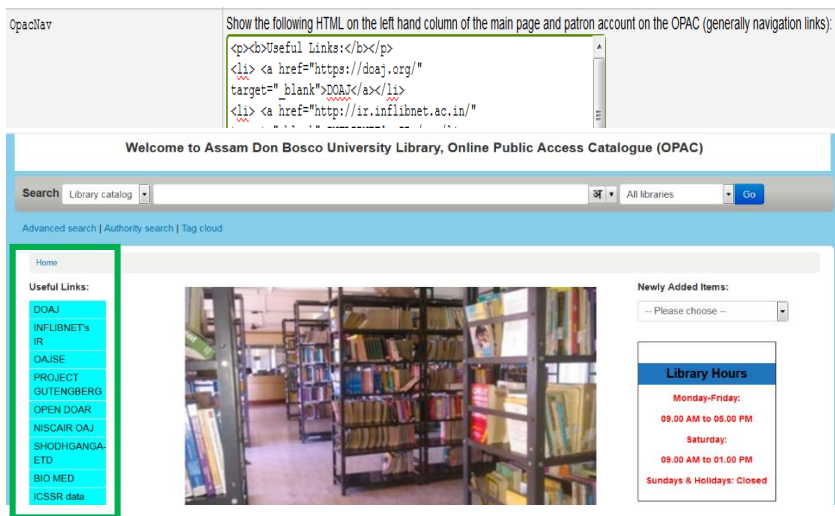
Click on ‘Save all OPAC preferences’ (Upper left side)

**III. Upper Left Navigation:** Upper left navigation (OpacNav) is useful for the library users, where basically the most useful links are given. To insert these links the steps are:

Open Koha -- Koha administration -- Global system preferences – OPAC – OpacNav (Click on 'Click to Edit') and type; for e.g., the codes are:

```
<p><b>Useful Links:</b></p>
<li>          <a          href="https://doaj.org/"
target="_blank">DOAJ</a></li>
<li>          <a          href="http://ir.inflibnet.ac.in/"
target="_blank">INFLIBNET's IR</a></li>
```

Click on ‘Save all OPAC preferences’ (Upper left side)



The above screenshot highlighted outline under OpacNav, left navigation display the example of useful links like open access sites provided to various e-resources available online.

**IV. Right Navigation:** Right navigation is in the right side of the OPAC window, where we input various types of information like ‘New Arrivals’, ‘Library Timings’, ‘Library Borrowings’ etc. So to insert these links the steps are:

Open Koha -- Koha administration -- Global system preferences – OPAC – OpacNavRight (Click on 'Click to Edit') and type; for e.g., the codes are:

**a. Newly Added Items:**

**<b>Newly Added Items:</b>**

**<p><form name="searchform" method="get"**

**action="/cgi-bin/koha/opac-search.pl">**

**<input type="hidden" name="idx" value="kw" size="3"**

**maxlength="7"/>**

**<input type="hidden" name="sort\_by" value="acqdate\_dsc">**

**<input type="hidden" name="do" value="OK">**

**<select name="limit"**

**onChange="this.form.submit()"><option>-- Please choose**

**--</option>**

**<option value="mc-itype:BKS">Books</option>**

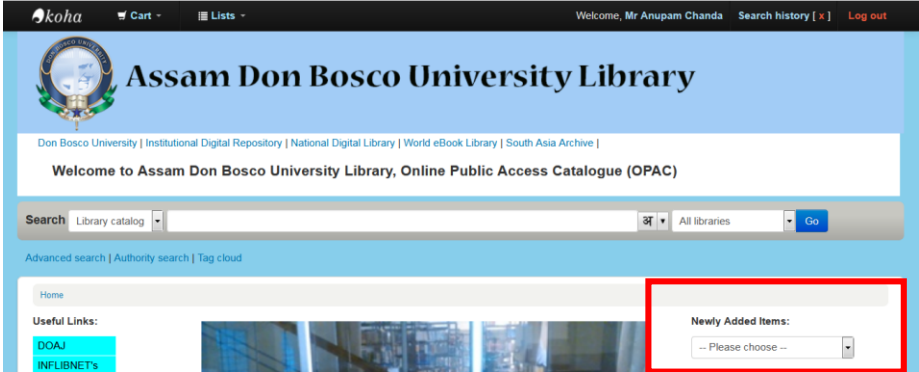
**</select></form></p>**

Click on 'Save all OPAC preferences' (Upper left side)



Please check the item types for Books, if it is not BKS than you have to change the term BKS with the existing terms. To check the item types for books go to Koha administration – Item types (under Basic parameters).

