

ADT: WebCal Version 1.0

Requirements Specification

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Document Revisions

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	Date	Description	Author
1	2001Sep4	Initial Draft Development	Janet Tan
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 WebCal 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 WebCal application. This specification does not extend to third party or infrastructure components.

1.3 Overview

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

- To be able to view and track events by day, month, and year.
- To be able to perform operations like add, modify and delete of calendar events for logged on users.

1.4 Business Context

WebCal 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 WebCal will ultimately benefit both the company and our users.

2 General Description

2.1 Product Functions

The general functionality of the WebCal application is to allow users to organize their own events by adding it into the calendar, to let other users know what events are coming up and also to track the movement of another person.

2.2 General Constraints

The calendar is not designed to be a personal calendar but a public calendar. No login is required for viewing the calendar events. Anyone can have free access to all the events and views.

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.

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	On	
<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/WebCal	
Script Display Name	'WebCal'	
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 checkfor 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	owner => 'Owner', start_date => 'Start Date', end_date => 'End Date', subject => 'Subject', description => 'Description', location => 'Location', status => 'Status', priority => 'Priority', last_mod_by => 'Last Modified By', last_mod_date => 'Last Modified Date', recur_until_date => 'Recurrent until', recur_interval => 'Recurrent interval',	
Datasource Setup		Configure the database and fields displayed
Field Names	record_id, type, owner, start_date, end_date, subject, description, location, status, priority, last_mod_by, last_mod_date, recur_until_date, recur_interval, ,	Corresponds to default extropa database
Valid Working Hours	(7..21)	
%months	@months{1..@months} = @months;	
%years	\$years{\$_} = \$_ for (2001..2005);	
%days	\$days{\$_} = \$_ for(1..31);	
%hours	\$hours{\$_} = sprintf "%02d",\$_ for @VALID_WORKING_HOURS;	
%mins	\$mins(+\$_*5) = sprintf "%02d",\$_*5 for (0..11);	
%recur_interval	0 => 'None', 1 => 'Daily', 2 => 'Weekly', 3 => 'Monthly', 4 => 'Yearly',	
<i>Sample Default Widget Definitions</i>		Configure field types for TTML

Display Name	Country	Name that appears in the browser
Type	Textfield, textarea, popup_menu, checkbox	
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
Basic Datasource Config Params		Configure datasource
Type	File	Other types include DBI
File	\$APP_DATAFILES_DIRECTORY/\$APP_NAME.dat	Use DBI_DSN in place of File for MySQL databases.
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' Datetime=> [-TYPE => "Date", -STORAGE => 'y-m-d H:M:S', -DISPLAY => 'y-m-d H:M:S',],	Specify a specific kind of field
Mailer Setup		Required for regular email. Not the same as Auth Mailer
Mail Config Params		
Type	Sendmail	
Email Display Fields	Subject, location, start_date, end_date, recur_interval, recur_until_date, description	
Delete Event Mail Send		Warns admin of deletions to the database
From	you@yourdomain.com	
To	you@yourdomain.com	
Reply To	you@yourdomain.com	
Subject	\$APP_NAME_TITLE Delete	
Add Event Mail Send		Tells admin of additions
From	you@yourdomain.com	
To	you@yourdomain.com	
Reply To	you@yourdomain.com	
Subject	\$APP_NAME_TITLE Addition	
Modify Event Mail Send		Tells admin of modifications to records
From	you@yourdomain.com	
To	you@yourdomain.com	
Reply To	you@yourdomain.com	
Subject	\$APP_NAME_TITLE Modification	

Logging Setup		
Type	File	
Log File	\$APP_DATAFILES_DIRECTORY/\$APP_NAME.log	
Log Entry Suffix	' ' . _generateEnvVarsString() . ' ',	
Log Entry Prefix	'WebCal '	
View Setup		
<i>Valid Views</i>	CSSView, DayView, MonthView, YearView, DetailsRecordView, AddRecordView, AddRecordConfirmationView, AddAcknowledgementView, DeleteRecordConfirmationView, DeleteAcknowledgementView, ModifyRecordView, ModifyRecordConfirmationView, ModifyAcknowledgementView,	Views to use, display, and defaults 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	WebCal	
Color for Even Rows	E5E5E5	
Color for Odd Rows	FFFFFF	
Display Fields	Subject, location, start_date, end_date, recur_interval, recur_until_date, description	
Table BG Color 1	6699CC	
Table BG Color 2	E5E5E5	
Table BG Font Color1	BLACK	
Table BG Font Color2	BLACK	
Date Time Setup		
Type	(HAS_CLASS_DATE ? 'ClassDate' : 'DateManip),	Required for WebCal and Recruit to use and manipulate dates Checks for ClassDate, a required Module. It will use DateManip if ClassDate is not found. Class Date is preferred, however.
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 Handler Plugins		
		Additional views and modules required for

