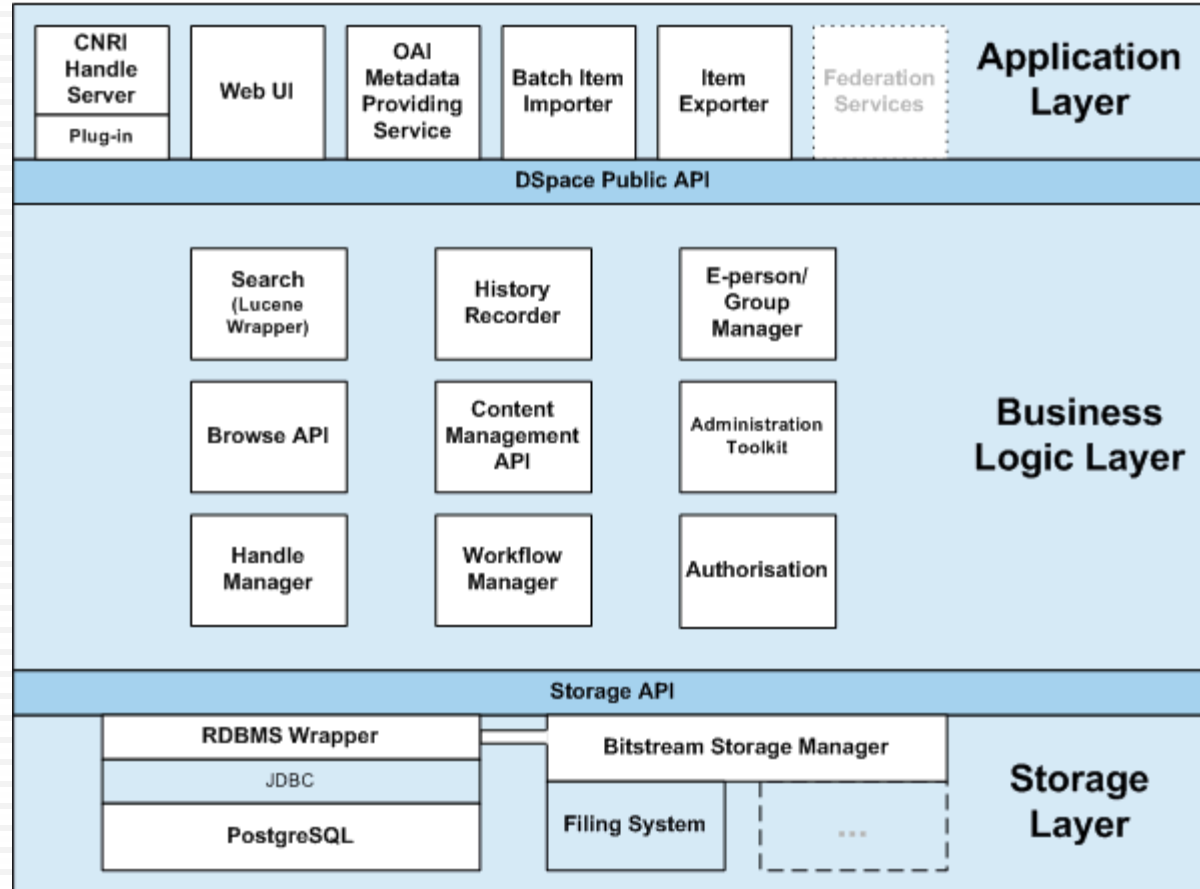




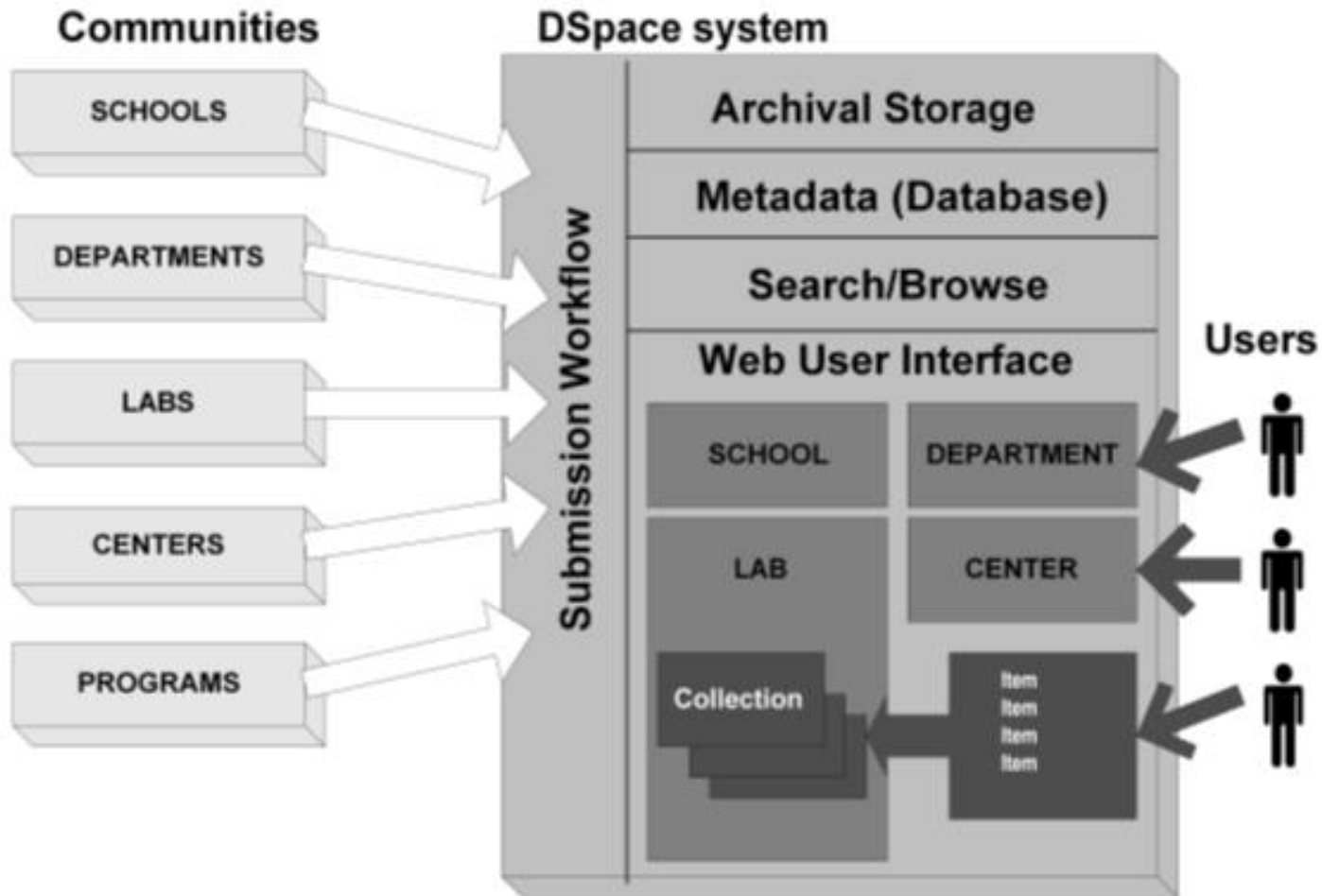
DSPACE ADMINISTRATION AND CUSTOMIZATION

Yatrik Patel
yatrik@inflibnet.ac.in

Understanding Dspace System Architecture



What to Administer..