The screenshot below in highlighted section is an example of the feature on 'Newly Added items'. This feature display all the recently catalogue items in koha.



b. **Library Hours:** To insert the information about library hours/timings; Open Koha -- Koha administration -- Global system preferences – OPAC – OpacNavRight (Click on 'Click to Edit') and type; for e.g., the codes are:

```
<div style="background-image: url(); height: 230px;
width: 200px; border: 1px solid black;margin-
top:0"><br>
    <center><h2><font size='4'
color='black'>Library Hours</font></h2>
    <font size='2'
color='red'><p><strong>Monday-
Friday:</strong></p>
    <p><strong>09.00 AM to 05.00
PM</strong></p>
    <p><strong>Saturday:</strong></p>
    <p><strong>09.00 AM to 01.00
PM</strong></p>
    <p><strong>Sundays & Holidays:
Closed</strong></p></font></center>
<style>
h2 {
background-color: #2175bc;
}
style {
```

**background-color: blue;**

**}**

**</style>**

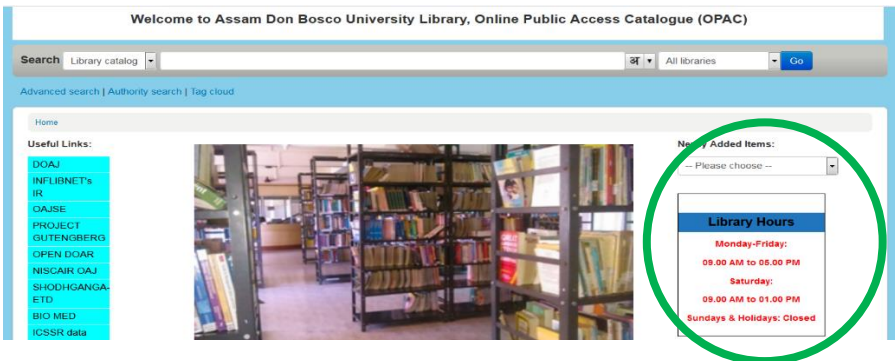
**</div>**

**</br>**

Click on ‘Save all OPAC preferences’ (Upper left side) and insert the timings as per the approved library hours

```
OpacNavRight Show the following HTML in the right hand column of the main page under the main login form:
<div style="background-image: url(); height: 230px; width: 200px; border: 1px solid black;margin-top:0"><br>
<center><h2><font size='4' color="black">Library Hours</font></h2>
<font size='2' color="red"><p><strong>Monday-Friday:
</strong></p>
<p><strong>09.00 AM to 05.00 PM</strong></p>
<p><strong>Saturday:</strong></p>
<p><strong>09.00 AM to 01.00 PM</strong></p>
<p><strong>Sundays & Holidays: Closed</strong></p></font>
</center>
<style>
h2 {
  background-color: #2175bc;
}
style {
```

The screenshot below in the circled area displays the library hours of the ADBU library.



c. **Library Borrowings:** To insert the information about library borrowings; Open Koha -- Koha administration -- Global system preferences – OPAC – OpacNavRight (Click on 'Click to Edit') and type; for eg, the codes are:

