Creating Surveys

New surveys can either be created from scratch or by copying an existing survey. When creating a survey by copying an existing survey, the existing survey is copied in its entirety. All survey options, question, page conditions, etc. are copied to the new survey. If the survey being copied has responses, none of the responses are copied. After copying the survey, you can then change the name of the survey, and modify.

If a user is logged into the application with Create permission, the dropdown box used for copying an existing survey contains a list of all surveys owned by that person. If the user has Admin permission, all surveys in the system are displayed in the dropdown box.

Designing Surveys

Each survey can contain an unlimited number of questions distributed amongst any number of pages. A survey should contain multiple pages if page conditions are desired, or to limit the number of questions per page. New pages are inserted into a survey by clicking the "NEW PG" buttons in the appropriate location.

Page conditions can be inserted or updated by clicking the "INSERT PAGE CONDITION" or "EDIT PAGE CONDITION" buttons that appear at the top of each page. Note that these buttons are not displayed for the first page in a survey, since the first page must be displayed and therefore cannot have page conditions associated with it.

The main page for designing surveys displays visual representations of all of the questions. Note that because of space limitations, the way the questions are displayed on this page is not exactly the same as they are displayed in an actual survey. Use the Preview functionality to see how the survey will actually appear.

New items can be added to a survey either by creating them from scratch or by copying an existing item. When copying an existing item, the entire item, with all responses, if applicable, is copied into the survey. The item can then be modified as desired.

The look and feel of every survey is determined by the template associated with that particular template. The template for each survey can be set on the survey options page. See the section below, "Templates," for more information on using templates.

Every page in the survey may optionally include a title or an introduction. If either the title or the introduction is omitted for a particular page, that page is rendered without the title or introduction, as specified.
Templates

Templates are used to fully define the look and feel of all surveys. There is no limit to the number of templates a user may create. Each survey must be associated to a template, and any number of surveys can be associated to a single template. Modifying a template changes the look and feel of all surveys associated with that template.

Templates are used to define all of the following:

- Logo (optional)
- Border width and color (optional)
- Background colors
- Heading and alternating colors for matrix questions
- All font styles
- HTML for headers and footers (optional)
- Navigation buttons or links

Using templates, the look and feel of almost all web sites can be created for your survey. By providing HTML for the header and footer, you can have the same navigation, header, and footer as your own web site. With the many other template attributes, the entire look and feel can be copied. Finally, applying your own logo to the survey can help to create a fully branded survey.

The application contains a default template called, "Default Template." This template is associated with all new surveys. This template cannot be removed from the system, but it can be modified, as desired.

New templates can be created either by creating a new template from scratch, or by copying an existing template. Templates can be deleted if they are not associated with any surveys. When setting the template for a survey, only surveys that are marked as active can be selected.

Templates are owned, by default, by the user who created the template. To enable sharing of a template, the "Public User" property must be set to "Yes." This property indicates whether or not usage of the template is limited to administrators and the template owner, or it is available to all users of the application.

The look and feel of any template can be viewed by clicking one of the "Preview" buttons, which are located on the template list page, the template details page, and next to the template dropdown on the survey details page.
Libraries

Libraries are collections of questions that can be inserted into a survey. Libraries are useful because you can create a question once in a library, and then reuse it over and over again by inserting it into your surveys.

To insert an item into a survey from a library, click one of the "Insert" buttons on the survey. Then, click the "Insert from Library" button. Select the desired library from the dropdown list, then select the item, and click the "Continue" button.

New items can be added to a library in two ways, both of which can be accessed by clicking any of the "Insert" buttons on the library page. The first way is to create a new question from scratch. The second way is to click on the "Copy Existing Item" button, and copy an item from an existing survey.

All libraries are owned by and viewable only by the owner of the library. The exception to this rule is that administrators can view and manage all libraries in the application. You may optionally share a library with other users by setting the "Public" property, located on the library options page, to "Yes." Sharing a library means that other users can create questions by copying items from the library, but they cannot modify the library itself. Only administrators and the owner of the library can actually modify the library.

Item Types

The application contains over 20 different item types. Many of the item types are questions that request a response from the user, while others are simply formatting elements for HTML, messages, images, etc.

The "Choice - Database Dropdown" element allows a user to create a dropdown question that draws its data from any database. To use this question type, all that is required is that the user enters a valid SQL statement and the database connection string. When using this question type, be extremely careful to ensure that the SQL entered will return results, and that the database connection information is valid. If either of these is incorrect, no data will be displayed.

