

ADT: WebBBS Version 1.0

Requirements Specification

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Document Revisions

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	Date	Description	Author
1	6 September 2001	First Draft	Josh Hill
2	10 September 2001	Editing to match new template	Josh
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1 Introduction

1.1 Purpose of this document

The purpose of this document is to specify the functional and system specification of the WebBBS application. This document provides a road-map through which the implementation of the application will be developed and, where applicable, will also contain information detailing technical design constraints and assumptions.

1.2 Scope of this document

The scope of this specification covers the functional specifications of the WebBBS application. This specification does not extend to third party or infrastructure components.

1.3 Overview

The basic requirements summary build-in for the WebBBS application:

- To be able to read messages
- To be able to post messages
- To be able to reply to messages

1.4 Business Context

WebBBS is a groupware application designed for multiple users over a wide area. The generic version is open source for distribution. Anyone may take advantage of the powerful eXtropa Perl ADT. Improvements will be made incrementally as bug reports come in and suggestions are made. The generic WebBBS will ultimately benefit both the company and our users.

2 General Description

2.1 Product Functions

The general functionality of the WebBBS application is to allow users to share information over a wide area. The administrator may add topics by editing the CGI. Users may read and post messages only. Registration is required to post messages, but the administrator may turn it off.

2.2 General Constraints

The application is written as a public message board. Any user may read, but not all users may post.

The application will be written in Perl and the data files are stored in a common flatfile system (ASCII File). This will slow down in terms of searching for information if there is a presence of huge database.

The application is also able to interface with relational databases should the administrator desire it.

Bold Params indicate Section Headings. *Italic Params* are objects.

Indented Params are configurable variables.

Grayed out or missing items are not required or not available in the default configuration.

Param	Default configuration	Notes
Language	Perl	
Session Setup		
Type	File	Note that flatfile data sources are slow. We recommend upgrading to a database based data source
Max Modify Time	1 hour	
Fatal Timeout	Off	
Fatal if session not found	Off	
<i>Session Manager Setup</i>		
Type	FormVar	
Cgi Object	\$CGI	
Session Params	Session Config Params	
Authentication Setup		For the datasource
Type	File	
Field Delimeter	(pipe)	
Create a file if none exists	On	
Field Names	From Auth User Datasource	
File	Scriptname.users.dat	Path is set at start of script
Default Authentication Fields	Username, password, groups, firstname, lastname, email	
Authentication Manager Setup		How requests are processed
Color for even rows	E5E5E5	
Color for Odd Rows	FFFFFF	
CSS View URL	\$CSS_VIEW_URL	
Application Logo	logo.gif	
Application Logo Height	40	
Application Logo Width	353	
Application Logo ALT	WebDB Demo	
HTTP Header Params	[-EXPIRES => '-1d']	
Document Root URL	'/' or web root directory	
Image Root URL	/Images/Extropa	
Script Display Name	'Web BBS'	
Script Name	\$CGI->script_name()	
Page Top View	PageTopView	
Page Bottom View	PageBottomView	
Link Target	'_self' or current window	
<i>User_Fields</i>	Auth_username, auth_password, auth_groups, auth_firstname, auth_lastname, auth_email	
<i>Mail Params</i>		

Type	Sendmail	Default on most systems
<i>User Mail Send Params</i>		
From	you@yourdomain.com	
Subject	Password Generated	
<i>Admin Mail Send Params</i>		
From	you@yourdomain.com	
To	you@yourdomain.com	
Subject	Registration Notification	
<i>Auth Manager Config Params</i>		
Type	CGI	
Allow Registration	On	
Allow User Search	On	Allow anyone to check for an old account.
Generate Password	Off	
Default Groups	Normal	
Email Registration to Admin	Off	
Display Registration After Failure	On	
Data Handler Setup		How data is handled
<i>Add Form DHM Config</i>		
Type	CGI	
CGI Object	\$CGI	
Data Handlers	Email, Exists, HTML, String	
Field Mappings	Forum, email, name, subject, body, thread_id, parent_id, date_time_posted	
Datasource Setup		Configure the database and fields displayed
Field Names	record_id, forum, parent_id, thread_id, magic, email, name, subject, body, username_of_poster, group_of_poster, date_time_posted,	Corresponds to default extropia database
<i>Sample Default Widget Definitions</i>		
Display Name	Country	Name that appears in the browser
Type	Textfield, textarea	
Name	Fname	Internal field name
Size	30	Display size in characters
Maxlength	80	Maximum number of characters permitted
Rows	6	Initial height of textarea
Cols	30	Initial width of textarea
Wrap	VIRTUAL	Wrapping of text in textarea
<i>Basic Datasource Config Params</i>		Configure datasource
Type	File	
File	\$APP_DATAFILES_DIRECTORY/\$APP_NAME.dat	
Field Delimiter	(pipe)	
Comment Prefix	#	Ignore lines starting with #
Create File if None Exists	On	