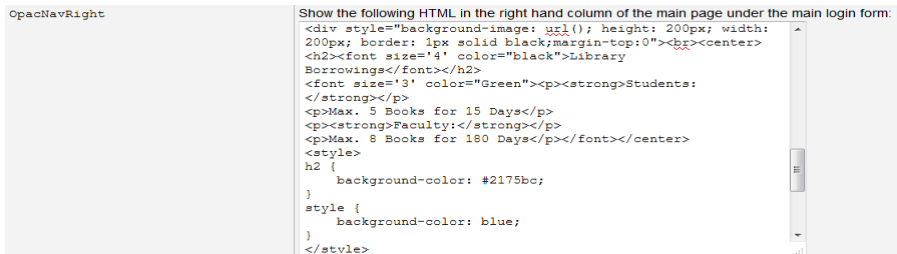
```

<div style="background-image: url(); height: 200px;
width: 200px; border: 1px solid black;margin-
top:0"><br><center><h2><font
size='4'
color="black">Library Borrowings</font></h2>
<font
size='3'
color="Green"><p><strong>Students:</strong></p>
<p>Max. 5 Books for 15 Days</p>
<p><strong>Faculty:</strong></p>
<p>Max. 8 Books for 180 Days</p></font></center>
<style>
h2 {
background-color: #2175bc;
}
style {
background-color: blue;
}
</style>
</div>

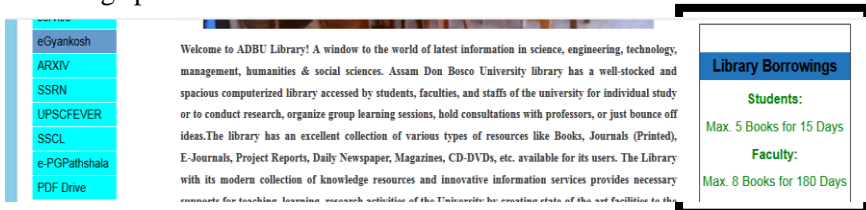
```

Click on ‘Save all OPAC preferences’ (Upper left side)

**NB: Insert the number of books and days as per your library rules.**



The screenshot below in square outline, display the library borrowings period.



**V. Main User Block:** To customize OPAC main user block, like to insert images in the middle section of OPAC and to insert various kinds of information, for example, a brief write-up about the library, Etc. The steps are: Take the image in the pen drive or any other storage media, open the terminal either by using ‘Ctrl+Alt+T’ in the Ubuntu OS, type *sudo su* type the root password, then type *gksudo nautilus* after that one file system will open, copy the image from storage media and paste it in *user/share/koha/opac/htdocs* (inside the *htdocs* folder). Rename the image file as **koha1.jpg**.

Open Koha -- Koha administration -- Global system preferences -- OPAC -- OpacMainUserBlock (Click on 'Click to Edit') and type; for e.g., the codes are:

```

<head>
<script
  type="text/javascript">
var image1 = new Image()
image1.src = "/koha1.jpg"
</script>
</head>
<body>
<p>
<center> </center></p>
<script type="text/javascript">
  var step=1;
  function slideit()
  {
    document.images.slide.src =
eval("image"+step+".src");
    if(step<1)
      step++;
    else

