

ADT: Quiz Admin Version 1.0

Requirements Specification

| | |
|----------------|--------------------|
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Document Revisions

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| 4 | | | |

TABLE OF CONTENTS

| | | |
|--|-----------|----|
| 1 Introduction | 4 | |
| 1.1 Purpose of this document | | 4 |
| 1.2 Scope of this document | | 4 |
| 1.3 Overview | | 4 |
| 1.4 Business Context | | 4 |
| 2 General Description | 4 | |
| 2.1 Product Functions | | 4 |
| 2.2 General Constraints | | 4 |
| 3 Functional Requirements | 11 | |
| 3.1 Quiz Admin Application | | 11 |
| 3.1.1 Description | | 11 |
| 3.1.2 Risks and Dependencies | | 19 |
| 4 Database Design | 19 | |
| 4.1 Description | | 19 |
| 4.2 Communications Interfaces | | 20 |
| 5 Other non-functional attributes | 20 | |
| 5.1 Reliability | | 20 |
| 5.2 Maintainability | | 20 |
| 5.3 Portability | | 20 |
| 5.4 Extensibility | | 20 |
| 5.5 Reusability | | 20 |
| 5.6 Serviceability | | 20 |

1 Introduction

1.1 Purpose of this document

The purpose of this document is to specify the functional and system specification of the Quiz Admin 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 specification covers the functional specifications of the Quiz Admin application. This specification does not extend to third party or infrastructure components.

1.3 Overview

The basic requirements summary for the Quiz Admin application:

- To provide the Administrator access to the quiz entries.
- To allow the Administrator to view the results.
- To allow the Administrator to tally results with queries.

1.4 Business Context

Quiz Admin allows administrators of Quiz to view the results. Businesses and individuals may wish to use this program to gather data about a particular topic from their website users. Others may wish to use it as a Contest Form or Test. 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 Quiz Admin will ultimately benefit both the company and our users.

2 General Description

2.1 Product Functions

The general functionality of the Quiz Admin application is to allow users to answer the survey. The administrator may view the records.

2.2 General Constraints

The application will be written in Perl and the data files are stored in a common flat file system (ASCII File). This file based system will slow down data searches if there is a lot of data.

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 | 60 seconds X 60 |
| 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 Delimiter | (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 | This should be changed to match the web server path to your Images. |
| Script Display Name | 'Quiz Admin' | |
| 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, Number | |
| Field Mappings | Number_of_swing_albums_owned, email, name | |
| Datasource Setup | | |
| Field Names | record_id, fname, lname, email, question1, question2, question3, question4, question5, comments, date_time_posted, | Configure the database and fields displayed Corresponds to default extropia database |
| <i>Sample Default Widget Definitions</i> | | |
| Display Name | Country | Configure field types for TTML 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 |
| Linebreak | 1 | |
| Multiple | 1 | |
| Values | Count Basie, Duke Ellington, Bill Elliot | |
| Wrap | VIRTUAL | Wrapping of text in textarea |
| <i>Basic Datasource Config</i> | | |
| | | Configure datasource |

| | | |
|-------------------------------|---|---|
| <i>Params</i> | | |
| 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> | fname, lname, email, question1, question2, question3, question4, question5, comments, | Email these fields |
| <i>Delete Event Mail Send</i> | | Warns Someone of Deletions to the database |
| From | you@yourdomain.com | |
| To | you@yourdomain.com | |
| Reply To | you@yourdomain.com | |
| Subject | Quiz 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 | Quiz 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 | Quiz Modification | |
| Logging Setup | | |
| Type | File | |
| Log File | \$APP_DATAFILES_DIRECTORY/\$APP_NAME.log | |
| Log Entry Suffix | ' ' . _generateEnvVarsString() . ' ', | |
| Log Entry Prefix | 'Quiz Admin ' | |
| View Setup | | Views to use, display, and defaults |
| <i>Valid Views</i> | CSSView, AddAcknowledgementView, | The program cannot |