		WebCal. No modification required.
Navigation Modes	day=>1, month=>1, year=>1,	If an available navigation view is not desired, disable. You may also set additional views, but be sure to make the TTML.
Default View Mode	Extropia::Core::App::WebCal::DAY;	Set to MONTH or YEAR for different default views Comment out the others
Action/Workflow Setup		
<i>Action Handler List</i>	Defaults	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	DayView	
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 Confirm 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	DESC	ASC=Ascending, DSC=Descending or DESC
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,	
AMPM Hour Display	On	
Basic Input Widget Display COLSPAN	7	

3 Functional Requirements

3.1 WebCal Application

3.1.1 Description

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 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

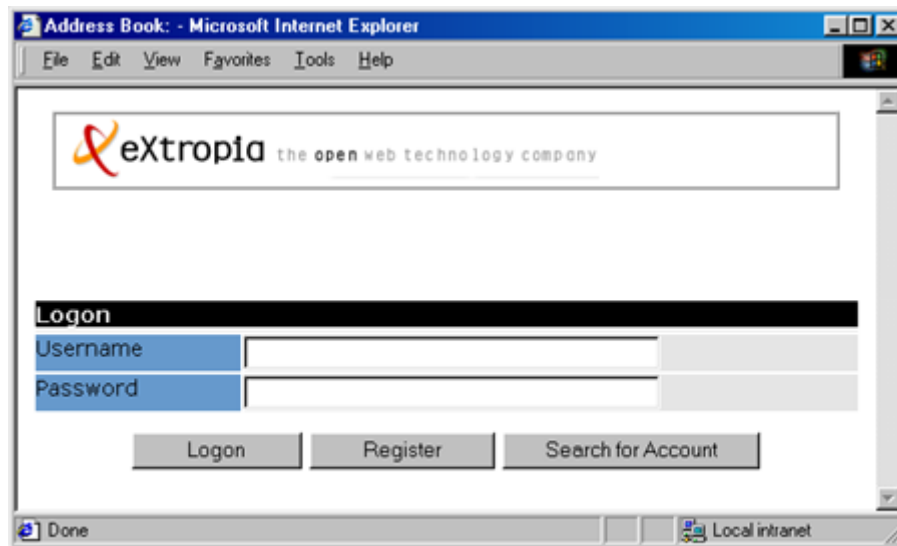
- Any user may browse the database
- Registered users may add, modify, and delete records
- Registration is available to anyone

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/WebCal/webcal.users.dat. It is recommended that administrators do not alter the contents, especially the encrypted passwords. The information is listed as:

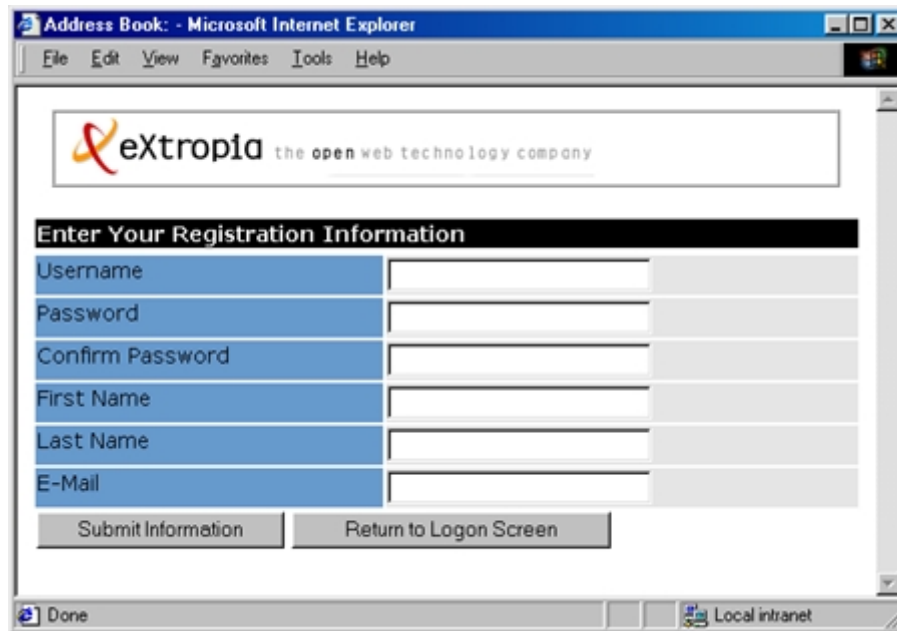
```
username | password | group_name | fname | lname | email
```