```

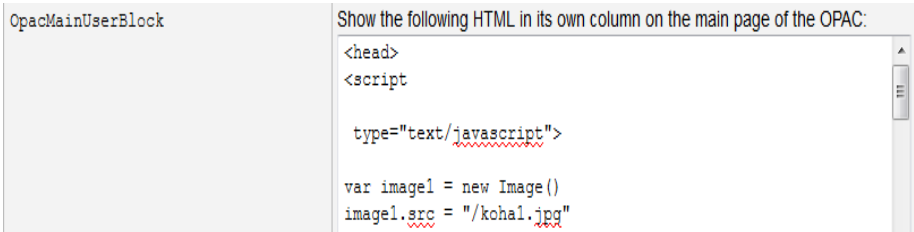


```

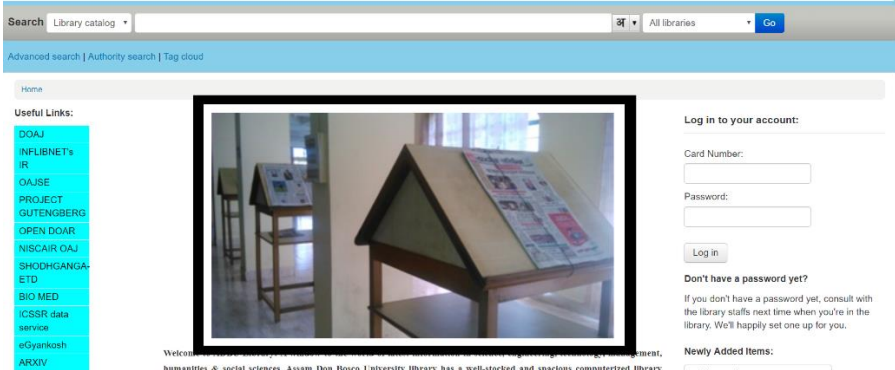
        step=1;
        setTimeout("slideit()",3500);
    }
    slideit();
</script>
</body>
<body>
<p align="justify">
<html>
<body>
<h1 style="font-family:times new roman; text-align:justify; font-size:100%; width:100%; background-color:light-grey; border:20px;">
Welcome to 'Library Name' Library!
'Write anything about the library'
</h1>
</body>
</html>

```

Click on 'Save all OPAC preferences' (Upper left side)



The screenshot below in the MainUserBlock, highlighted in black outline, display multiple images of library.



**VI. Footer:** In the OPAC window, we use footer as OPAC credits. For example, Copyright information, contact information etc. are there in the footer section. To insert any information in the footer section the steps are:

Open Koha -- Koha administration -- Global system preferences – OPAC – opaccredits (Click on 'Click to Edit') and type; for e.g., the codes are:

```
<p align="center">Copyright @ ADBU  
Library<br><a  
href="http://www.dbuniversity.ac.in"  
target="_blank">Assam Don Bosco  
University</a><br>Guwahati-781017,Assam</p>  
<p align="right">Contact the Librarian, ADBU  
<br>Email:: librarian@dbuniversity.ac.in</br>  
</p>
```

Click on 'Save all OPAC preferences' (Upper left side)

***NB: Insert the information as per your library guidelines.***

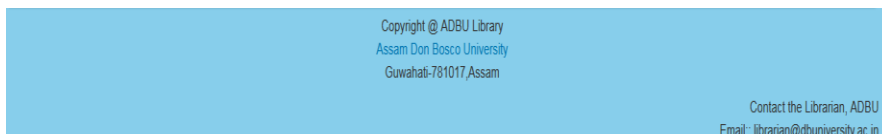
opaccredits (modified)

Include the following HTML in the footer of all pages in the OPAC:

```
<p align="center">Copyright © ADBU Library<br><a href="http://www.dbuniversity.ac.in" target="_blank">Assam Don Bosco University</a></br>Guwahati-781017, Assam</p>

<p align="right">Contact the Librarian, ADBU <br>Email:: librarian@dbuniversity.ac.in</br> </p>
```

The screenshot below shows the display in the Opaccredits, which is the lower bottom display in Koha Web-OPAC.



**VII. OPAC User CSS:** To change the background colour of the OPAC window we can insert some HTML coding in the OPAC User CSS in Koha. The steps are:

Open Koha -- Koha administration -- Global system preferences – OPAC – OPACUserCSS (Click on 'Click to Edit') and type; for eg, the codes are:

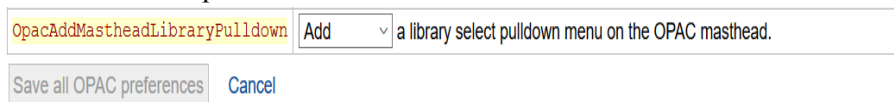
```
#opac-main-search{  
background:#006743;  
border-top:Opx  
}  
#navigation{  
margin-left:0;  
padding-padding:0;  
list-style-type:none;  
}  
#navigation a{display: block; text-decoration: none;  
background: #00ffff; color:#000000; padding: .2em  
.5em;  
border-bottom: 1px solid #fff; width: 7em}  
#navigation a:hover{background:#69c; color:#000;}  
#navigation li{display:inline;}
```