Field Names	\@DATASOURCE_FIELD_NAMES	
Key Fields	['record_id']	Not required if key is not used
Field Types	Record_id => 'Autoincrement'	Specify a specific kind of field
Mailer Setup		Required for regular email. Not the same as Auth Mailer
<i>Mail Config Params</i>		
Type	Sendmail	
<i>Email Display Fields</i>	Forum, name, email, subject, body	Email these fields
<i>Delete Event Mail Send</i>		Warns Someone of Deletions to the database. Not available with BBS since there is no Delete/Modify Action.
From	you@yourdomain.com	
To	you@yourdomain.com	
Reply To	you@yourdomain.com	
Subject	Address Book Delete	
<i>Add Event Mail Send</i>		Tells user of additions
From	you@yourdomain.com	
To	you@yourdomain.com	
Reply To	you@yourdomain.com	
Subject	Address Book Addition	
<i>Modify Event Mail Send</i>		Tells user of modifications to records
From	you@yourdomain.com	
To	you@yourdomain.com	
Reply To	you@yourdomain.com	
Subject	Address Book Modification	
Logging Setup		
Type	File	
Log File	\$APP_DATAFILES_DIRECTORY/\$APP_NAME.log	
Log Entry Suffix	' ' . _generateEnvVarsString() . ' ',	
Log Entry Prefix	'BBS '	
View Setup		Views to use, display, and defaults
<i>Valid Views</i>	CSSView, AddRecordView, BasicDataView, DetailsRecordView, AddAcknowledgementView, AddRecordConfirmationView, DeleteRecordConfirmationView, DeleteAcknowledgementView, ModifyAcknowledgementView, ModifyRecordConfirmationView, ModifyRecordView, PowerSearchFormView, SessionTimeoutErrorView, LogoffView, OptionsView,	The program cannot display views that are not available here.
<i>View Display Params</i>		Defaults for Views
Application Logo	logo.gif	
Application Logo Height	40	
Application Logo Width	353	

Application Logo ALT	WebDB Demo	
Color for Even Rows	E5E5E5	
Color for Odd Rows	FFFFFF	
Display Fields	Forum, name, email, subject, body, date_time_posted	
Table BG Color 1	6699CC	
Table BG Color 2	E5E5E5	
Table BG Font Color1	BLACK	
Table BG Font Color2	BLACK	
Filter Setup		
<i>HTMLIZE Filter</i>		
Type	HTMLize	
Convert Double Linebreak to P	On	
Convert Linebreak to BR	On	
<i>Charset Filter</i>		
Type	CharSet	
<i>Embed Filter</i>		
Type	Embed	
Enable	Off	
Action/Workflow Setup		
<i>Action Handler List</i>	Defaults. Includes BBS specific Actions.	User should not need to modify
<i>Action Handler Action Params</i>		
Action Handler List	\@ACTION_HANDLER_LIST	
Add Acknowledgment View Name	AddAcknowledgementView	
Add Email Body View	AddEventEmailView	
Add Form View Name	AddRecordView	
Allow Additions Flag	On	
Allow Deletions Flag	On	
Allow Duplicate Entries	Off	
Allow Username Fields to be Searched	On	
Allow Modifications Flag	On	
Application Sub Menu View Name	ApplicationSubMenuView	
Options Form View Name	OptionsView	
Auth Manager Config Params	\@AUTH_MANAGER_CONFIG_PARAMS	
Add Record Confirmation View Name	AddRecordConfirmationView	
Basic Data View Name	BasicDataView	
CGI Object	\$CGI	
CSS View URL	\$CSS_VIEW_URL	For speed, change CSS URL to a location outside the CGI directory.
CSS View Name	CSSView	
Datasource Config Params	\@DATASOURCE_CONFIG_PARAMS	

