Development of Multimedia Database (MDB)

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About this hands-on training

• 5/8 Today
  - Indexing machinery
  - Run Python script & Page Template
  - Details of MDB components, workflow
• 6/8 Friday
  - MDB Products, create new content type
• 9/8 Monday
  - System management, backup
• 10/8 Tuesday
  - SMB, LDAP, etc

Today’s goal

• You should be able to index the content to MDB.
• You should be able to search the contents by using python script.
• You should be able to write down the simple Page Template for web interface.
• You should be able to change the workflow state

Indexing machinery

Catalog Object

• Catalog Object provide indexing machinery and APIs.
• Catalog Object return the list of result objects consists of metadata which is attributes of actual object.

Scripts and Page Template
Restricted Python script

- Loop limits
  - cannot create infinite loops
- Import limits
  - cannot import arbitrary packages and modules.
  - but such as standard utility module, string are allowed
- Access limits
  - restricted by standard Zope security policies
- allowed Built-in Functions
  - None, abs, apply, callable, chr, cmp, complex, delattr, divmod, filter, float, getattr, hash, hex, int, isininstance, issubclass, list, len, long, map, max, min, oct, ord, repr, round, setattr, str, tuple

Page Template

- TAL
  - The Template Attribute Language is an Attribute Language used to create dynamic templates.
- METAL
  - The Macro Expansion Template Attribute Language is an Attribute Language for structured macro preprocessing. It can be used in conjunction with or independently of TAL

Page Template (TAL)

- TAL Statements
  - define
  - condition
  - repeat
  - reputation
  - content
  - replace
  - attributes
- Optional Names in Page Templates
  - root
  - here
  - container
  - template
  - request
  - user
  - modules
- Built-in Names in Page Templates
  - nothing
  - default
  - options
  - attrs
  - CONTEXTS

Page Template (TAL)

- METAL Statements
  - Define-Macro
  - Use-Macro
  - Define-Slot
  - Fill-Slot

Page Template (METAL)
Practice

• create the python script to search the MDB content.
• write down the Page Template for full-text search form and its results page.
  - option selection of content type
  - add advanced search feature

Properties related to search

<table>
<thead>
<tr>
<th>meta_type</th>
<th>search_scope</th>
<th>object_class</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDB Article</td>
<td>main</td>
<td>content</td>
</tr>
<tr>
<td>MDB Category</td>
<td>main</td>
<td>content</td>
</tr>
<tr>
<td>MDB Document</td>
<td>main</td>
<td>content</td>
</tr>
<tr>
<td>MDB Folder</td>
<td>none</td>
<td>folder</td>
</tr>
<tr>
<td>MDB Image</td>
<td>main</td>
<td>content</td>
</tr>
<tr>
<td>MDB Link</td>
<td>main</td>
<td>content</td>
</tr>
<tr>
<td>MDB Printer</td>
<td>pointer</td>
<td>pointer</td>
</tr>
<tr>
<td>MDB StreamLink</td>
<td>main</td>
<td>content</td>
</tr>
<tr>
<td>MDB Top</td>
<td>pointer</td>
<td>pointer</td>
</tr>
<tr>
<td>MDB Stream Metafile</td>
<td>sub</td>
<td>content</td>
</tr>
<tr>
<td>MDB Thumbnails</td>
<td>sub</td>
<td>content</td>
</tr>
</tbody>
</table>