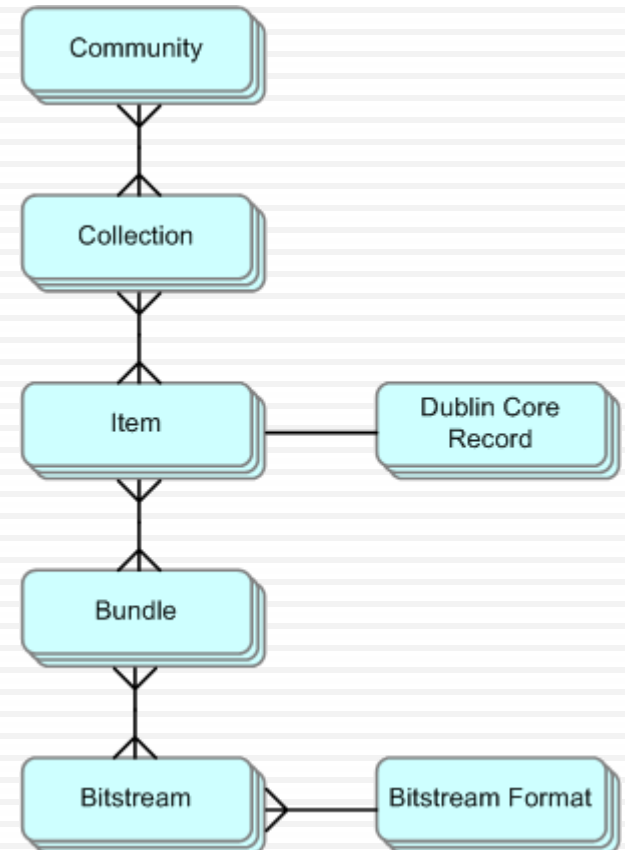


Let's understand DSpace Instance

- Communities/Collections/Items
- E-People/Groups
- Metadata Registry
- Bit stream Format Registry
- Work Flow
- Authorization.

Community/Collection/Items

- Bitstreams (files having content)
- Bundles (more than one bitstream)
- Items (digital documents)
- Collections (a set of items)
- Sub-communities (a set of collections)
- Communities (Top level)



Peoples and Dspace

- Anonymous Users (anybody)
- **Members**, who wish to subscribe to a collection (one can not subscribe to communities). Also called E-person in DSpace
- **Submitters (authors)**, who submit their publications to a collection (they should be members and have been authorized to submit).
- **Reviewers** - members who are authorized to review submissions. They can either accept or reject submissions). Normally, they are subject specialists
- **Metadata Editors** – who validate the metadata. Normally, they are library professionals
- **Collection Administrators**. In a large digital repository collection administration can be delegated various E-groups.
- They can choose the reviewers, metadata editors among members and decide the collection policy
- They are different from DSpace administrators, who have the overall responsibility and power. A kind of super-user

Grouping of Peoples

- DSpace calls the reviewers, metadata editors, collection administrators as E-groups
- It means, there can be more than one e-person (member) in any list of reviewers or metadata editors etc.
- Each e-group can be associated with one or more collections
- A member can be placed in none or more than one e-group

More on Grouping/Customization

- Create communities
- Create collections under each community
- Administration of E-People
- Creating E-Groups among E-People
- Authorizing E-Groups for each collection
- Authorizing E-People for submission
- Authorizing E-Groups to workflows for each collection
- Various Authorizations at
 - Community Level
 - Collection Level
 - Item Level
 - Bitstream level

Ways to Customize

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- User Interface
- Metadata
- Browse and Search
- Language

Three Layers of DSpace

- Application Layer (UI) : JSPs (XHTML/CSS) & Servlets
- Business Logic Layer : Java Classes / Objects
- Storage Layer : Database & Filesystem APIs

- **JSPs (Java Server Pages)** create HTML for the browsers to display
- **JSP Tags**, which help to "build" the webpage, and usually contain code useful to many different JSPs.
- **Java Servlets**, which perform any requests a User makes through the UI, and provide JSPs with all the information they need to create the next webpage.
- **Java Classes**, which define and retrieve information about the "objects" within the system.

DSpace Directories

Source Directories ([/something/dspace-1.8.X-source/])

All customization generally takes place here

- **config/ - DSpace configurations**
- **jsp/ - DSpace JSPs**
- **src/ - DSpace Servlets & Classes**

Installed Directories ([/dspace/])

- **Home to all "live" configuration files, properties, Java libraries (including dspace.jar)**
- **Usually home to log files, reports, search indices, and "bitstreams" themselves!**

Webapplication Directory ([/dspace/webapps/])

- **Home to all compiled servlets and JSPs**
- **Basic customizations can also takes place here (*if you decide to do after installation*)**