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.

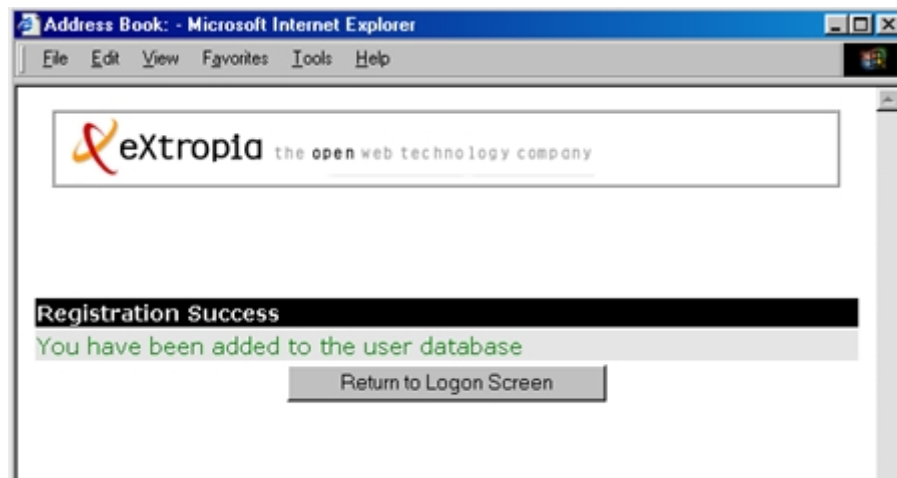
- **Logon View** requests the Username and Password of registered users. Users may attempt to logon, Register, or Search for Account. Also the view for failed logins.



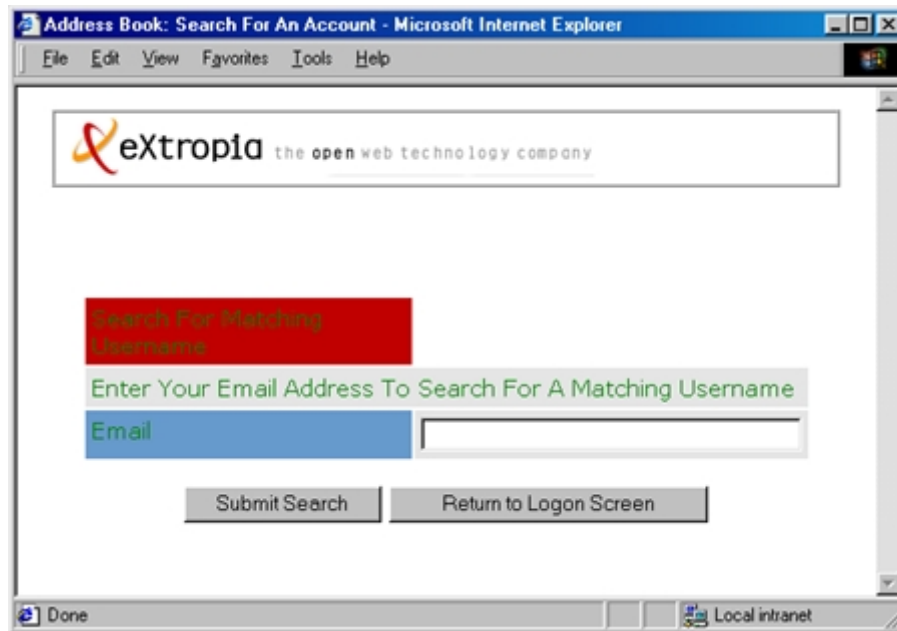
- **Register View** permits any user to enter Username, Password, Confirm, Password, First Name, Last Name, and E-Mail. The user may then Register or Return to Logon Screen.



