

Lab 8: Customization

8.1. Customization: macro files and stylesheets

The appearance of all pages produced by Greenstone is governed by macro files, which reside in the folder *Greenstone* → *macros*, images, and CSS stylesheets, both of which reside in *Greenstone* → *images*.

A macro takes the form `_macroname_ {macro value}`. Macro names start and end with underscores (`_`), and the macro value is enclosed in curly brackets (`{}`). Macro values can be text or HTML, and can include other macros.

Macros are grouped into packages, and different packages control the appearance of different pages. For example, the **home**, **help**, **preferences**, **query**, **document** packages control the home, help, preferences, query, and document pages, respectively. Some macro files contain macros for just one package, for example, *home.dm*, *query.dm*, *document.dm*, while others contain macros for many packages. *base.dm* contains macros used globally, *style.dm* controls the common style of each page, *english.dm*, *french.dm* and other language files contain the text fragments for the entire interface, in that language.

The output of the library program is a page of HTML which is viewed in a web browser. CSS (Cascading Style Sheets) are often used alongside HTML pages to control the formatting, such as layout, colour, font etc. The default Greenstone stylesheet is *Greenstone* → *images* → *style.css*.

In this exercise, we customize the macros, images and stylesheets to change the appearance of our library.

Collection specific customisation

Macros can be used to customize single collections by adding them to a file called *extra.dm* in the *macros* directory of a collection.

We use the Word and PDF collection (from exercise **A collection of Word and PDF files**) as the example for this exercise, but it can be done with any collection. Open up this collection (**reports**) in the Librarian Interface.

1. Go to the **Format** panel, and select **Collection Specific Macros** from the left hand list. This section allows you to edit the collection's *extra.dm* macro file.
2. First, we change the title of the **About this collection** section of the about page. Add the following text in the edit box (which can be copied from the file *about_tweak.txt* in the *sample_files* → *custom* folder):

```
package about

_textabout_ {
<div class="section">
<h3>Very Interesting Reports Collection.</h3>
_Global:collectionextra_
</div>
}
```

Preview the collection by pressing the **<Preview Collection>** button. The *About* page will have a new title underneath the search form.

- Next we add a footer to each page. Add the `_footer_` macro to the end of the edit box (which can be copied from the file `footer_tweak.txt` in the `sample_files` → `custom` folder):

```
package Style

_footer_ {
  _pagefooterextra_ <center><small>Copyright 2006 My Awesome Digital
  Library</small></center> _endspacer__htmlfooter_
}
```

The `<center>` and `<small>` HTML tags center the text, and make it a smaller size than the rest of the page.

- Preview the changes in a web browser. Each page should now have the new text at the bottom.
- Putting text in the main `_footer_` macro adds it to all pages of this collection. To add a footer just to a particular page, use `_pagefooterextra_` in the appropriate package. For example, lets add some more text to the footer, this time just on the *About* page.

Add the following text immediately after the line `package about` :

```
_pagefooterextra_ {Collections generated by Me.}
```

Preview the *About* page in a web browser. The *About* page should now display the new text, while the other pages won't.

- Next we'll do some style customisations. Add the following text below the `_footer` macro (which can be copied from the file `red_tweak.txt` in the `sample_files` → `custom` folder)

```
_collectionsspecificstyle_ {
<style type="text/css">
/*clear the use of a background image */
body.bgimage \{ background-image: none; \}
/* set the background color to pink */
body \{ background: pink; \}
/* clear the background image for the navigation bar, and set its
color to red */
div.navbar \{ background-image: none; background-color: red; \}
/* clear the background image for the divider bars, and set their
color to red */
div.divbar \{ background-image: none; background-color: red; \}
</style>
}
```

`/*...*/` around a line signals a comment, and this style element will be ignored.

Preview the collection. The **reports** collection will now have a pink background, and the navigation bar and divider bars will be red. These changes will only affect this collection.

Any macros from the general macro files can be copied into a collection's `extra.dm` file and modified.

Remember to include the package declaration to make sure that the macros get applied to the correct page (s).

The style modifications made above were minor. The collection still uses the majority of the standard style file. The style declarations in the `_collectionsspecificstyle_` macro get appended to the default ones. To completely change the appearance of a collection, we can use a new style sheet altogether.

7. Add the following to *extra.dm* (which can be copied from the file *css_tweak.txt* in the *sample_files* → *custom* folder), after the last modifications:

```
_cssheader_ {
<link rel="stylesheet" href="_httpcimages_/style-blue.css"
type="text/css"
title="Blue Style" charset="UTF-8">
}
```

Outside of the Librarian Interface, locate the collection folder *Greenstone* → *collect* → *reports*. Create an *images* folder inside this (if not already present), and copy the file *sample_files* → *custom* → *style-blue.css* into this folder.

Preview the collection; it should look radically different.

Changing the colour of the page title and page text

In the previous exercises we changed a single collection. Now we change all the pages in our Greenstone installation by modifying style and macro files outside the Librarian Interface. First, we format the page so that some other parts are blue. Preview any collection after each change to make sure that it has worked properly. On Windows, macro file changes require a restart of the Greenstone local library server. Stylesheet changes may require a forced reload in the web browser.

8. The majority of the style definitions reside in an external style file, *Greenstone* → *images* → *style.css*, and most style changes involve modifying that file. Open *Greenstone* → *images* → *style.css* in a text editor, e.g. WordPad (and save a .backup copy). Make the following modifications. You might want to preview after each one to see the effect.