Things you should know about editing dspace.cfg files

- There are * two dspace.cfg files after an installation of DSpace.*
- The "source" file that is found in [dspace-source]/dspace/config/dspace.cfg
- The "runtime" file that is found in [dspace]/config/dspace.cfg
The runtime file is supposed to be the **copy** of the source file, which is considered the master version. However, the DSpace server and command programs only look at the *runtime* configuration file, so when you are revising your configuration values, it is tempting to *only edit the runtime file*. **DO NOT** do this.
- Always make the same changes to the source version of dspace.cfg in addition to the runtime file. The two files should always be identical, since the source dspace.cfg will be the basis of your next upgrade.
- To keep the two files in synchronization, you can edit your files in [dspace-source]/dspace/config/ and then you would run the following commands:
- `cd [dspace-source]/dspace/target/dspace-<version>-build.dir ant update_configs`
- This will copy the source dspace.cfg (along with other configuration files) into the runtime ([dspace]/config) directory

JSP Files

- The JSPs are available in one of two places:
- `[dspace-source]/dspace-jspui/dspace-jspui-webapp/src/main/webapp/` - Only exists if you downloaded the full Source Release of DSpace
- `[dspace-source]/dspace/target/dspace-[version].dir/webapps/dspace-jspui-webapp/` - The location where they are copied after first building DSpace.

DSpace™

Header

[About DSpace Software](#)

Search DSpace

[Advanced Search](#)

[Home](#)

Browse

- [Communities & Collections](#)
- [Titles](#)
- [Authors](#)
- [Subjects](#)
- [By Date](#)

Sign on to:

- [Receive email updates](#)
- [My DSpace authorized users](#)
- [Edit Profile](#)
- [Help](#)
- [About DSpace](#)

Location Bar

DSpace at My University >

Top News

DSpace is Live

Welcome to our digital repository of My University research!

More exciting news to appear here.

Search

Enter some text in the box below to search DSpace.

Communities in DSpace

Choose a community to browse its collections.

[Digital Library at Documentation Research and Training Centre](#)

[Library and Information Science](#)

Side Bar News

This is a default installation of DSpace!

It can be extensively configured by installing modified JSPs, and altering the site configuration.

Basic Customization: Top News

Step 1

- Communities/
Collections
- E-people
- Groups
- Items
- Metadata
Registry
- Bitstream Format
Registry
- Workflow
- Authorization
- Edit News**
- Edit Default
License
- Supervisors
- Statistics

Step 2



Step 3

News:

```
<h3>DSpace is Live</h3><p>Welcome to our digital repository of My University research!</p><p>More exciting news to appear here.</p>
```

Save Cancel

- To change the Sidebar News, follow the same steps as shown in the above for Top News, only instead of Top News, choose Sidebar News (of Step 2)

Customization: Header/ Footer/ Navbar

Files Located in:

`/dspace/webapps/jspui/layout/*.jsp`

Change the HTML in **header-default.jsp**, **footer-default.jsp**, **location-bar.jsp**, **navbar.jsp**,

....

N.B. *If you don't want something to be appeared in the site, just comment it using*

`<%-- and --%>`

Example:

```
<%-- <form method="get" action="<%= request.getContextPath()
%>/simple-search"> --%>
```

Customization: Location Bar

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Files Located in:

- ▣ `/dspace/config/dspace.cfg`

Change name of the site in

`dspace.name = "DSpace Short-Term Course"`

Customization: CSS

CSS file Located in:

`/dSPACE/webapps/jspui/styles.css.jsp`

```
BODY { font-family: "verdana", Arial, Helvetica, sans-serif;  
font-size: 10pt;  
font-style: normal;  
color: #000000;  
background: #bbbbbb;  
margin: 0;  
padding: 0;  
margin-left:0px;  
margin-right:0px;  
margin-top:0px;  
margin-bottom:0px }
```

Customization: XHTML

- In JSP pages, Java code is surrounded by `<%java code%>` or `<%=java variable%>`. Any other thing outside of that is XHTML (except for JSP Tags).

```
<td>
  <a href="<%= request.getContextPath() %>/"><a
  href="http://your.dspace.website.com">"
  width="102" height="100" border="0"/></a></a>
</td>
```

```
<td class="tagLine" width="99%"> <%-- Make as wide as possible. cellpadding
  repeated for broken NS 4.x --%>
  <h1 align="center">Dspace at INFLIBNET</h1>
</td>
```