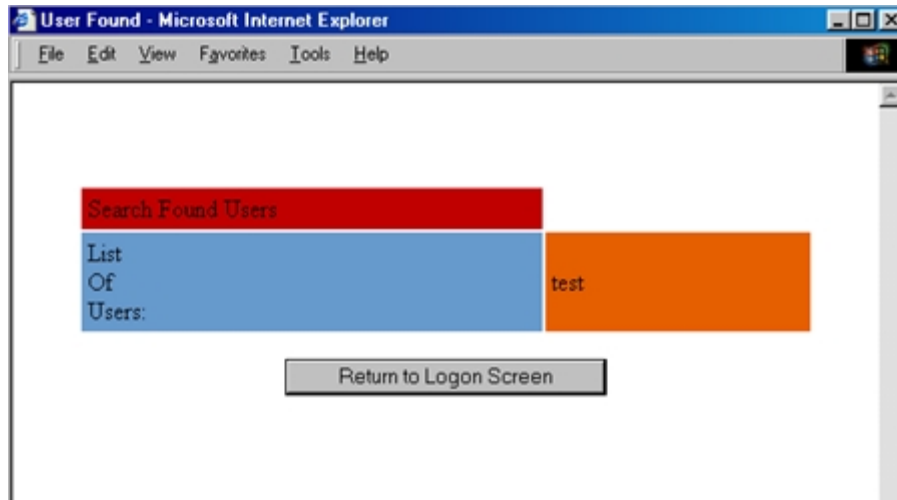
- **Register Confirmation View** confirms registration and returns the user to the Logon View.



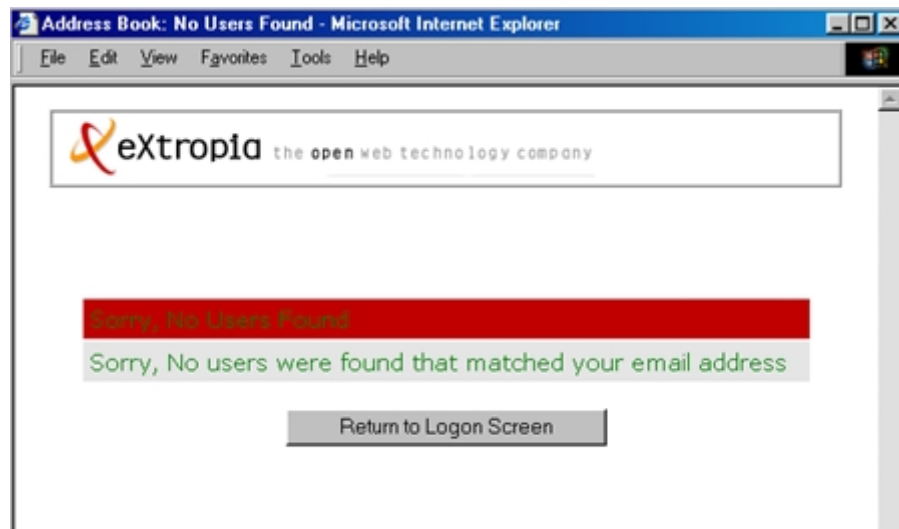
- **Search for Account** requests an email address to match users and then sends the password to the user.