Click on 'Save all OPAC preferences' (Upper left side)

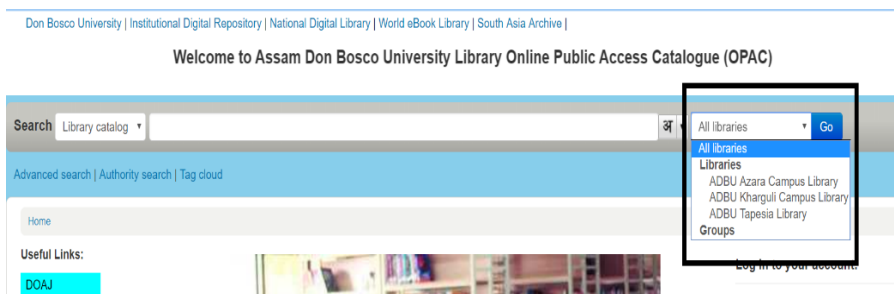
***NB: Insert the colour codes as per your convenience.***

```
OPACUserCSS
Include the following CSS on all pages in the OPAC:
#opac-main-search{
background:#006743;
border-top:0px
}
|
#navigation{
margin-left:0;
padding-padding:0;
list-style-type:none;
}
#navigation a{display: block; text-decoration: none;
background: #00ffff; color:#000000; padding: .2em .5em;
border-bottom: 1px solid #fff; width: 7em}
#navigation a:hover{background:#69c; color:#000;}
#navigation li{display:inline;}
```

**VIII. OPACAddMastheadLibraryPulldown:** This features enabled the end users to search for materials within the Web-OPAC available in all the three library campuses. To enable it just go to Open Koha -- Koha administration -- Global system preferences – OPAC – OPACAddMastheadLibraryPulldown (Click on 'Add option') and click on ‘Save all OPAC preferences’. See below screenshot:



The above changes in the setting will highlight all the Libraries in the pull down menu on the right side of the additional searches as shown below in the screenshot.



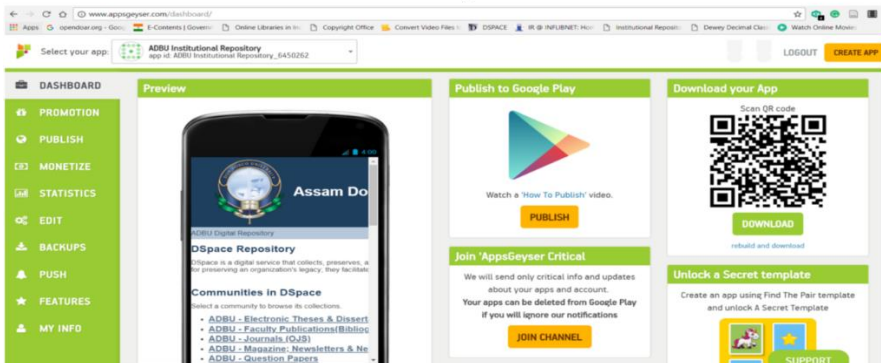
**IX. OpacNavBottom:** In this section, the bottom left navigation display a QR code in the OPAC. End-users can scan the code using the QR reader  
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apps from Google Play Store for free and download the ADBU-Institutional Repository apps under the android platform from the hosting website <https://www.appsgeyser.com/>

For this purpose the site <https://www.appsgeyser.com/> is used which is an open web platform launched January 25th, 2011, that allows converting any web content into an Android App in two easy steps. Built to help people to transfer their ideas into apps ('What is AppsGeyser?', 2018).

The steps given below in the screenshot will display how the QR code is generated from the website and implemented into our Koha Web-OPAC.

Step 1: The site below generate and host the ADBU-IR apps and generate the QR code. The site also display various features in the dashboard that enable a minimum customization for ADBU-IR apps.