The SQL statement must contain two columns called "ItemValue" and "ItemDisplay". These two columns are used, respectively, as the value and the display text for each entry in the dropdown list. The correct way to make sure that your SQL contains columns with these two names is to use the "As" keyword in your SQL, as shown in the following example:

```
SELECT state_code As ItemValue, state_name as ItemDisplay
FROM tblState
ORDER BY state_name
```
If you wish to use the same column for both the value and text, simply select that column twice in your SQL statement, and alias it using the "As" keyword, as follows:

```sql
SELECT state_code As ItemValue, state_code as ItemDisplay FROM tblState ORDER BY state_name
```

The database connection string can be any valid DSN-less connection, or any valid DSN.

**Scored Surveys**

Point values can be associated with questions that have predefined values. The types of questions that can have points values associated with them are checkboxes, option buttons, and dropdown lists.

Not all question types support point values, and it's possible that not all answers in a question that does support scored surveys will have a point value associated with it. Therefore, when calculating the score for a survey, any question or answer to a question that does not have a point value associated with it is simply ignored.

Data about the scores for any survey with point values associated to it can be viewed, by default, in the reports.

**Page Conditions**

Page conditions are the mechanism by which pages in a multi-page survey are optionally displayed. That is, other than the first page in a survey, each page may be shown to or hidden from the respondent based on the page conditions associated with the page. If a page does not contain any page conditions, the page is always displayed to the user.

The page conditions on a page are based on the responses given to a question or questions on a prior page or pages in the survey. A page condition can be based on any question on any prior page, not just the previous page. If the conditions on a survey evaluate to "True," the page is displayed. Similarly, if any of the page conditions evaluate to "False," the page is hidden from the respondent.

Each condition is created by selecting a question from a prior page, selecting an operator, and entering or selecting the value to be compared using the selected operator. The appropriate operators and, if applicable, the predefined answers for a question, are displayed depending on the type of the question selected.
Each page condition must be part of a group, and each page in a survey can use up to five groups. A group is the way "AND" vs. "OR" logic has been implemented in the application. The conditions within a single group are evaluated using "AND" logic, while each group is combined together using "OR" logic. Thus, a page is displayed if at least one group evaluates to "True," even if all other groups on the page are "False." A single group evaluates to "True" if all of the individual conditions within that group evaluate to "True."

To better illustrate how groups work, let's use an example of a page in a survey that has two groups, each of which has two conditions. The page will be displayed if:

- Both conditions in the first group evaluate to "True" (regardless of how the second group evaluates)
- Both conditions in the second group evaluate to "True" (regardless of how the first group evaluates)

The page will NOT be displayed if:

- Each group has at least one condition that evaluates to "False"

As a second example, a survey contains five pages. The first page contains a single question which is a dropdown box prompting the user to select his/her gender. If the user selects "Male," the fifth page should be displayed. If the user selects "Female," page two, three, and four (but not five) should be displayed. To implement, page conditions are added to the second, third, fourth, and fifth pages of the survey. Each page has a single page condition, all of which use the question from the first page. On pages two, three, and four, the page condition uses an equal operator, and the value "Female." On the fifth page, the page condition again uses an equal operator, with the value "Male." In the case where "Male" is selected on the first page, the user "skips" from the first page to the fifth page. This type of skip logic is commonly used, and is a good example of how every page in a survey can be optionally displayed to the user.

**Piping Answers**

Displaying the answer to one question in the text of a subsequent question is called answer piping. For example, on the first page of your survey, you might have a question that asks the user for his/her name. On a subsequent page, you would like to begin a question using the respondent's name. This is accomplished by piping the answer from the first question into the desired location on the second page.

To set up answer piping, simply insert a pipe token into the desired location in either the question text or subtext. The format for the token is ###xxx###, where xxx represents the ID of the item whose answer should be inserted in that
location. To make this process as easy as possible, on the main page for modifying surveys (ModifySurvey.aspx), there is a small "PIPE" button next to each question. Clicking on this button brings up a small window that contains the text of the token to use to pipe the answer to that question. Simply copy the token text, and then paste it into the desired location on any subsequent question. It is important to note that piped answers must always originate from an earlier page in the survey.

**Previewing Surveys**

All surveys with one or more items can be "previewed" by actually taking the survey. After taking the survey, simply click the "Clear" link on the main list of surveys to delete the response, and you may continue modifying the survey as desired. Survey testing and previewing is done by taking the actual survey to ensure that you are testing the exact same survey that your end users will be taking.