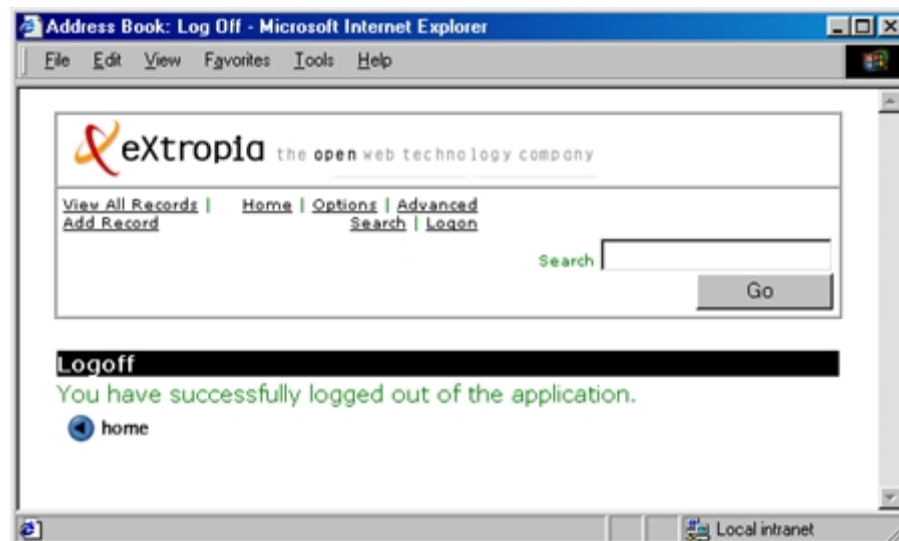
- **Search for Account Users Found** displays the username that matches the email address given.



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

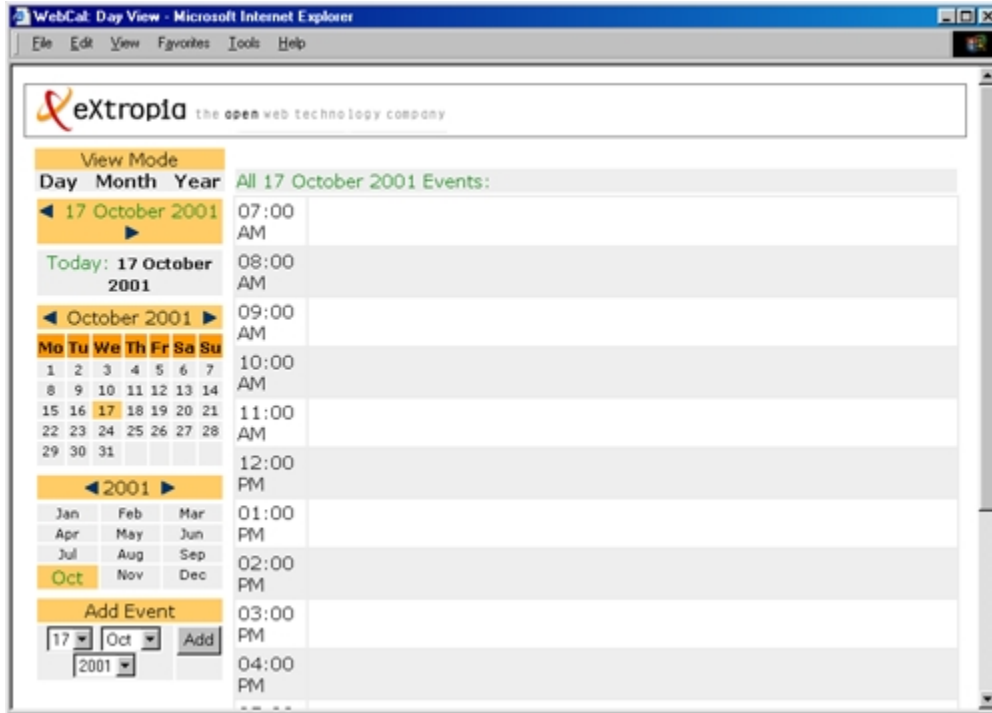


- **Logoff View** logs the user out and confirms the logoff. The session is terminated.