Customization: Text

- “Messages.properties” contains almost all the text of DSpace
- Located in:

Format of “Messages.properties”

`jsp.layout.navbar-default.authors` = Authors

(Navigation bar text “Authors” shared by pages in `/jsp/layout/navbar-default.jsp`)

Customization: Text

- **Keys** in Messages.properties referenced in JSP with:
`<fmt:message key="jsp.layout.navbar-default.authors"/>`
(/jsp/layout/navbar-default.jsp)
- The text corresponds to a property "key" named after the JSP or Tag in which it appears.
- **Example:**
`jsp.community-home.heading1` is a heading within /jsp/community-home.jsp
`jsp.general.search.button` is the text that appears on ALL search buttons in DSpace

Customization: Text

Before

Browse

- [Communities & Collections](#)
- [Titles](#)
- [Authors](#)
- [Subjects](#)
- [By Date](#)

Search DSpace

[Advanced Search](#)

After

Browse

- [Communities & Collections](#)
- [Titles](#)
- [Lekhak](#)
- [Subjects](#)
- [By Date](#)

Search DSpace

[Advanced Search](#)

Customization: Add Metadata

- [Groups](#)
- [Items](#)
- [Metadata Registry](#)
- [Bitstream Format Registry](#)
- [Workflow](#)
- [Authorization](#)
- [Edit News](#)
- [Edit Default License](#)
- [Supervisors](#)
- [Statistics](#)
- [Help](#)

Metadata Field Registry

[Schemas](#) | [Help](#)

Note: Adding a new field to the registry does not add a corresponding input field to the submit forms!

ID / Element / Qualifier / Scope Note				
67	<input type="text" value="Audience"/>	<input type="text"/>	<input type="text" value="Target user"/>	<input type="button" value="Update"/> <input type="button" value="Delete..."/>
2	<input type="text" value="contributor"/>	<input type="text" value="advisor"/>	<input type="text" value="Use primarily for thesis <u>advisor</u>."/>	<input type="button" value="Update"/> <input type="button" value="Delete..."/>
66	<input type="text" value="type"/>	<input type="text"/>	<input type="text" value="Nature or genre of content."/>	<input type="button" value="Update"/> <input type="button" value="Delete..."/>

Add Metadata Field

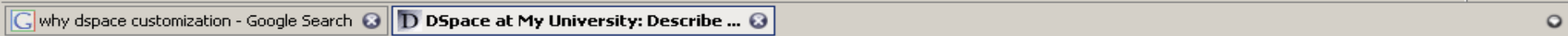
To create a new field you must provide a unique element and qualifier pair. The qualifier may be left blank if desired and the element and qualifier cannot contain spaces, underscores or periods.

Element:

Qualifier:

Scope Note:

Customization: Submit/ Input Form



[Home](#) [Login/Register](#) [Edit Profile](#) [Receive email updates](#) [Help](#) [About DSpace](#)

[Describe](#) [Describe](#) [Describe](#) [Upload](#) [Verify](#) [License](#) [Complete](#)

Submit: Describe this Item

Please fill in the requested information about this submission below. In most browsers, you can use the tab key to move the cursor to the next input box or button, to save you having to use the mouse each time. [\(More Help...\)](#)

Enter the names of the authors of this item below.

Last name

First name(s) + "Jr"

e.g. Smith

e.g. Donald Jr

Authors

Enter the main title of the item.

Title

Enter the series and number assigned to this item by your community.

Series Name

Report or Paper No.

Series/Report No.

If the item has any identification numbers or codes associated with it, please enter the types and the actual numbers or codes below.

Identifiers

Select the type(s) of content of the item. To select more than one value in the list, you may have to hold down the "CTRL" or "Shift" key.