Delete Acknowledgment View	DeleteAcknowledgementView	
Delete Record Confirmation View	DeleteRecordConfirmationView	
Records Per Page Options	[5, 10, 25, 50, 100]	Remove or change numbers as desired. This appears under Options.
Max Records Per Page	\$CGI->param('records_per_page') 5	
Sort Field 1	\$CGI->param('sort_field1') 'category'	Sort by which field?
Sort Field 2	\$CGI->param('sort_field2') 'fname'	Sort by which field?
Sort Direction	\$CGI->param('sort_direction') 'ASC'	ASC=Ascending, DSC=Descending
Delete Form View Name	BasicDataView	
Delete Email Body View	DeleteEventEmailView	
Details View Name	DetailsRecordView	
Data Handler Manager Config Param	\@DATA_HANDLER_MANAGER_CONFIG_PARAMS	
Display Acknowledgement On Add	On	
Display Acknowledgement On Delete	On	
Display Acknowledgement On Modify	On	
Display Confirmation On Add	On	
Display Confirmation On Delete	On	
Display Confirmation On Modify	On	
Enable Sorting	On	
Hidden Admin Fields View	HiddenAdminFieldsView	
Input Widget Definitions	\@INPUT_WIDGET_DEFINITIONS	
Key Field	record_id	
Logoff View	LogoffView	
URL Encoded Admin Fields View	URLEncodedAdminFieldsView	
Log Config Params	ModifyAcknowledgementView	
Modify Acknowledgment View	ModifyRecordConfirmationView	
Mail Config Params	\@MAIL_CONFIG_PARAMS	
Modify Form View	ModifyRecordView	
Modify Email Body View	ModifyEventEmailView	
Power Search View	PowerSearchFormView	
Require Auth to Search	Off	Is authorization required for the action?

Require Auth for Add	On	Is authorization required for the action?
Require Auth for Modify	On	Is authorization required for the action?
Require Auth for Delete	On	Is authorization required for the action?
Require Auth for Details	Off	Is authorization required for the action?
Require Matching Username for Modify	Off	Is a matching group or username required for the action on that record?
Require Matching Group for Modify	Off	Is a matching group or username required for the action on that record?
Require Matching Username for Delete	Off	Is a matching group or username required for the action on that record?
Require Matching Group for Delete	Off	Is a matching group or username required for the action on that record?
Require Matching Username for Search	Off	Is a matching group or username required for the action on that record?
Require Matching Group for Search	Off	Is a matching group or username required for the action on that record?
Send Email on Delete	Off	
Send Email on Modify	Off	
Send Email on Add	Off	
Session Object	\$SESSION	
Session Timeout View	SessionTimeoutErrorView	
Templates Cache Directory	\$TEMPLATES_CACHE_DIRECTORY	
Valid Views	\@VALID_VIEWS	
View Display Params	\@VIEW_DISPLAY_PARAMS	
View Filters Config Params	\@VIEW_FILTERS_CONFIG_PARAMS	
View Loader	\$VIEW_LOADER	
Simple Search String	\$CGI->param('simple_search_string') ""	
First Record on Page	\$CGI->param('first_record_to_display') 0	
Last Record on Page	\$CGI->param('first_record_to_display') "0"	
Page Top View	PageTopView	
Page Bottom View	PageBottomView	
Action Handler Plugins	\%ACTION_HANDLER_PLUGINS,	

3 Functional Requirements

3.1 WebBBS Application

3.1.1 Description

The application will provide any user with read-only rights to view the posts. Only registered users may post new message or reply to old messages. **There is no modification of records. Only the administrator has access to the flatfile or the database. Modification is not recommended.**

The following definitions only cover the Default settings and views.

Authentication Definition Views

The application will allow any user read-only rights to view the address records registered in the application. Only registered users however, may add, modify, and delete records. There is no capacity for multiple group definitions, thus the default group is "Normal" and cannot be changed.

Default Settings Permit:

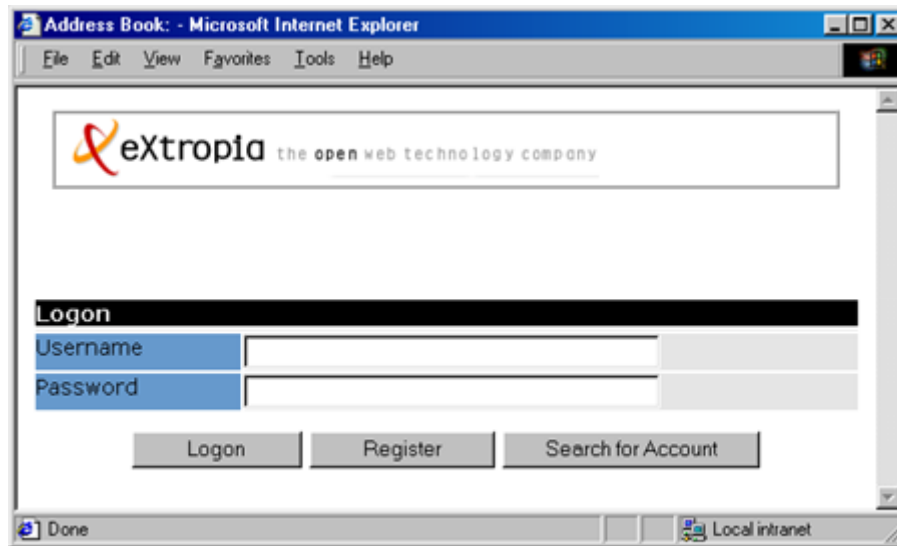
- Any user may view the database
- Any user may search the database
- Registered users may add, modify, and delete records
- Registration is available to anyone