| | | |
|-------------------------------|---|--|
| | AddRecordConfirmationView, DeleteRecordConfirmationView, DeleteAcknowledgementView, ModifyAcknowledgementView, ModifyRecordConfirmationView, SessionTimeoutErrorView, AddRecordView, PowerSearchFormView, BasicDataView, DetailsRecordView, ModifyRecordView, LogoffView, OptionsView | 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 | | |
| Table BG Color 1 | 6699CC | |
| Table BG Color 2 | E5E5E5 | |
| Table BG Font Color 1 | BLACK | |
| Table BG Font Color 2 | 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 | |
| Embed Filter | | |
| Type | Embed | |
| Enable | Off | |
| Action/Workflow Setup | | |
| <i>Action Handler List</i> | Default::SetSessionData Default::DisplayCSSViewAction Default::DisplaySessionTimeoutErrorAction Default::PerformLogoffAction Default::PerformLogonAction Default::DisplayOptionsFormAction Default::DownloadFileAction Default::DisplayAddFormAction Default::DisplayAddRecordConfirmationAction Default::ProcessAddRequestAction Default::DisplayDeleteFormAction Default::DisplayDeleteRecordConfirmationAction Default::ProcessDeleteRequestAction Default::DisplayModifyFormAction Default::ProcessModifyRequestAction Default::DisplayModifyRecordConfirmationAction Default::DisplayPowerSearchFormAction Default::DisplayDetailsRecordViewAction Default::DisplayViewAllRecordsAction Default::DisplaySimpleSearchResultsAction | User should not need to modify |

| | | |
|--------------------------------------|---|--|
| | Default::PerformPowerSearchAction Default::HandleSearchByUserAction Default::DisplayBasicDataViewAction Default::DefaultAction | |
| <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 | Off | |
| 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 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 | \$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 | Off | |
| Display Acknowledgement On Delete | Off | |
| Display Acknowledgement On Modify | Off | |
| Display Confirmation On Add | Off | |
| Display Confirmation On Delete | Off | |
| Display Confirmation On Modify | Off | |
| 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 | On | 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 | On | 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 | Off | Is a matching group or |

| | | |
|------------------------------------|--|---|
| Username for Search | | 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, | |
| Basic Input Widget Display COLSPAN | 2 | |

3 Functional Requirements

3.1 Quiz Admin 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:

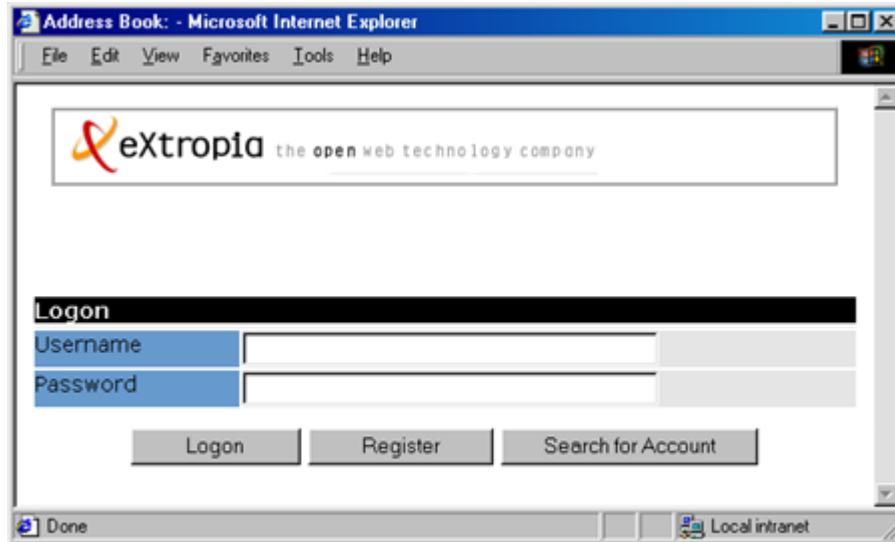
- Registered users may view the database
- Registered users may search the database
- Registered users may add records but not modify or delete records
- Registration is available to anyone