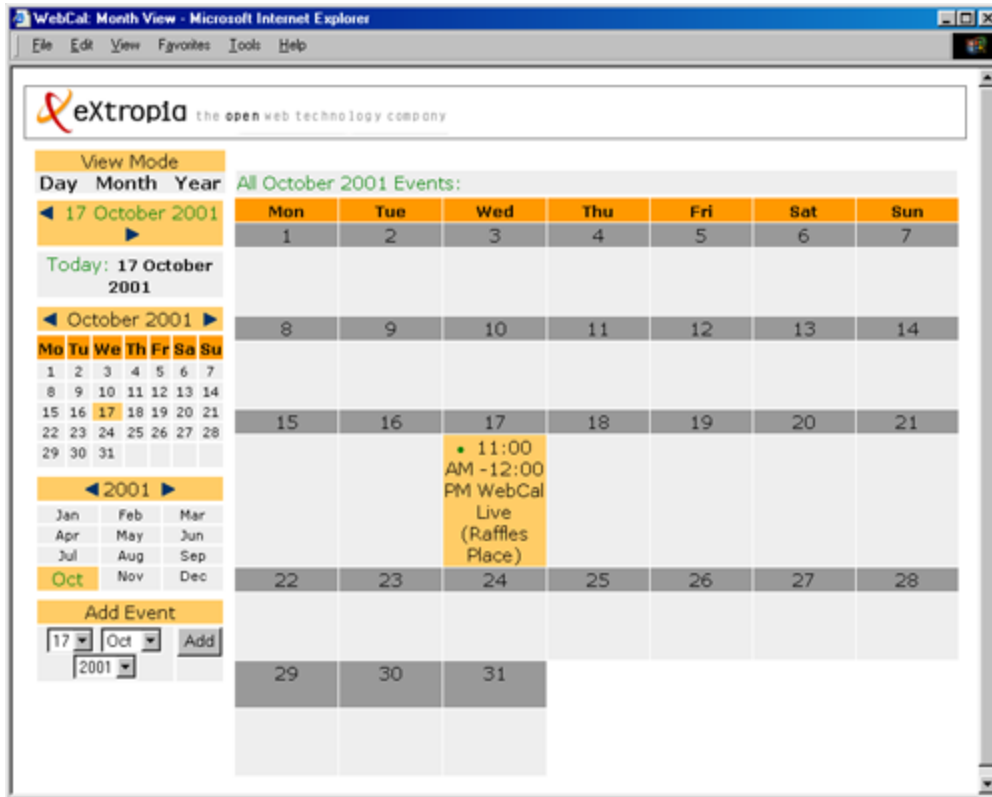


Application Specific View Definitions

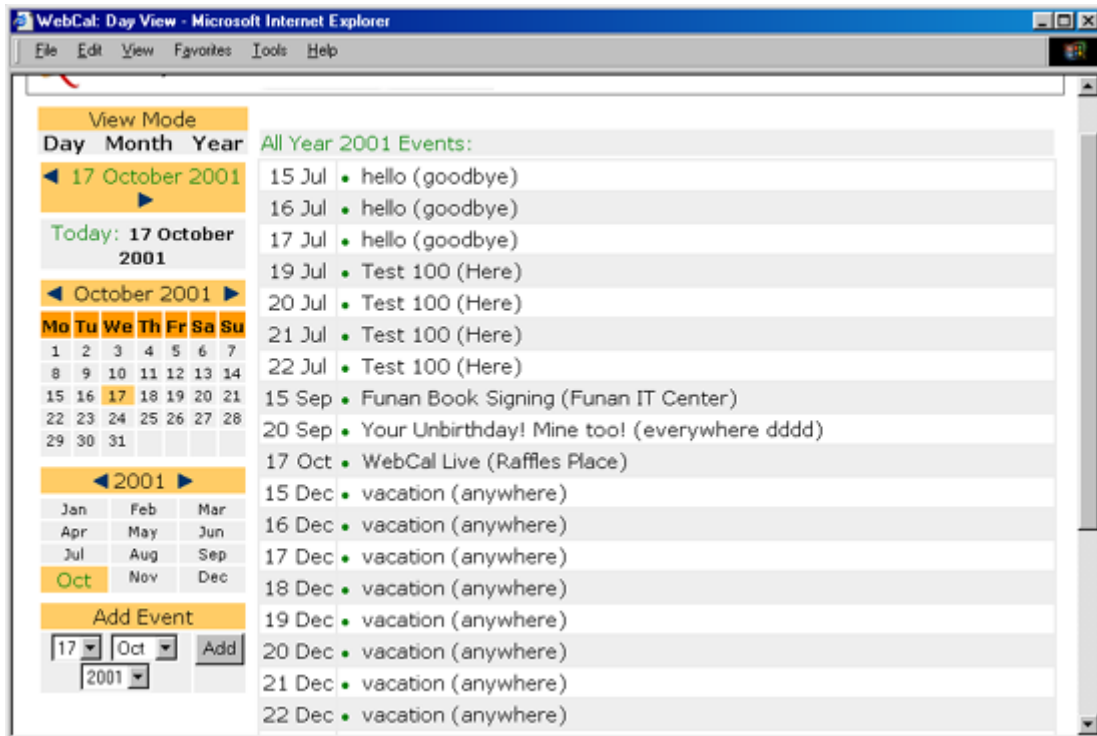
- **Default Day View** permits the user to see the events for the current day. The user may click on time slots to Add Events or View Details. Options include changing to Day, Month, or YearView, changing the day, month, or year. A Fast Add panel permits switching to any day, month, and year without having to navigate to it.