Registration of normal users is simply done by pressing "Logon" and following the Registration Views. User data is written to the datasource. In the default installation, it is written to `Datafiles/BBS/bbs.users.dat`. It is recommended that administrators do not alter the contents, especially the encrypted passwords. The information is listed as:

```
username | password | group_name | fname | lname | email
```

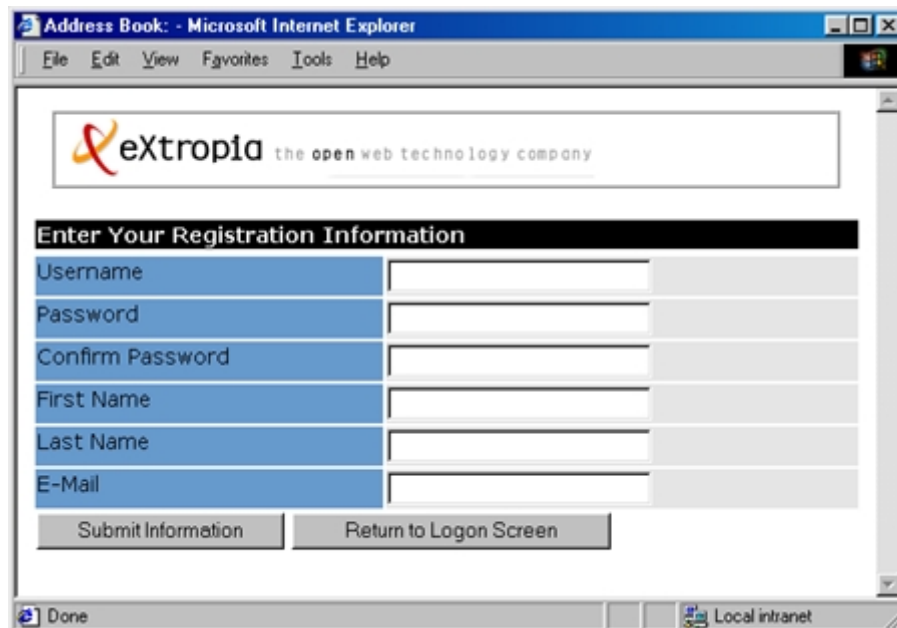
Registration of Administrative users may be done at a later date. System administrators will be able to alter hard data in databases or flatfiles as needed.

- **Logon View** requests the Username and Password of registered users. Users may attempt to logon, Register, or Search for Account. Also the view for failed logins.



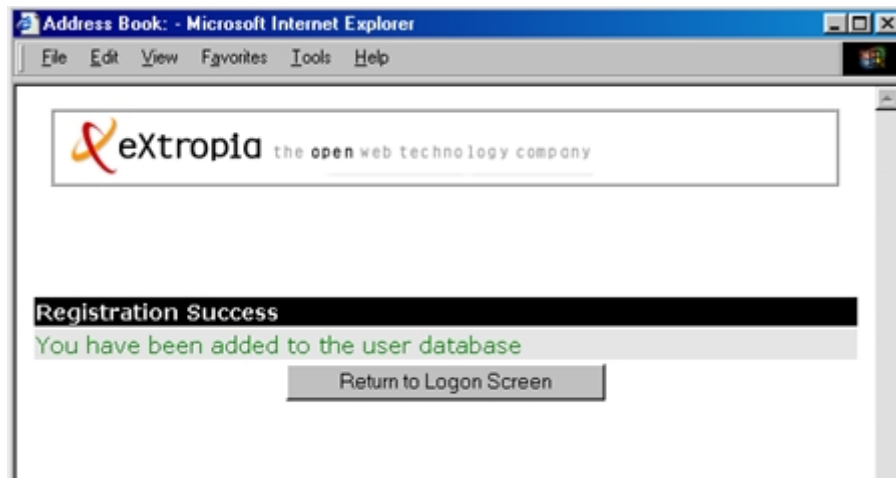
The screenshot shows a Microsoft Internet Explorer browser window titled "Address Book: - Microsoft Internet Explorer". The address bar is empty. The menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The main content area displays the eXtropa logo and the tagline "the open web technology company". Below the logo is a section titled "Logon" with a black header. Underneath, there are two input fields: "Username" and "Password". Below these fields are three buttons: "Logon", "Register", and "Search for Account". The status bar at the bottom shows "Done" and "Local intranet".

- **Register View** permits any user to enter Username, Password, Confirm, Password, First Name, Last Name, and E-Mail. The user may then Register or Return to Logon Screen.

