
User Manual – *Please use Mozilla FireFox for best functionality (sufficient acc. to Prof. Lee)*

General

This web-based application will allow you to create documents of your choice, revise them as frequently as you would like, view all revisions in HTML format and store them for later work. You may also search across documents for keywords or if the user is not sure about the topic's name there is a powerful 'regular expression' search box for names.

Navigation

The home screen is a simple form with **one main data input** line called: Topic name, and few supporting controls: 1) View/Edit option (only one can be selected at a time) , 2) "revision" check box. When "revisions" is checked, it is intended to view only, so even if you have selected Edit + revisions, your next screen presents the revisions for the topic entered, for the purpose of view only.

In addition to selecting topic by typing its name, you may select a topic that was recently edited, via the drop-down box which is underneath the "Topic Name" box.

The recent edit list gets updated after a new revision of a topic is saved (or a brand new topic with its first revision of course).

If there is a topic in the Topic Name box, and the user selects from the 'recent' list, the topic from the recent list will be displayed, and upon return 'home', that newly selected topic will be displayed in the Topic Name input box. The same is true for edit. In other words, selecting from the 'recent' list takes precedence over the value entered in the topic name box.

Another way to select a topic, is to choose it from the 'Popular topic' list and press GO. That can also be combined with View/Edit or revisions (usage is on the screen)

There are also two search options. On the bottom right hand-side of the screen you can type a keyword in the text box and hit the <SEARCH> button, this function searches the entire database for topics with text that contain the keyword. The second type of search is for topic name, which can be a partial name or even a regular expression. Bothe types of searches bring back a list of links to the found topics (described later in more detail)

One more item is the Photo upload button. This button takes the user to a very simple screen (HTML based) that allows to upload photos from the user's PC to the server. immediately after the upload the image is displayed and the user can upload another photo (one at a time).

Last, but not least, the home page has a button right underneath the title, called: Statistics. That button allows us to see a page with detail stats about the entire website.

DATA persistence

I try not to disrupt the work-flow by forcing the user to enter data unnecessarily, so for that reason, many times data values are carried between screens. For instance, if we perform a search across topics and return HOME, the last searched keyword is still displayed in the search box. There are too numerous instances of this type to mention in this small handbook, however, by using the application, it will become apparent that this convenient feature is there.

HOME screen

The possible actions are:	will display
a. View + existing topic	HTML of the most recent revision
b. View + none existing topic	error message
b. Edit + existing topic	Text (edit) of the most recent rev.
c. Edit + none existing topic	Edit screen with empty text-area
d. view + existing topic + check mark in 'revisions'	Revisions list screen, to choose
e. View or Edit + topic selected from Recent Edits	Either Edit screen or view
f. Enter a keyword in the search field & hit FIND	HTML page with all links to docs where the keyword is found.
g. View or Edit + topic selected from popular list and press: GO	Either Edit screen or view for the topic selected from the list
h. A topic from the popular list + revision checked	Revisions list screen, to choose
i. Upload photos	screen to facilitate photo upload
j. Enter a regular expression or partial topic name	BROWSE brings back a list of topics as links (similar to option f.)
k. Hit the 'statistics' button	Table with statistics about the site

VIEW screen

This screen will show the text of the topic after all the interpretations discussed in the Edit screen, including the showing of images, bulleted lists etc. This screen has a button that allows

the user to switch into 'Edit' mode, for the currently viewed document. We can also cancel from this screen and that takes us back to the home page.

EDIT screen

There are several conventions that allow the user to create various text (and image) effects. As per the initial rules, the symbols & < and > are converted to their HTML counter-parts. In order to make text bold, we have to surround it by asterisks: **bold text** and to italicize text we surround it by underscores: *_This will show in italics_*
A blank line gets interpreted into a <p></p> HTML tags. In order to create a heading the line must start with three dashes, followed by 1 to 3 'plus' signs, followed by a space. Whatever comes after, on the same line is used as the heading. The number of pluses determines the size of the text, where 1 is the largest (H1), so: ---+ Heading will be interpreted as: <H1>Heading</H1>

Any reference to a topic that already exists (if any word in the content of a topic is a name of another topic), when viewing the page, that becomes a link, by which we could 'jump' to the view of that particular topic.

Bulleted list - in order to create a bulleted list, the user would designate a symbol that looks like this :x: , where x can be 'c' (for circle), 'd' for disc or 's' for square. Those are the different symbols that can be used for the bulleted list. That sequence is on a separate line from other text. The following lines will each be a bullet and the list ends by having two slashes at the beginning of another new line. For example:

```
:d:  
Tough economic times  
World depression  
social clashes  
//
```

```
Interpretation  
. Tough economic times  
. World recession  
. social clashes
```

Image support - In order to enter an image into a document, the code that needs to be added is :img:url:here comes the complete url of the image: (and ends with a coon)

Example :img:url:https://cs.nyu.edu/~js3104/cgi-bin/unixtool/images/j.jpg:

PREVIEW screen

This screen is displayed if after editing a topic the user selects 'preview'. It displays the text of the topic just edited with all the HTML interpretation (as described in the view page) and allows 3 actions: (1) cancel - Goes back to the 'edit' screen with the text intact in the text area box. (2) save - will save a new revision of the topic to the database. (3) save + provide an e-mail in the text box, will both save the revision and send an e-mail notification about the topic being edited to the address specified.