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 `Datfiles/Quiz/quiz_admin.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
```

System administrators will be able to alter hard data in databases or flatfiles as needed.

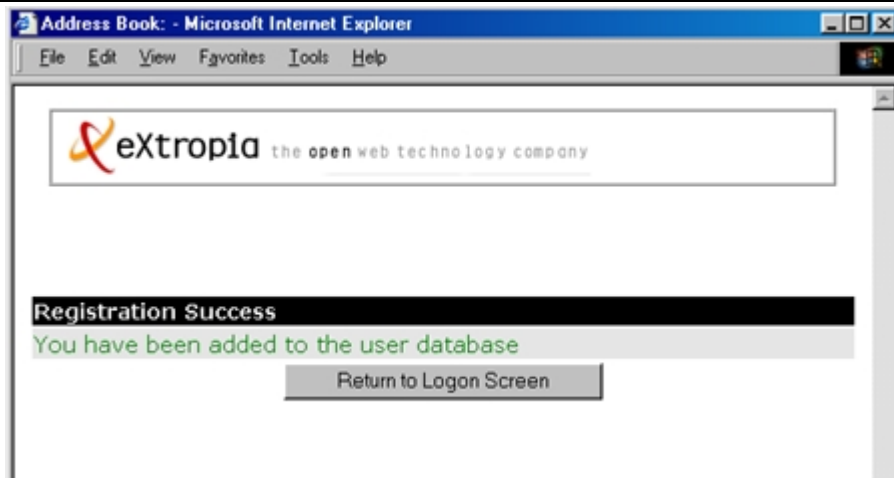
- **Logon View** requests the Username and Password of registered users. Users may attempt to logon, Register, or Search for Account. Also the view for failed logins.



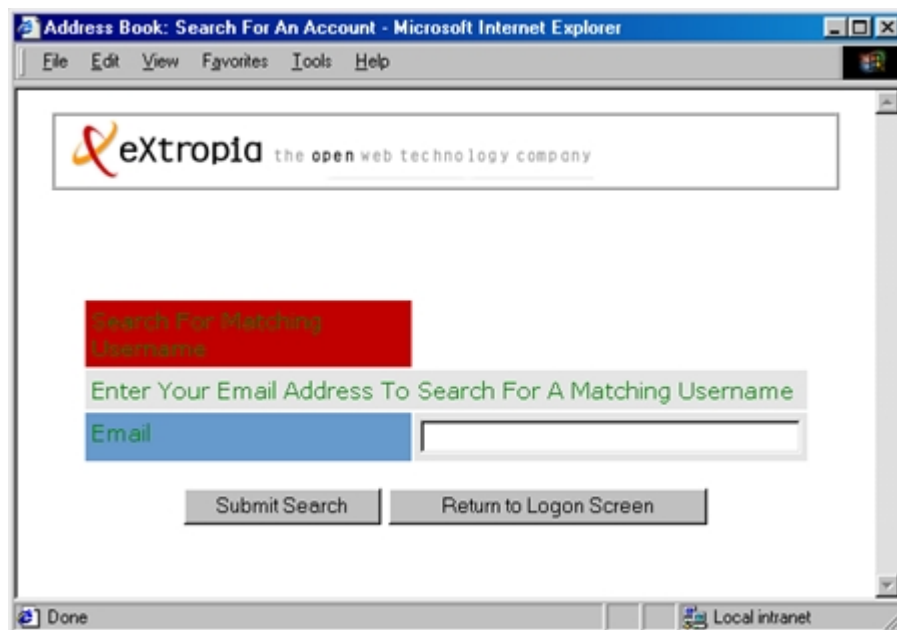
- **Register View** permits any user to enter Username, Password, Confirm, Password, First Name, Last Name, and E-Mail. The user may then Register or Return to Logon Screen.



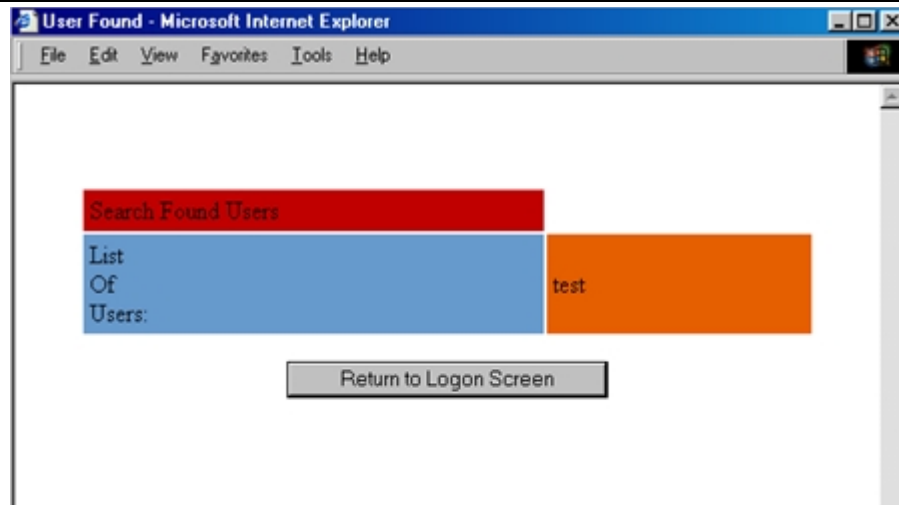
- **Register Confirmation View** confirms registration and returns the user to the Logon View.



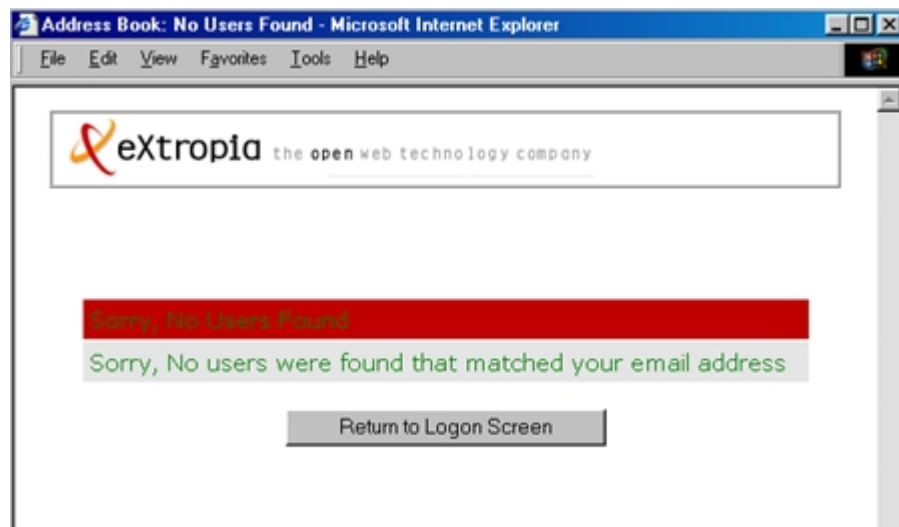
- **Search for Account** requests an email to match users and then sends the password to the user.



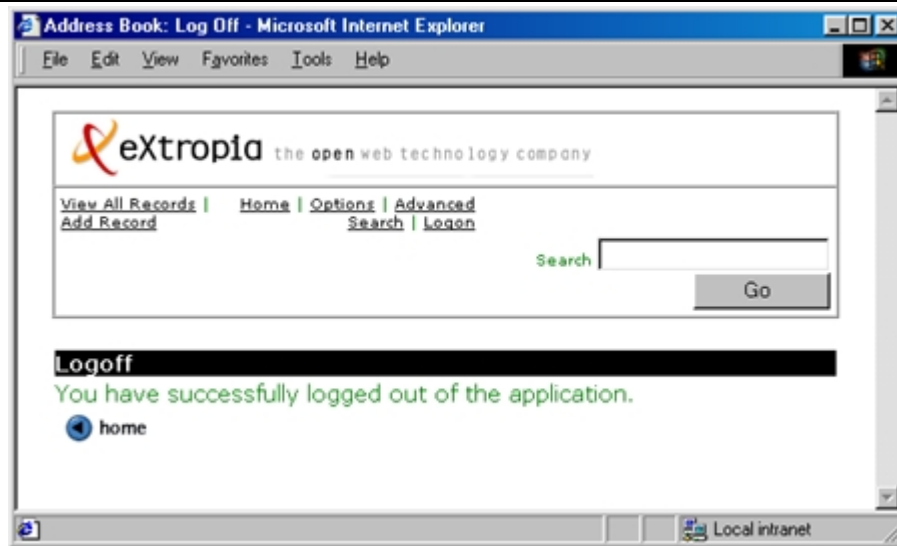
- **Search for Account Users Found** displays the username that matches the email address given.