Step 2: Copy the code below and paste in Koha setting (OpacNavBottom)



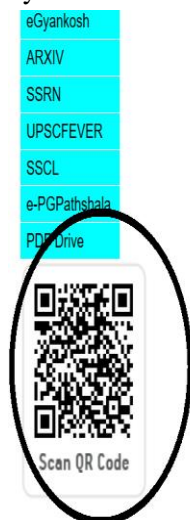
Step 3: Below screenshot shows the code that is paste under (OpacNavBottom)



After the generation of the QR widget, one can copy the code and go to Koha -- Koha administration -- Global system preferences -- OPAC -- OpacNavBottom (Paste the code) and click on 'Save all OPAC preferences'.

See Step 3 screenshot above.

As a result of this setting made into our OPAC preferences, the following screenshot below with highlight in a circle, display the QR code, a machine-readable code consisting of an array of black and white squares, which is used for storing ADBU-Institutional Repository URLs for reading by the camera on a Smartphone.



Welcome to ADBU Library! A window to the world of latest information in science, engineering, technology, management, humanities & social sciences. Assam Don Bosco University library has a well-stocked and spacious computerized library accessed by students, faculties, and staffs of the university for individual study or to conduct research, organize group learning sessions, hold consultations with professors, or just bounce off ideas. The library has an excellent collection of various types of resources like Books, Journals (Printed), E-Journals, Project Reports, Daily Newspaper, Magazines, CD-DVDs, etc. available for its users. The Library with its modern collection of knowledge resources and innovative information services provides necessary supports for teaching, learning, research activities of the University by creating state-of-the-art facilities to the academic community. The university is a member of the various consortium such as eShoodhSindhu, National Digital Library, South Asian Archive, World eBook Library. The entire Library collections are made available through OPAC (Online Public Access Catalogue). OPAC can be accessed through any terminal on all the three Campuses network connected. Library collections and the e-resources can be accessed through Web OPAC. The Library offers a range of information services to support the learning process set to the highest professional standards. The university is using DSpace software for its institutional repository which preserves the institute's intellectual output for campus-wide access and digital preservation for the posterity.

**X. Opaccredits:** After many searches for free page hits counters from the internet through Google and after clicking several result, The Library decided to use <https://www.easycounter.com/> which is very similar to Google analytics. The purpose of using this site is to track down the number of visitors who use the Web-OPAC.

The step to generate the embedded code for the Web-OPAC is as follows: First go to the site <https://www.easycounter.com/> -- Register an account -- Insert the Web-OPAC URL <http://14.139.209.89/> and you will received a confirmation mail of registration. Next step, Go to – OPAC System Preferences – Opaccredits (Copy the embedded HTML code from the website and paste it under Opaccredits) and click on ‘Save all OPAC preferences’. See below screenshot for example:

Step 1: Login to the registered account at <http://www.easycounter.com>

Step 2: The screenshot below display the embedded HTML code generated from the site and ready to be install by copy-paste into the OPAC System Preferences Setting.

The screenshot shows the EasyCounter website interface. On the left is a login form with fields for 'Login:' (containing 'librarian123') and 'Password:' (containing '\*\*\*\*\*'), a 'Login' button, and a 'forgot password?' link. On the right, there is a navigation menu with 'Stats', 'Counter Code', 'Edit Profile', 'Counter Style', and 'Subaccounts'. Below the menu, a text box says 'Add the following HTML Code into all your files that you wish to get logged:' followed by a code block:

```
<a href="https://www.easycounter.com/">
</a>
<br><a href="https://www.easycounter.com/">Web Site Hit
Counters</a>
```

Below the code block, there is a link: 'or Download PHP code below and add it into all your files that you wish to get logged: Download PHP code'.

Step 3: Below screenshot shows the same HTML code generated from the site under Step 3. The same code is pasted into the Koha Admin - Global System Preferences - Opaccredits. After pasting the code, click on the 'Save All Opac Preferences' in the upperleft.