Change some of the colours:

- Find the body style instructions:

```
body {
background: #ffffff;
}
```

Add `color: teal;`

- For `a.collectiontitle`, set `color` to `blue`.
- For `p.collectiontitle`, add `color: blue;`

Preview the collection. Now text in the page body is a light green color (teal), and the font of the collection title has changed from black to blue.

(If a collection title image is used, you won't see the change on the collection title.)

9. Lets switch the positions of the HOME, HELP and PREFERENCES buttons and the collection name or image.
 - For `div.pageinfo`, set both `float` and `text-align` to left.
 - For `div.collectimage`, set `float` and `text-align` to right.

The look of your library should now be substantially different. The HELP, HOME and PREFERENCES buttons are in the left upper corner whereas the collection title is switched to the right of the page.

10. Two new images for this exercise can be found in *sample_files* → *custom*. Copy *newbgimg.gif*, *newheading.gif* from the *custom* folder into the *Greenstone* → *images* folder.
11. Open the file *Greenstone* → *macros* → *home.dm* in a text editor. Find each occurrence of *gsdlhead.gif* in this file (there are two) and replace with *newheading.gif*. (If you are using WordPad, you can use **Edit** → **Find** to search for the text.)

Save *home.dm* and close the file.

12. Open the file *Greenstone* → *macros* → *style.dm* with the same program. Locate the following part of the file (this is part of the `_cssheader_` macro):

```
<style type="text/css">
body.bgimage \{ background-image: url("_httpimg_/chalk.gif"); \}
```

Use copy and paste on the `body.bgimage` line to make it look like this:

```
<style type="text/css">
/*body.bgimage \{ background-image: url("_httpimg_/chalk.gif"); \}
*/
body.bgimage \{ background-image: url("_httpimg_/newbgimg.gif"); \}
```

Here we are changing the background image for the `bgimage` section of the body of the page to *newbgimg.gif*.

Save *style.dm* and close the file.

13. Preview the home page in a web browser. (On Windows, restart the Greenstone library server.) The page header and background should now use the new graphics.

Make your own Greenstone home page

You can make radical change to a page by changing the macro file completely. For example, here we use an alternative to the home page which we have prepared for you in advance and included in your Greenstone installation.

14. Open the file *Greenstone* → *etc* → *main.cfg* in a text editor. Locate the *macrofiles* list:

```
# The list of display macro files used by this receptionist
macrofiles tip.dm style.dm base.dm query.dm help.dm pref.dm about.
dm \
    document.dm browse.dm status.dm authen.dm users.dm html.
dm \
    extlink.dm gsdl.dm extra.dm home.dm collect.dm docs.dm \
    bsummary.dm gti.dm gli.dm nav_css.dm usability.dm \
    ...
```

Change the text `home.dm` to `yourhome.dm`. Save and close the file.

15. Preview the newly structured home page in a web browser. (On Windows, restart the Greenstone library server.) Look at the file `macros/yourhome.dm` in a text editor to see how these changes are expressed.
16. Reverse this last change by changing `yourhome.dm` back to `home.dm` in the file *Greenstone* → *etc* → *main.cfg*. You may also like to reverse the other changes you have made.

The final part of this exercise looks at how we determined which images needed replacing, and which macro files should be edited.

How to determine which images to replace (advanced)

17. In the step 10 of this exercise we replaced the default background (**chalk.gif**) and header (**gsdlhead.gif**) images with new ones. To do this we needed to change the image names in the macro files. How did we know which images we were replacing and which macro files to edit? This exercise shows you how to find out.
18. To find out the names of the images to replace, go to the home page of your digital library in a browser. Right-click on the header image ("Greenstone digital library software") and select "Save picture as". A dialog will pop up and will display the image name: **gsdlhead.gif** (or **newheading.gif** if you are using the new header). Click Cancel to close the dialog—you don't need to save the images. Do the same for the background image by right clicking on the left hand green (or blue) swirly bar. This time choose "Save background as" to find the name: **chalk.gif** (or **newbgimg.gif**), then click Cancel.
19. These instructions apply to Internet Explorer. Other browsers may have other options in the right-click menu. For example, Mozilla provides "View Image" and "View Background Image" options. Using these options will put the path to the image in the browser address box, and the name can be seen from this.
20. Once you have identified the names of the images to be replaced, you need to find out where they occur in the macro files. To do this, search the macro files for the image names using the **find** program, which is run in a command prompt. Open a command prompt using **Start** → **Programs** → **Accessories** → **Command Prompt**, or **Start** → **Run** and enter `cmd` as the name of the program to run.

You can type `find/?` to see a description of the program and its arguments.

To search the macro files for **gsdlhead.gif** type

```
find "gsdlhead.gif" "C:\Program Files\Greenstone\macros\*.dm"
```

***.dm** means all files ending in **.dm**. A list of all macro files will be displayed, along with any matches. You will see that *home.dm* and *exported_home.dm* both contain **gsdlhead.gif**. *home.dm* is the one you want to edit—*exported_home.dm* is used for the home page when you export a collection to CD-ROM.

Do the same thing for **chalk.gif**:

```
find "chalk.gif" "C:\Program Files\Greenstone\macros\*.dm"
```

base.dm and *style.dm* are the only files that mention this image.

Close the command prompt.