REVISIONS screen

If the user checked off 'revisions' on the home page, a screen (this one) would be displayed, in which the topic is a 'read only' field and on the right hand side of the page, all the revisions of that topic, numbered from the highest (latest) revision down to zero (first revision).

On this screen there three possible functions. The first is selecting one revision, and hitting 'submit'. This will get that specific revision and will display it on a page called: REVISION VIEW. Canceling from this page, will bring us back to the list of revisions (REVISIONS page), from which the user can select another revision to view.

The second function, allows us to select two revisions (if there are), and hit 'submit' (simple interface in line with the UNIX spirit), and this will bring us to a page that compares the two selected revisions side by side. See more on that in the 'COMPARE' screen description. No more than two revisions can be selected.

The third function is DELETE a revision. Select a single revision (any that's on the list) and press the delete button. If there are more revisions left for this topic, the page automatically updates the new list and their numbers to reflect the new number of revisions left. If, on the other hand, no more revisions are left, the topic is also removed and the applications goes back to the home page, announcing the topic name that has been discarded.

Note that I do not update the 'recent edit' list upon delete. This is by design not forgetfulness, as many other apps (like MS Word), leave the history of documents opened. I do, however keep the recent list 'clean' of duplicates, and it contains up to 6 entries.

COMPARE screen

This page is activated when we compare two revisions of the same topic, as discussed under the REVISIONS screen.

It presents that two selected revisions, the older on the left and the newer on the right with their corresponding revision number (human readable not EPOCH time).

At the bottom of the page, an 'ed' script is added such that basically it can be run to move from the older revision to the newer. I used this method as a concise way to present the changes between revisions, granted those changes are not so dramatic (but more subtle such as versions of program codes).

SEARCH functions (also with REGEX)

The keyword search takes the keyword and does a 'generic' search. In other words, even if the keyword is part of a word (string), that would be considered a match.

It searches across all topics and each and every revision of every topic (which can help identify at what point this text was added to the topic).

It returns back the topic and revision in which the keyword has been found. It also returns all the lines in which it appears (perhaps an overkill for a common search). It also returns the number of times a match occurred in the particular topic and for that revision.

The ranking of the search is simply by number of lines with a match on the keyword (descending). I give more importance to documents where the keyword appears more on separate lines than others (as do many search engines). Please note that if you have the same keyword 10 times on one line, it will still count for only one match.

The displayed search, contain links to the appropriate topic and its relevant revision, so the user can immediately view that page.

If we follow one of the links of the search, it will bring us to the "revision view" because the search is refined to the level of revision. In that case, after viewing the 'found' topic/revision, upon 'cancel', the app. would take us back to the list of revisions for the same topic. To view another topic/revision found through the search, we can always hit the browser's "back" button, as is the case with Google search.

The second type of search is for a topic's name. If you only vaguely remember a name of a topic, this search allows you to specify partial name or even **regular expression**, and it returns back a page with links to the documents whose names match the search criteria. So, for instance if we

search for: t.s.* we'll get a match on: test and photo. For a user with regular expression knowledge, this type of search is very useful.

Statistics screen

Shows how many images were uploaded, how many revisions for topics (edits), how many times each topic has been viewed , how much space is take by images etc.

EXTRA features

DELETE revisions

I allow the user to delete any revision of any topic (1 at a time). This feature is also on the screen called REVISIONS and described in more detail above.

Most POPULAR (viewed) topics

The way this feature works, on the home page there is a drop-down box, which displays the topic that has been viewed the most, a space, and the number of times the topic has been viewed. The count of the views starts from 0 (in the spirit of Unix again), 0 means it has been viewed once.

I consider viewing in two cases: (1) view is requested specifically (not preview before save), and (2) A request to view a specific revision has been made.

If the user presses the arrows, a list opens, and the list shows the topics in order of popularity of viewing (always accompanied by the number of times viewed). This list is dynamic and gets updated right after the viewing and returning to the home page.

The user can then select either Edit or View to go to the appropriate screen as described above. The user may also choose to check revisions for the popular topic selected and that, as expected, will display the revision list screen.

Topic name search

This may be one of the 'killer' features that was not mentioned in the specifications. Initially if you have no clue about the topic subjects, you may want to search the database for what's already out there. Alternatively, if you want to bring a group of topics with similar names or you are not sure about the exact name, this is the way to go. This function is relatively 'quick and dirty' way to find out what we have on our database. I thought it was essential to have been included.

Statistics

The page described above details the stats available for viewing on the website

E-mail notification

I provide an optional input text field on the preview screen, right before an update is made to a new topic or a new revision of an existing topic. Since it is optional, I do not verify or validate this e-mail address, and I use /usr/bin/sendmail for this.

PHOTO Upload

A simple button on the home page takes us to an even simpler form that allows uploading a photo from the local PC to the server's images folder. After the upload the image is immediately visible to the user and more photos can be uploaded (one at a time). From the photo upload, we can either upload more or return to the home page.

Miscellaneous

- 1) Does not allow to save the same revision more than once.
- 2) Providing a 'reset' button to erase the last thing typed before preview has not been requested on the EDIT page as part of the project, this is just a nicety.
- 3) When a topic is viewed, on the top right hand corner the last modification date/time is displayed. Since we keep revisions named by EPOCH time, I found this to be worth displaying.