The screenshot shows the 'Opaccredits' section in the Koha Admin interface. The 'Tools' sidebar is on the left. The main content area has a form with the following text:

OPACBaseURL: The OPAC is located at [ ] . This should be a complete URL, starting with http:// or http a trailing slash in the URL. (This must be filled in correctly for RSS, unAPI, and search plugins to work.)

opaccredits: Include the following HTML in the footer of all pages in the OPAC:

```
<p align="center">Copyright @ ADBU Library<br><a href="http://www.duniversity.ac.in" target="_blank">Assam Don Bosco University</a></p><br><p align="right">Contact the Librarian, ADBU <br>Email: librarian@duniversity.ac.in</p><br>Email: anupam.chanda@duniversity.ac.in</p><br>Email: chanlang.bareh@duniversity.ac.in</p>
```

Below this, there is a code block with the following HTML code:

```
<p align="left"><a href="http://www.easycounter.com/">
</a>
<br><a href="http://www.easycounter.com/">Web Site Hit
Counters</a>
```

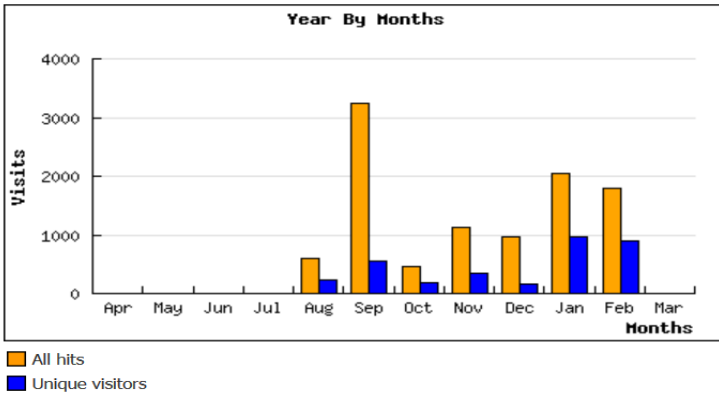
Step 4: At the Footer, which is located at the bottom of the Web-OPAC, one will be able to track the number of visitors recorded by the site after the implementation of all the given steps.



**XI. ADBU-Web OPAC Counts:** After the implementation of this feature in ADBU-Web OPAC, One can login to the registered account again and generate the statistical representation and extensive reports to keep track of the site visitors. One can view the number of visitors by unique hits, every page hits, by countries, by browsers and by operating system. The site is very informative. The graphical representation generated as it is from the website <http://www.easycounter.com> on the number of visitors/counts to the Web-OPAC since its implementation in August 2017 till the 16th March 2018 is given below:

## Counts report for librarian123

[Last 30 Days](#) | [This Month](#) | [Last Year](#) | [By Countries](#) | [By Browsers](#) | [OS Stats](#)



[Privacy Policy](#) | [Terms and Conditions](#) | [Bug Tracking](#)

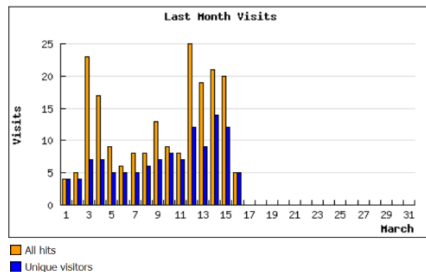
Copyright 2005 © www.easycounter.com  
All rights reserved.

The above bar chart shows the number of all counts report, month-wise, represented by a brown colour bar while the blue colour bar represents unique visitors.