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

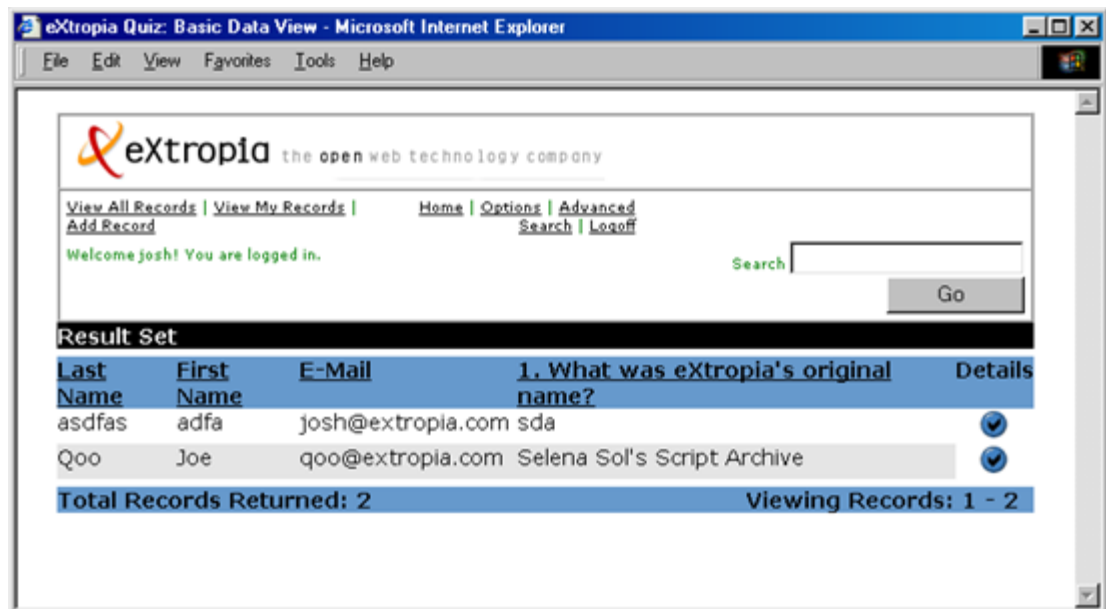


- **Logoff View** logs the user out and confirms the logoff. The session is terminated.

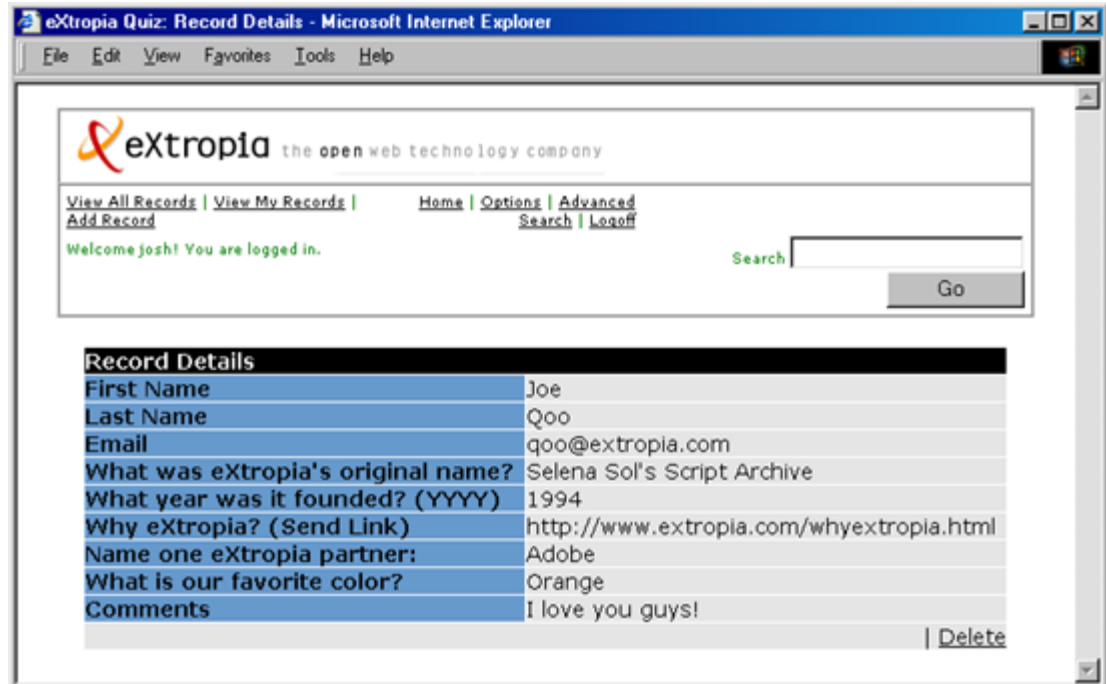


Application Specific View Definitions

- **Home View (Basic Data View)** displays a listing of the first 25 records in the database. The list is ranked by Name and Email. Users may view record Details. View All Records, View My Records, Options, Advanced Search, Keyword Search, and Logoff are available options.



- **View All Records** will show all the information in the database ranked by First Name of the record in the address list.
- **View My Records** – allows a registered user to search within the subset of all records that were added by that user.
- **Details View** displays the entire contents of a record. This view permits Modify and Delete with authentication.



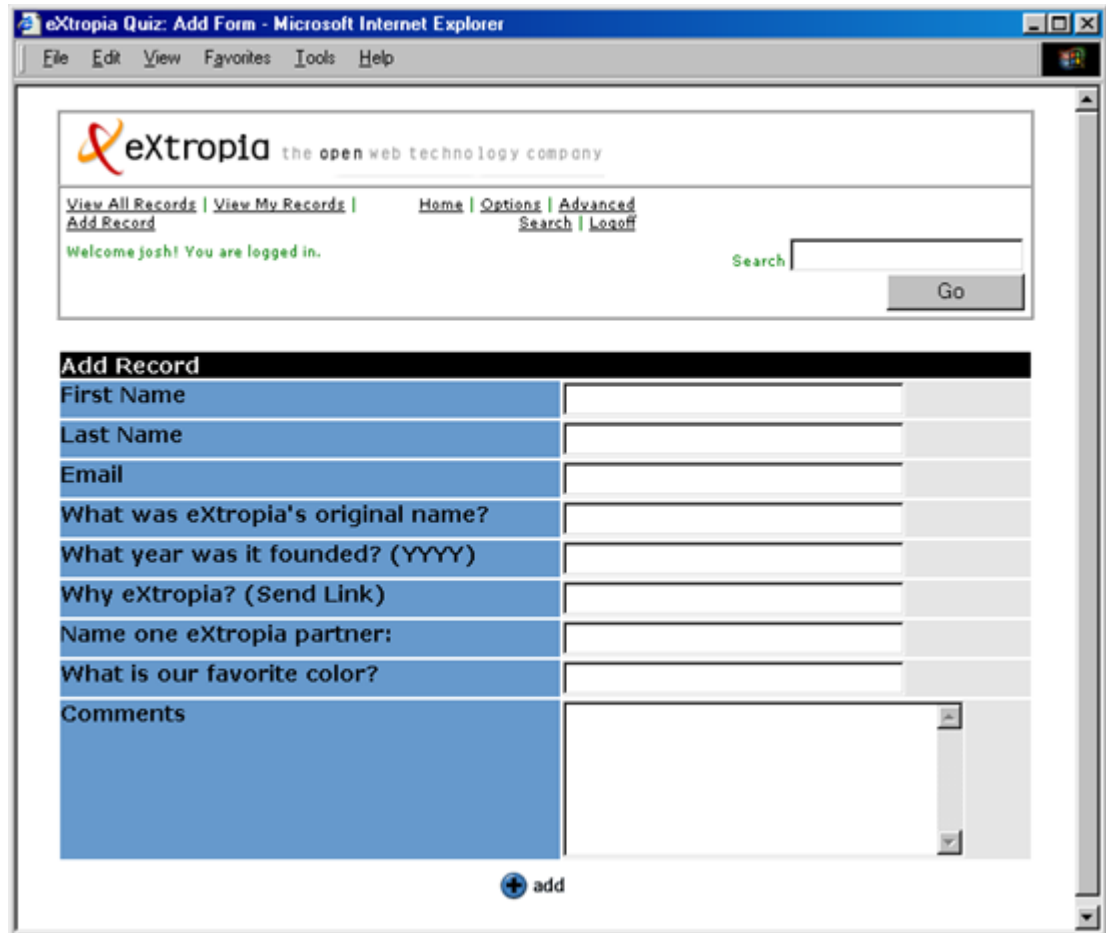