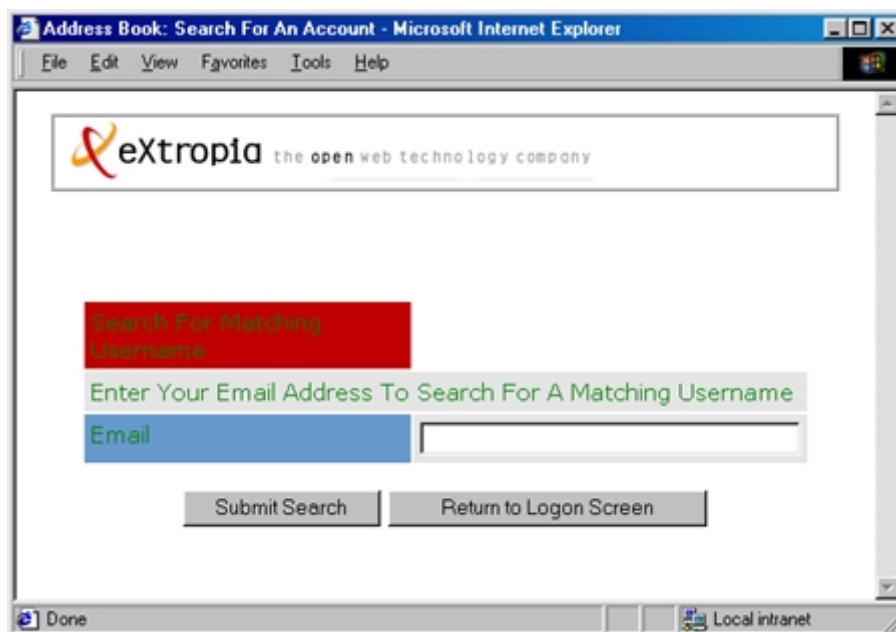


The screenshot shows a Microsoft Internet Explorer browser window titled "Address Book: - Microsoft Internet Explorer". The address bar is empty. The menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The main content area displays the eXtropa logo and the tagline "the open web technology company". Below the logo is a section titled "Enter Your Registration Information" with a black header. Underneath, there are six input fields: "Username", "Password", "Confirm Password", "First Name", "Last Name", and "E-Mail". Below these fields are two buttons: "Submit Information" and "Return to Logon Screen". The status bar at the bottom shows "Done" and "Local intranet".

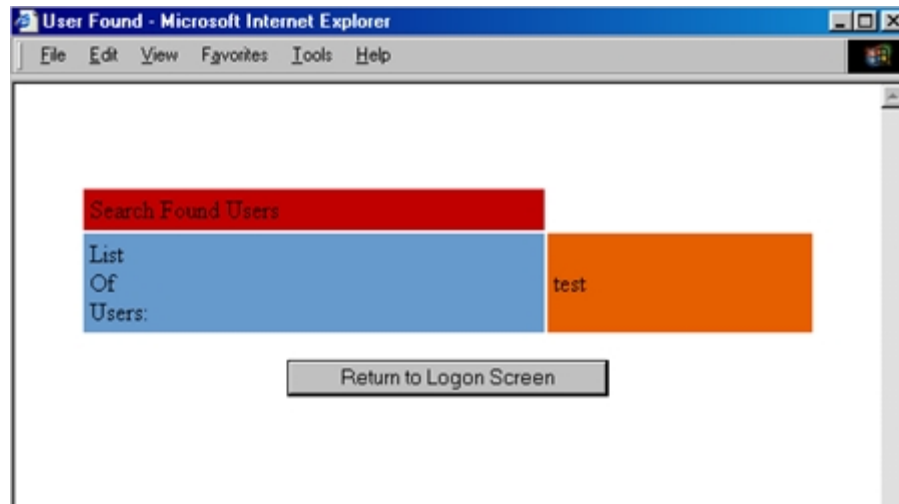
- **Register Confirmation View** confirms registration and returns the user to the Logon View.



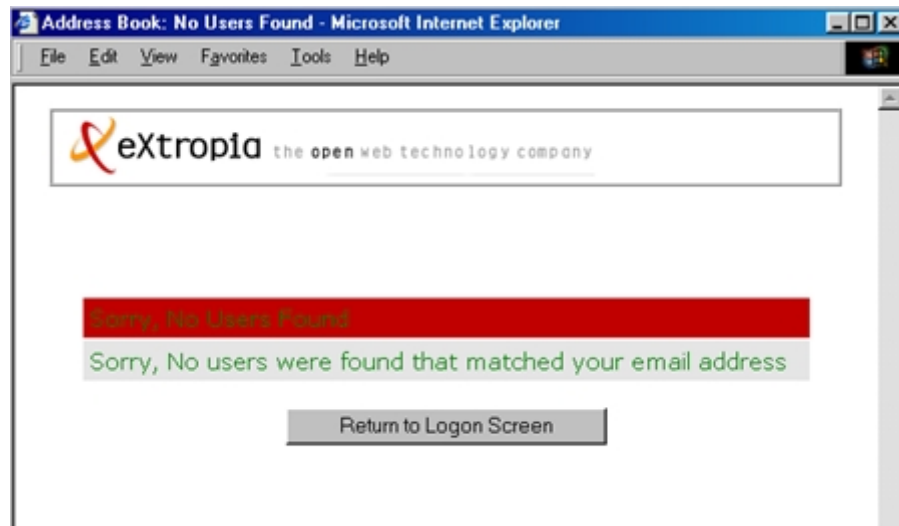
- **Search for Account** requests an email address to match users and then sends the password to the user.