Type

Select the language of the main content of the item. If the language does not appear in the list below, please select 'Other'. If the content does not really have a language

Customization: Submit/ Input Form

Submission form is located in:

/dspace/config/input-forms.xml

Home Login/Register Edit Profile Receive email updates Help About DSpace

Describe Describe Upload Verify License Complete

Submit: Describe this Item

Please fill in the requested information about this submission below. In most browsers, you can use the tab key to move the cursor to the input box or button, to save you having to use the mouse each time. ([More Help...](#))

Enter the main title of the item.
Title

Enter appropriate subject keywords or phrases below.
Subject Keywords

Enter Govt. Doc. No.
Govt. Doc

< Previous Next > Cancel/Save

Customization: Submit/ Input Form

General format of *input-forms.xml*

```
<page number="1">
```

```
<field>
```

```
<dc-element>govtdocrefno</dc-element>
```

```
<dc-qualifier></dc-qualifier>
```

```
<repeatable></repeatable>
```

```
<label>Govt. Doc</label>
```

```
<input-type>onebox</input-type>
```

```
<hint>Enter Govt. Doc. No.</hint>
```

```
<required></required>
```

```
</field>
```

```
</page>
```

.....

Customization: Search

Customize Advanced Search options: </dspace17/config/dspace.cfg>

The screenshot displays a search interface with the following elements:

- A search scope dropdown menu labeled "Search:" with the value "All of DSpace".
- A "Search type:" dropdown menu currently showing "Keyword". A list of search types is open, including: Keyword, Author, Title, Subject, Abstract, Series, Sponsor, Identifier, and Language (ISO).
- Two "AND" dropdown menus for combining search terms.
- A "Search for:" input field containing the text "nal001".
- Two empty input fields for additional search criteria.
- "Search" and "Clear" buttons.
- Partial text at the bottom: "rch produced no results."

Customization: Search

- Edit the *search index* in: `/dspace/config/dspace.cfg`
- This can change only your search result, not *search display*

.....

```
search.index.11 = identifier:dc.identifier.*  
search.index.12 = language:dc.language.iso  
search.index.13 = keyword:dc.govtdocrefno.*
```

.....

The general format is:

```
search.index.[number] = [search field]:element.qualifier
```

After making changes, re-index everything (go to `/dspace/bin` and execute the command,

`./index-all`

Customization: Search

- To change the **search display**, edit **advanced.jsp**, **dspace.cfg** and **Messages.properties**

advanced.jsp located in:

/dspace/webapps/jspui/search/

Messages.properties located in:

/dspace/webapps/jspui/WEB-INF/classes/

Customization: Search

In `advanced.jsp`

```
<option value="govtdocrefno" <%= field1.equals("govtdocrefno") ?  
"selected=\"selected\" : "" %>><fmt:message  
key="jsp.search.advanced.type.govtdocrefno"/></option>
```

In `dspace.cfg`

```
search.index.13 = govtdocrefno:dc.govtdocrefno.*
```

In `Messages.properties`

```
jsp.search.advanced.type.govtdocrefno = Govt Doc. No.
```

Customization: Search

Search: All of DSpace

Search type: Keyword

Search for:

AND

AND

Keyword

Author

Title

Subject

Abstract

Series

Sponsor

Identifier

Language (ISO)

Govt Doc. No.

Search

Clear

Customization: Item Display

To modify the metadata displayed in item screen, modify **dspace.cfg** and **Messages.properties**

[DSpace at My University](#) >
[Digital Library at Documentation Research and Training Centre](#) >
[Article Collection on Metadata](#) >

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789>,

Title: Aerospace: a primar
Keywords: Aerospace
Issue Date: 27-Aug-2007
URI: <http://hdl.handle.net/123456789/6>
Govt Doc. Ref. No.: NAL001
Appears in Collections: [Article Collection on Metadata](#)

Files in This Item:

File	Description	Size	Format
DSpaceHowToGuide.pdf		986Kb	Adobe PDF View/Open

[Show full item record](#)

Remember: After making changes, re-index everything (go to `/dspace/bin` and execute the command, `./index-all`)