The screenshot shows a web browser window titled "eXtropa Quiz: Record Details - Microsoft Internet Explorer". The page header includes the eXtropa logo and navigation links: [View All Records](#), [View My Records](#), [Add Record](#), [Home](#), [Options](#), [Advanced Search](#), and [Logoff](#). A green message reads "Welcome josh! You are logged in." To the right is a search box with a "Go" button.

The main content area is titled "Record Details" and contains a table with the following information:

| | |
|-----------------------------------|---|
| First Name | Joe |
| Last Name | Qoo |
| Email | qoo@extropia.com |
| What was eXtropa's original name? | Selena Sol's Script Archive |
| What year was it founded? (YYYY) | 1994 |
| Why eXtropa? (Send Link) | http://www.extropia.com/whyextropia.html |
| Name one eXtropa partner: | Adobe |
| What is our favorite color? | Orange |
| Comments | I love you guys! |

A "Delete" link is located at the bottom right of the record details table.

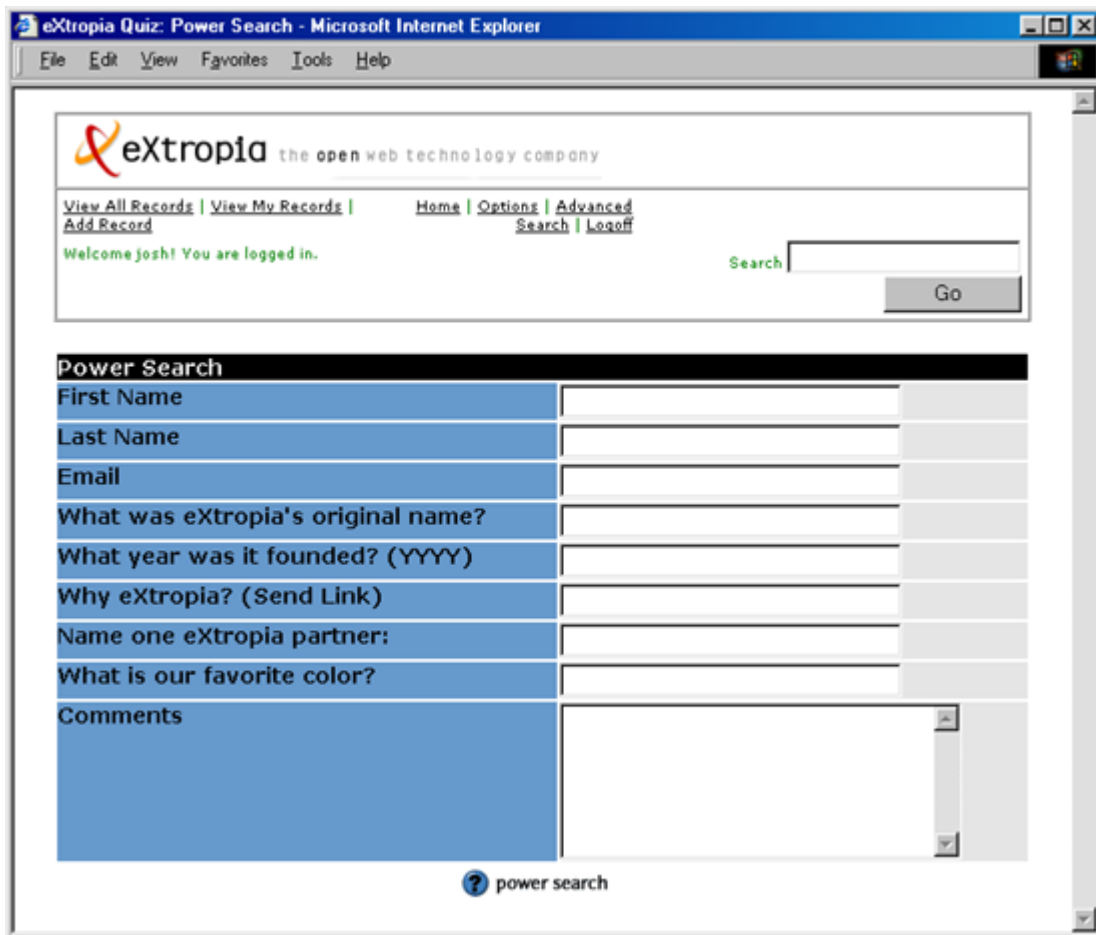
- **Add Record** requires login authentication. The fields are the same as in the Quiz Admin.



- **Delete Record** requires authentication. It will ask the user to confirm.