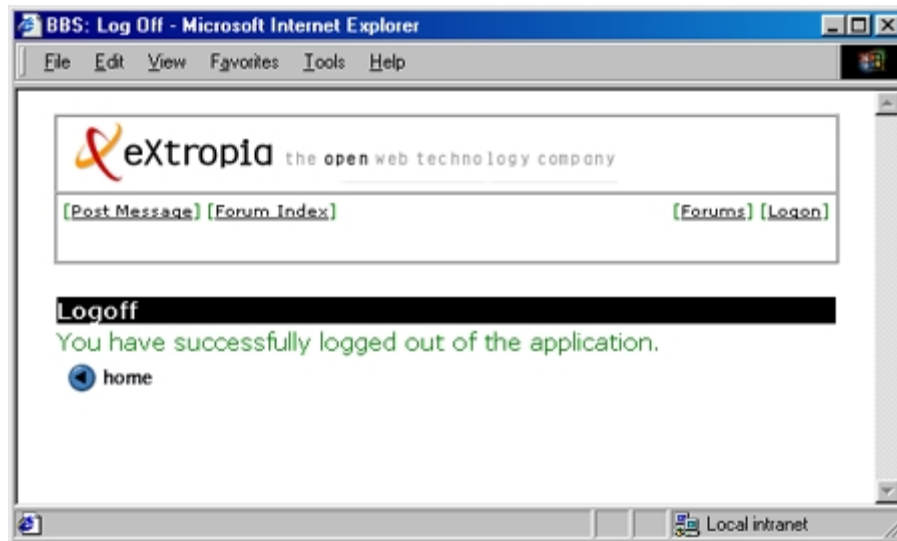
- **Search for Account Users Found** displays the username that matches the email address given.



- **Search for Users No Results** appears when no email address is associated with a username.

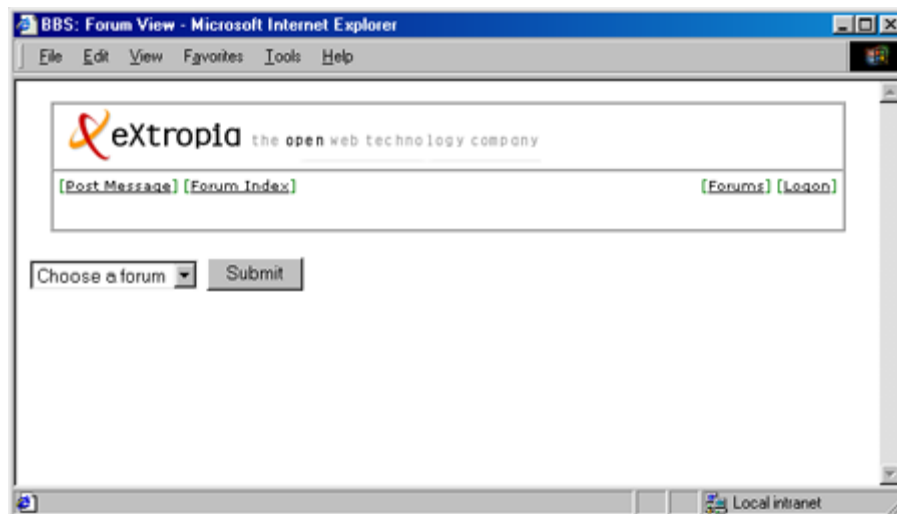


- **Logoff View** logs the user out and confirms the logoff. The session is terminated.