Customization: Item Display

In **dspace.cfg**, add the new field to be displayed/ or change the order to display

```
webui.itemdisplay.default = dc.title, dc.title.alternative, dc.contributor.*, \  
    dc.subject, dc.date.issued(date), dc.publisher, \  
    dc.identifier.citation, dc.relation.ispartofseries, \  
    dc.description.abstract, dc.description, \  
    dc.identifier.govdoc, dc.identifier.uri(link), \  
    dc.identifier.isbn, dc.identifier.issn, \  
    dc.identifier.ismn, dc.identifier, \  
    dc.govtdocrefno.*
```

In **Messages.properties**, name the field to be displayed

```
metadata.dc.title = Title
```

```
metadata.dc.title.alternative = Other Titles
```

```
metadata.dc.contributor.* = Authors
```

```
metadata.dc.contributor.author = Authors
```

...

```
metadata.dc.identifier.isbn = ISBN
```

```
metadata.dc.govtdocrefno.* = Govt Doc. Ref. No.
```

Customization: Browse Fields

To modify the browse fields in navigation bar, modify `dspace.cfg` located in `/dspace/config/dspace.cfg`

.

In `dspace.cfg`, uncomment the following lines to specify the metadata fields are to be browsed in DSpace:- “Browse by Date”, “Browse Authors”, “Browse Titles” and “Browse Subjects”:-

```
# webui.browse.index.date = dc.date.issued
```

```
# webui.browse.index.author = dc.contributor.*
```

```
# webui.browse.index.title = dc.title
```

```
# webui.browse.index.subject = dc.subject.*
```

After modification in any of the browse indices in `dspace.cfg`, one must Re-index for changes to take place.

Customization: Change Browse Layout

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In `dspace.cfg`, one can change the metadata fields which are displayed for each item in browse item listing.

Make the required changes in the following single line in `dspace.cfg` and uncomment it:

```
#webui.itemlist.columns = dc.date.issued(date), dc.title,  
dc.contributor.*
```

Stop and restart Tomcat for changes to take affect.

Customization: Full text indexing

1. Configure media filters in `dspace.cfg` under

```
##### Media Filter plugins#####
```

Enable or disable specific media filter from the list:-

```
plugin.sequence.org.dspace.app.mediafilter.Mediafilter = \  
    org.dspace.app.mediafilter.PDFFilter, \  
    org.dspace.app.mediafilter.HTMLFilter, \  
    org.dspace.app.mediafilter.WordFilter, \  
    org.dspace.app.mediafilter.JPEGFilter
```

2. Schedule filter-media by cron entry

```
0 2 * * * /dspace/bin/filter-media
```

3. Modify

```
search.maxfieldlength = 10000
```

Set it to -1 for indexing unlimited no. of words

4. Re-index for the changes to take effect

Customization: Summary

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Restart (Restart the webserver after configuration changes)

1. Stop Tomcat

`[tomcatpath]/bin/shutdown.sh`

2. Start Tomcat

`[tomcatpath]/bin/startup.sh`

Re-index DSpace

1. Log on to the machine running dspace.

2. Change directory to `/dspace/bin`

3. Run the re-index command

`./index-all`

4. Stop and restart Tomcat.

Dspace and OAI

- **ShodhGanga harvest URL**
- http://shodhganga.inflibnet.ac.in/oai/request?verb=ListRecords&metadataPrefix=oai_dc
- **ShodhGanga_atom**
- <http://shodhganga.inflibnet.ac.in/oai/request?verb=ListRecords&metadataPrefix=ore>
- **Shodhganga_mets**
- <http://shodhganga.inflibnet.ac.in/oai/request?verb=ListRecords&metadataPrefix=mets>
- **ShodhGanga_RDF**
- <http://shodhganga.inflibnet.ac.in/oai/request?verb=ListRecords&metadataPrefix=rdf>
- **Get Shodhganga oai_dc records by Identifier**
- http://shodhganga.inflibnet.ac.in/oai/request?verb=GetRecord&identifier=oai:ietd.inflibnet.ac.in:10603/19&metadataPrefix=oai_dc
- Get identifier of Shodhganga Records
- http://shodhganga.inflibnet.ac.in/oai/request?verb=ListIdentifiers&metadataPrefix=oai_dc
- **List Metadata format**
- <http://shodhganga.inflibnet.ac.in/oai/request?verb=ListMetadataFormats>