- **Modify Record** requires authentication. It contains the same fields as Add Record. It is not available by default.
- **Confirmation View** displays the user's answers to confirm. The user may continue or return to edit his answers. This is not turned on by default.
- **Acknowledgement View** reports the success of the entry. This is not turned on by default.

Common Features Definitions

- **Basic Search** permits any user to search the database based upon keywords. Available in the header.
- **Advanced Search** permits any user to search the database for any or all of the available fields.

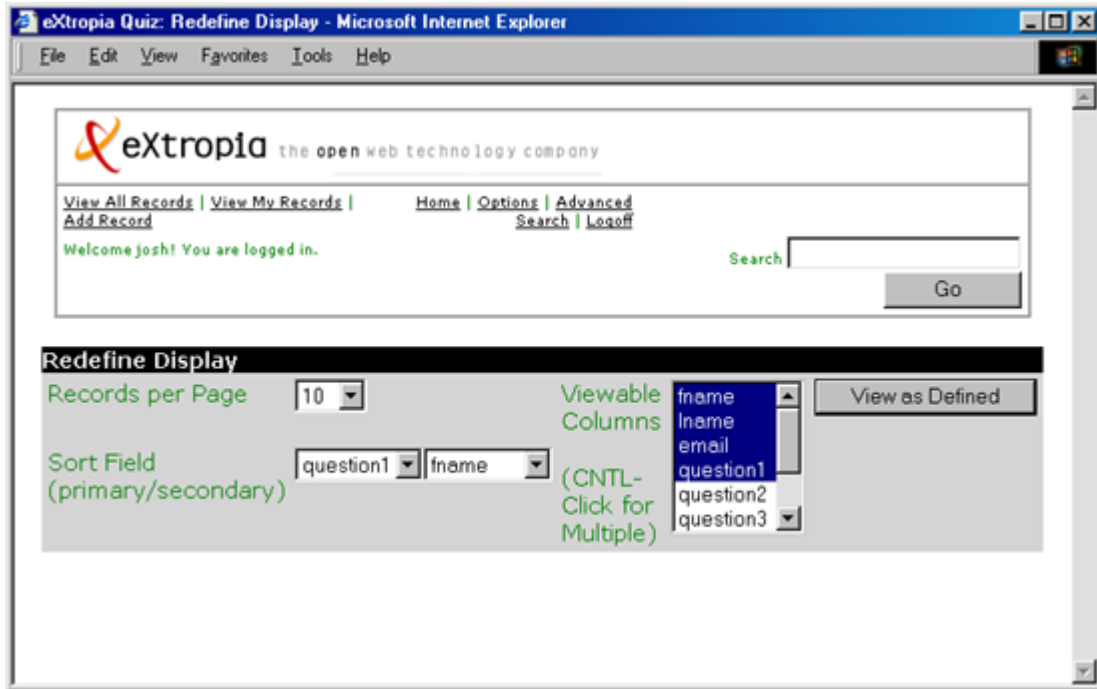


The screenshot shows a web browser window titled "eXtropa Quiz: Power Search - Microsoft Internet Explorer". The browser's address bar and menu bar are visible. The main content area features the eXtropa logo and navigation links: [View All Records](#), [View My Records](#), [Home](#), [Options](#), [Advanced Search](#), and [Logoff](#). A message reads "Welcome josh! You are logged in." To the right is a search box with the label "Search:" and a "Go" button. Below this is a section titled "Power Search" with a table of search criteria:

| Power Search | |
|-----------------------------------|----------------------|
| First Name | <input type="text"/> |
| Last Name | <input type="text"/> |
| Email | <input type="text"/> |
| What was eXtropa's original name? | <input type="text"/> |
| What year was it founded? (YYYY) | <input type="text"/> |
| Why eXtropa? (Send Link) | <input type="text"/> |
| Name one eXtropa partner: | <input type="text"/> |
| What is our favorite color? | <input type="text"/> |
| Comments | <input type="text"/> |

At the bottom of the form is a question mark icon followed by the text "power search".

- **Options View** permits the authenticated user to alter Records Displayed per Page, Two Sort Fields, and which Columns to View. Upon pressing View as Defined, the user will see the records as desired. The Viewable Columns will vary according to Application.



3.1.2 Risks and Dependencies

There is a risk that the Administrator will delete records he wants to keep. The design of survey also makes it difficult to tally results in a meaningful fashion.

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 | Field Types |
|------------------|---------------------------------|-------------|
| record_id | Record Value (Auto Incremental) | Auto |
| name | Name | char |
| email | Email | char |
| question1 | Question 1 | Char |
| question2 | Question 2 | Char |
| question3 | Question 3 | Char |
| question4 | Question 4 | char |
| question5 | Question 5 | Char |
| comments | Comments | Char |
| date_time_posted | Date and Time Posted | 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. Owners will want to clear out a large flat file now and then as well as ensure their installation is secure from hackers. Users of relational databases will probably not need to clear out their database.

5.3 Portability

Portability is limited by the choice of database.

5.4 Extensibility

Information entered 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

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

5.6 Serviceability