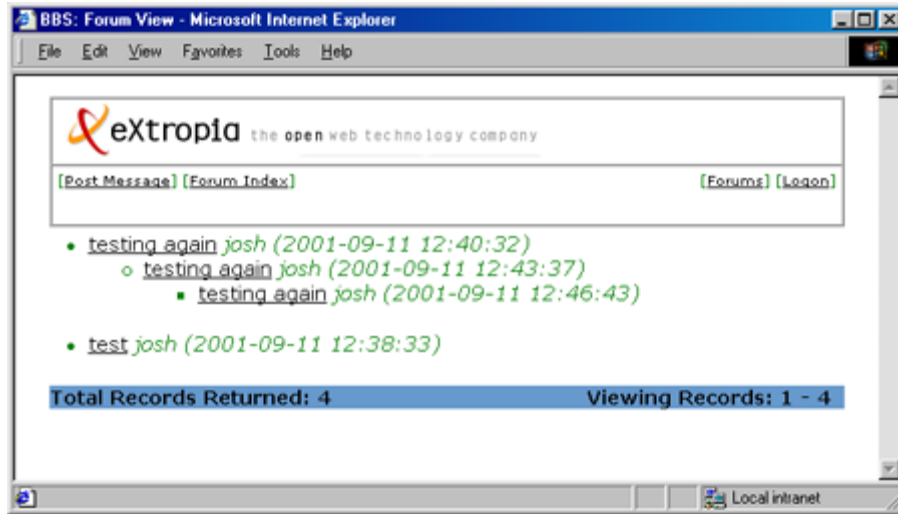


Application Specific View Definitions

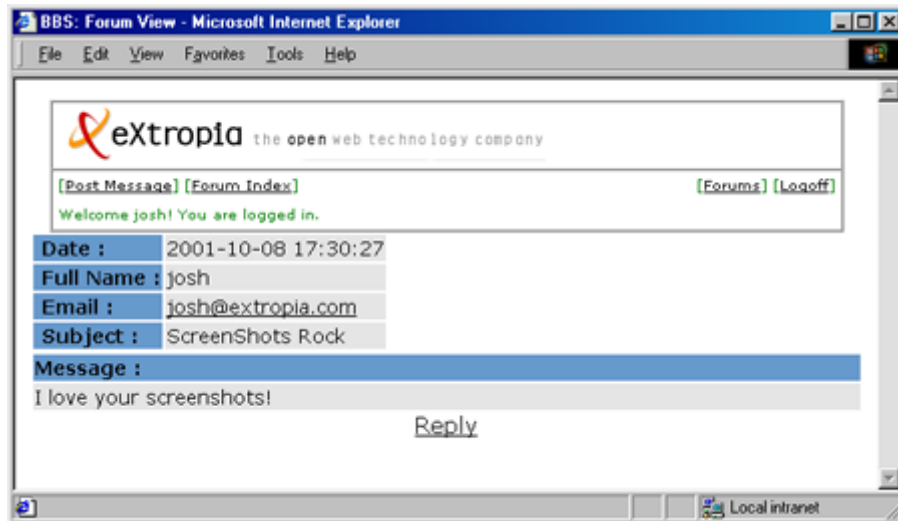
- **Read-Only Forum View** will display the available forums via a popup box.



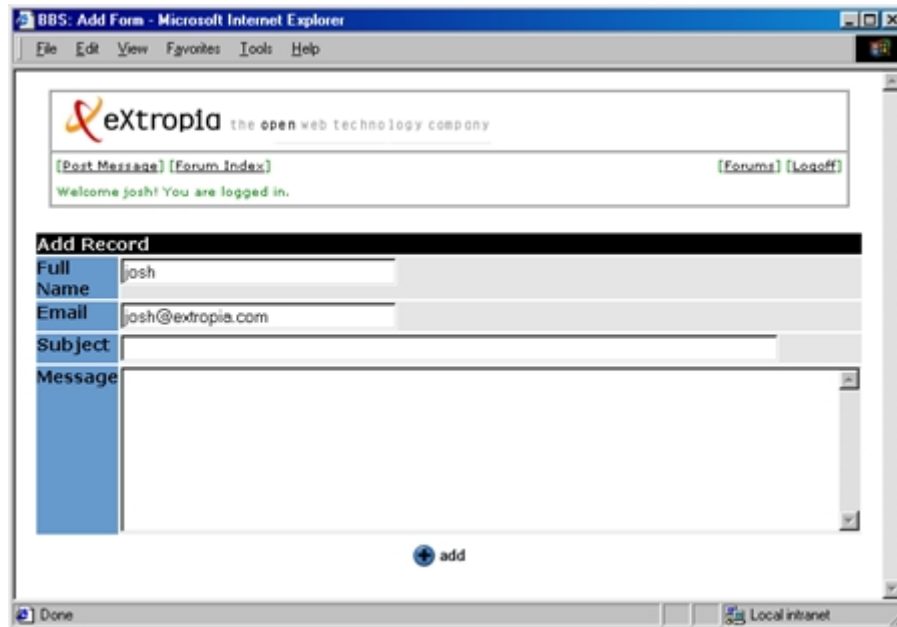
- **Read-Only Forum Index View** displays the posts in the selected forum. Links highlight posts for reading. The subject, username, and date of each post is displayed.