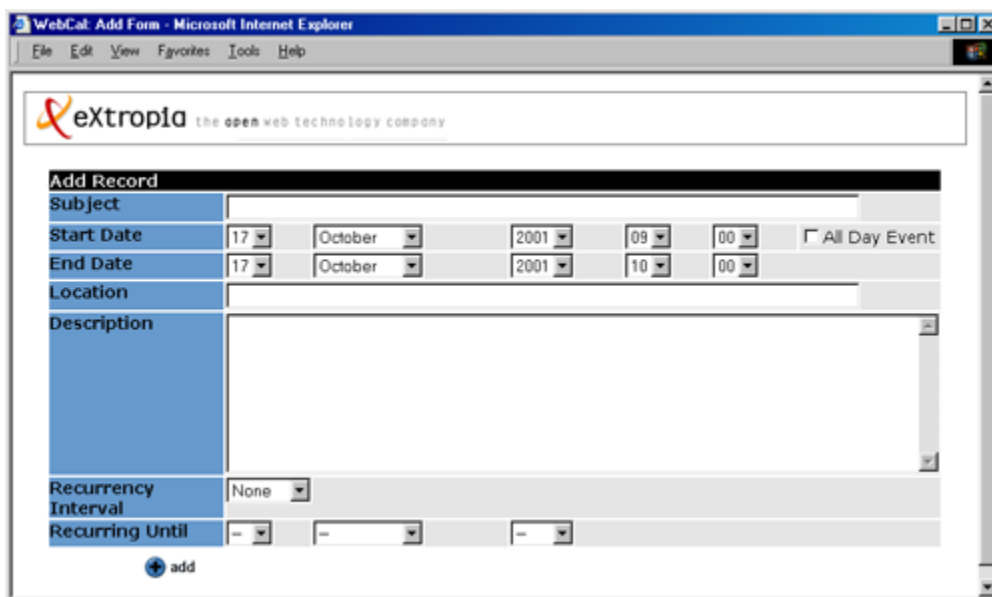
- **Month View** displays the selected or current month in regular calendar view. Users may click on a date to see the events on that day. Selecting a specific event brings up the Details. All other features are available.



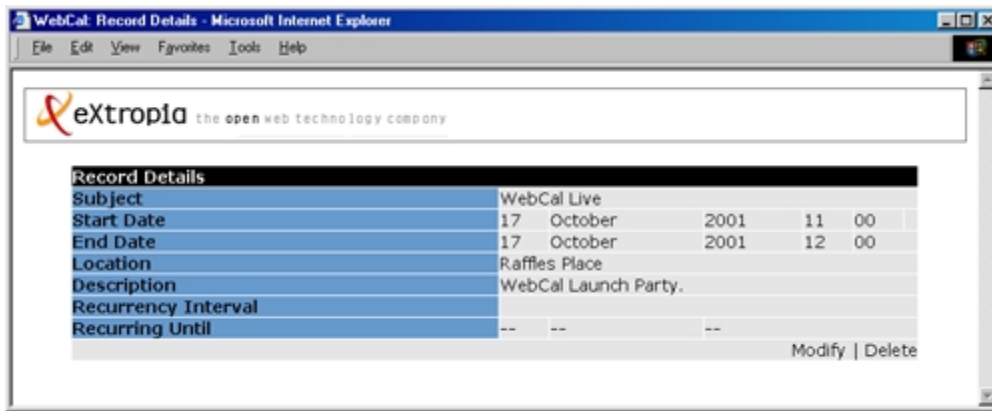
- **Year View** displays the selected year or current year's events. The events are listed in chronological order. Nothing will appear unless an event has already been entered into the calendar. All other options are available.