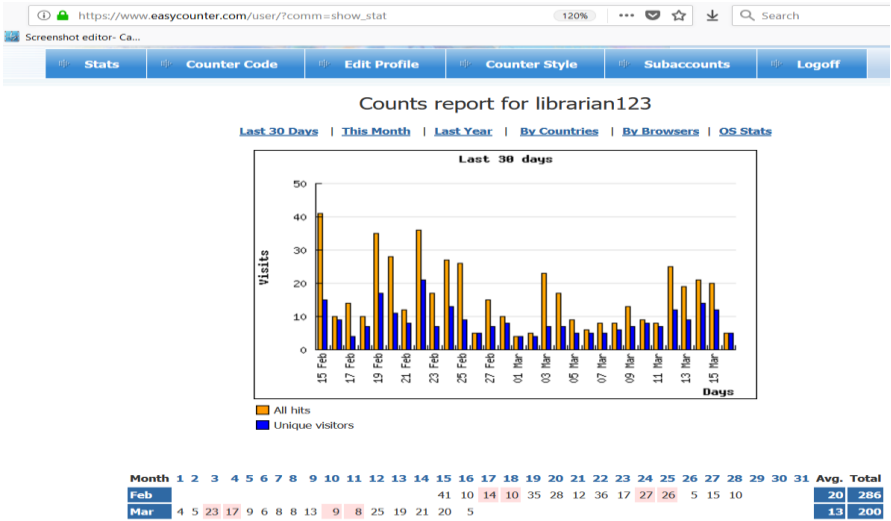
## Counts report for librarian123

[Last 30 Days](#) | [This Month](#) | [Last Year](#) | [By Countries](#) | [By Browsers](#) | [OS Stats](#)



The counter report above represent with a bar chart, display a current month of March 2018 counts report generated up-to the 16th March 2018.





The screenshot above is the records of the last 30 (Thirty) days counts report. It also gives us the total average of 20 counts/day in February from 15th to 28th. The total counts for February from 15th till 28th is 286 counts. Whereas, the average in March is 13 counts/day if taken the statistic from the 1st March 2018 to 16th March 2018. A total count for half the month of March is 200 counts. The overall total count for the last 30 days is 486 counts.

Stats Counter Code Edit Profile Counter Style Subaccounts Logoff

### Edit Profile

Login: **librarian123**

Email:

Language:

Time Zone:

New Password:

New Password Confirm:

Show:  All hits  Unique visitors

Unique Counter:

Main Counter:

The screenshot above shows a total of 5322 visitor to the ADBU Web-OPAC since its implementation from August, 2017 to 16th March 2018.

### **Suggestions to Improve Koha Web-OPAC.**

- i. **User satisfaction study:** A proper users study will give us a better understanding about their search behavior.
- ii. **Simple Design:** When creating usable design, think about your users and how they'll be utilizing what you create. Be consistent by using the same fonts and design elements on all of the pages.
- iii. **Put a help link on every page:** Don't leave users stranded. Give them a way to get help by adding elements of online assistance to any query.
- iv. **Check for a broken link:** Make the sure that any link added to the site does not have any broken links or grammatical errors that will undermine the quality and authority of the library.
- v. **Use appealing color:** Highlight specific templates with colors that are more appealing to the eyes and cause less strain.
- vi. **Useful Information on the first page:** Avoid making your patrons scroll to find information. Put all of your most used functions and information high in the display field or the main page.
- vii. **Regular updates on Useful Links:** Regularly updates the useful links with the freely available e-resources online. These way users can take advantage of a new way to enjoy browsing.
- viii. **Catalogue different items:** Adding different types of items into our Koha database like thesis, dissertation, student's projects & other collection types.
- ix. **Adding library blog:** Allow provision for library blog to evangelize the library and get connected with patrons by inserting the library blog into the main page of OPAC.
- x. **YouTube:** Post videos of the library on YouTube to create awareness to patrons about the usefulness of Web-OPAC.

## Conclusion

The Web-OPAC ease of access is not just the reason behind this paper; it is not just a tool for small presentation but a facilitator of information within information accessible from all over the globe with the click of a mouse and the availability of internet connection. This paper presents an overall view of the implementation and usability of Web-OPAC, by giving the required information in an orderly fashion into the already existing default template of Koha. The technology is highly interactive for editing provision to a library professionals with less experience on advanced programming skills. The Web-OPAC, not only provide better services, but also undergone changes in the attitude of the library professional with broader outlook. The customization process enables the fellow professional in the North-East regions to get acquainted with new features to utilize the potential of Koha web technologies entirely and at the same time to keep looking for new features updates from the Koha communities.

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