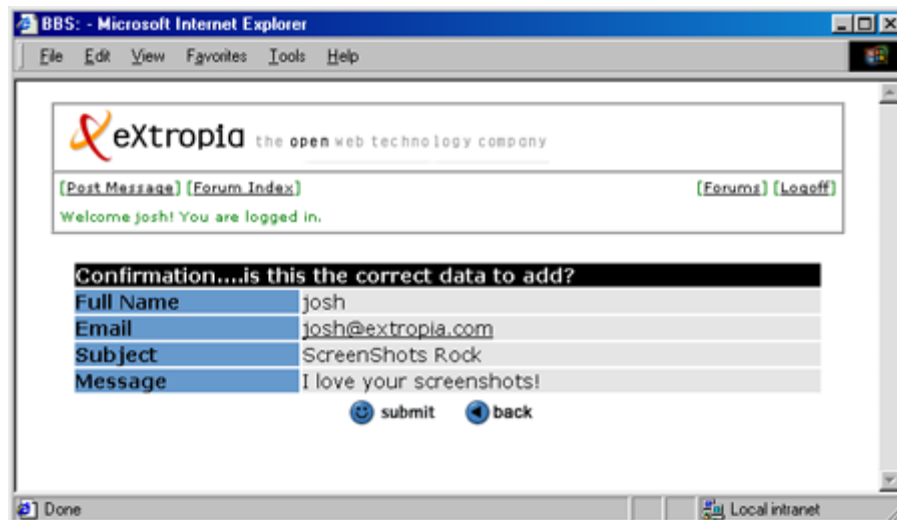
- **Read-Only Post View** shows the date, name, email, subject, and body of the selected post. A reply link is available. Users already logged in will be taken to the Post Form, other users will need to login.



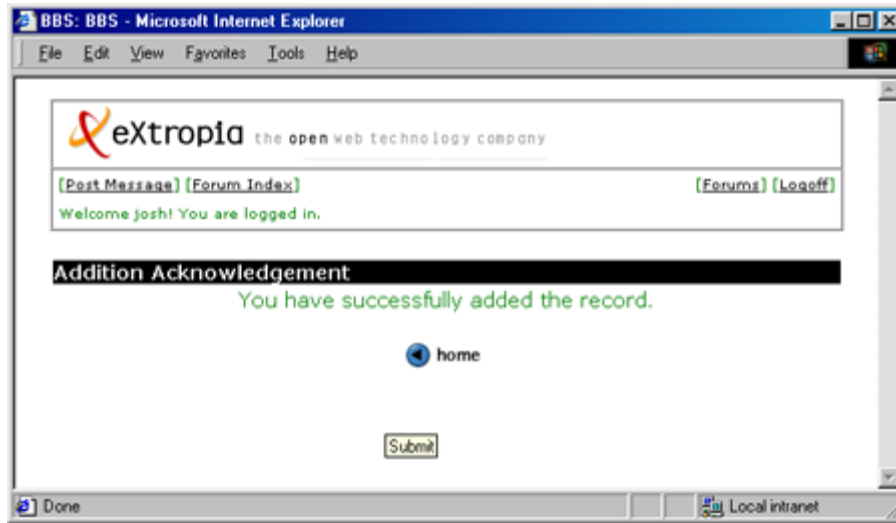
- **Add Post Form** will allow logged on users to reply to a post or post something new. Full name, email, subject, and message are required.



- **Add Post Confirmation Page** will display event details for final confirmation before they are added to the data source.



- **Add Record Acknowledgement Page** will be displayed after an event is added to let the user know that the action was successful.



Common Features Definitions

WebBBS does not use the common search.

3.1.2 Risks and Dependencies

4 Database Design

4.1 Description

The data of the application will be stored in a flat file. Each data fields of a record will be separated by '|'.

Field name	Description	Data Type
record_id	Record value	Auto incremental numeric value
forum	Forum number	char
parent_id	Parent post number (1 for first)	char
thread_id	Thread ID	char
magic	?	char
email	Email address of poster	char
name	Name used by poster	char
subject	Subject of Post	char
body	Message body	char
username_of_poster	Poster's username	char
group_of_poster	Poster's group	char
date_time_posted	Timestamp	date

4.2 Communications Interfaces

5 Other non-functional attributes

5.1 Reliability

Highly reliable in a properly secured environment.

5.2 Maintainability

Requires little maintenance. Some owners may need to overflow databases to new files or manage flatfiles of heavily used BBSs. Users of relational databases will probably not need to clear out their database.

5.3 Portability

Dependent on choice of database and usage.

5.4 Extensibility

Information entered via is portable to any relational database. The program can easily be switched to a new database with just a few lines of code. The program relies on the eXtropa ADT that divorces form and function.

5.5 Reusability

WebBBS is highly reusable. The application can be modified for just about anything!

5.6 Serviceability