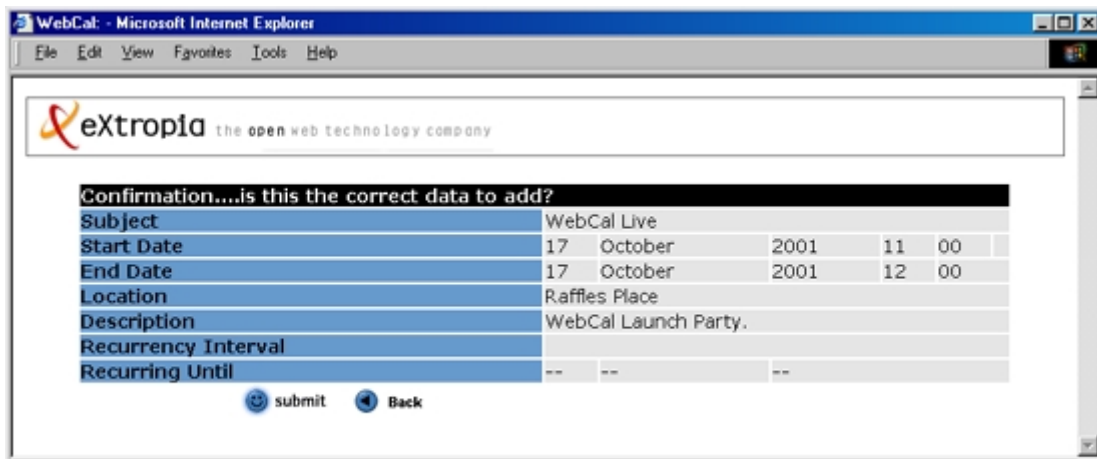
- **Day View** exactly the same as the Default Day View, but for a selected day.
- **Add Event View** permits a registered user to add events. Fields include: Subject, Start Date, End Date, All Day Event, Location, Description, Recurrency, and Recur Until. Events may be single time slots, all day events, multiple day events, or recurring events.



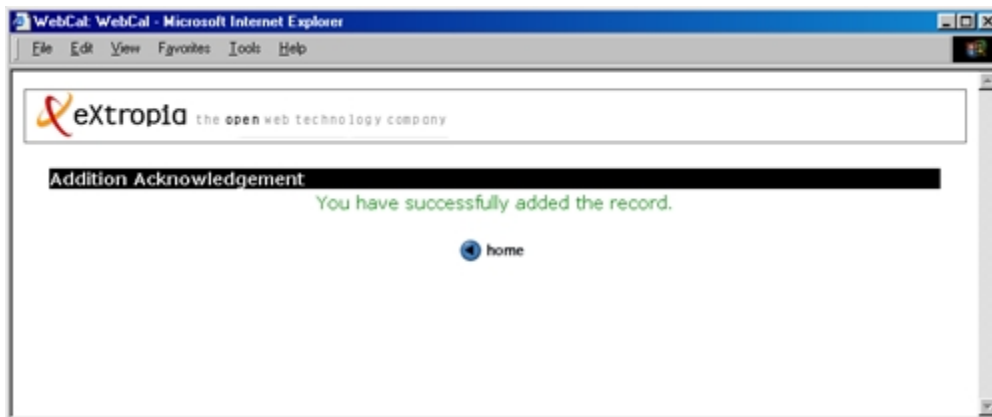
- **Details View** displays the Event details.



- **Confirmation View** displays the Added or Modified information for review. Users may press Back or Continue.



- **Acknowledgement View** confirms the changes.



- **Modification View** permits the user to alter an Event's information with the same functions as the Add Event View.

- **Delete View** completely removes an event.

Common Features Definitions

There are no common features available.

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 numericvalue
type	Type of the event	Not in use – Set to 255
owner	The name of the user who has added the event	char
start_date	It contains start date and start time.	char
end_date	It contains end date and end time.	char
subject	Subject of the event.	char
description	Description of the event	char
location	Location of the event.	char
status	Status of the event	Not in use – Set to 255
priority	Priority of the event	Not in use – Set to 255
last_mod_by	The name of the user who last modified the event.	char
last_mod_date	The date of last modification.	char
recur_until_date	End date of recursive event.	char
recur_interval	The type of recursive event. Daily, Weekly, Monthly or Yearly	numeric

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

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

5.6 Serviceability