There are two ways a user may "preview" a survey. The first is on the main list of surveys, click the title of the survey, which will display the survey in a new window, just as your users will see it. The second way is to click on the "Deploy" link on the main list of surveys, which will give several options for how to deploy the surveys. You may use any of these links to test the survey.

After previewing a survey, the response is written to the database. When attempting to modify a survey with responses, a message is displayed at the top of the page for modifying surveys indicating that the survey has at least one response, and therefore is subject to only limited modifications. Along with this message is a link that you can use to clear the responses to this survey, which will then allow full modifications.

**Managing Surveys**

The main survey page displays a list of all surveys. For a user with Create permission, this list represents all surveys that they own. For a user with Admin permission, this page displays all surveys in the system.

All surveys are always in one of three states: Design, Open, or Closed. When a survey is first created, it is in Design mode while the owner creates the survey. Once a survey is ready to launch, it is launched either by clicking on the Launch button on the main survey design page, or by clicking the small "OPEN" button to the left of the survey in the survey list page.

Once a survey is launched, the status of the survey changes to Open. Note that a survey can be launched only if it contains at least one answerable question. A survey can be toggled between Open and Closed by using the small buttons to the left of each survey on the main list of surveys.
Once a survey is launched, it can be fully edited only when the survey does not have any responses. Once a single response is recorded for the survey, only limited modifications can be made to the survey. Editing the entire survey is no longer possible because changing the structure of a survey that has existing responses would cause the reporting to fail.

On the main list of surveys, a user can manage each survey using the buttons to the left and right of each survey in the list. From this page, the user can manage survey options, preview the survey, set the status of the survey, analyze the survey results, deploy a survey, and delete a survey.

Survey Options
The survey options page allows a survey creator to manage all of the administrative options associated with each survey. The options available are as follows:

**General Information**
*Title* - The title of the survey

*Template* - The template contains the look and feel information for the survey. Each template can be associated with more than one survey.

*Survey Language* - The default language for the survey, which is used to assist the web browser in rendering the HTML.

*Status* - The status of the survey (Design, Open, or Closed)

*Start Date* - The first date that users can enter responses to the survey

*End Date* - The last date that users can enter responses to the survey

**Respondent Access Level**
Set the desired security level based on a combination of single vs. multiple response, login required vs. anonymous, and updateable vs. not updateable. Detailed descriptions of each security level are given on the options page.

**Survey Completion Properties**
*Completion Action* - Set the desired action that should occur when a user completes the survey.

*Completion Message* - The message that is displayed to the user at the end of a survey for actions that include a message.
Completion URL - The URL to redirect or continue to, which is used for actions that redirect to another URL.

Send Responses To - Enter the email addresses, each separated by a semi-colon, that responses should be sent to upon completion. Leave blank if the responses should not be emailed.

Navigation Properties
Back Button - An option to display or hide the "Back" button on the survey.

Cancel Button - The action to take when a user clicks the Cancel button while taking a survey.

Cancel Button URL - The URL to redirect to if the user clicks the Cancel button while taking a survey.

Hidden Fields
When a user responds to a survey, you may save data stored in session, cookies, or in the querystring, and have this data be associated with each individual response. The Type field is the source of the hidden data, the Key field is the key within the session, cookie, or querystring used to extract the data, and the Display Name field is how the data captured will be displayed in the reports.

Numbering Properties
Page Numbering - This option sets the page numbering format, if page numbering is displayed.

Question Numbering - This option sets the question numbering format.

Other Administrative Properties
Report Security - Set the report security to 'High' to enable access only to survey owners. 'Semi-private' allows all users to view the overview results and only owners to view the individual results. 'Public' allows all users to view all reports.

Maximum Responses - The maximum number of responses for this survey. Leave blank for unlimited responses.

Responses per User - For Multiple Response surveys only, enter the maximum number of responses per user. Leave blank for unlimited responses.
Days for Update - The number of days during which a respondent may update their response. This option applies to respondent access levels that are updateable.

Administrator Properties

Owners - The usernames for all owners of this survey. Each name should be separated with a semi-colon, and the logged in user must included his/her name in the list.

Admin Email - The email address for the administrator of the application.

Deploying Surveys

After creating and launching a survey, it can be deployed to users in one of the following ways:

- **Email Link** - Surveys can be deployed by embedding a link to the survey in a web page.
- **Web Link** - Surveys can be deployed by simply giving the users a link to the actual survey.
- **Popup Link** - Surveys can be deployed by inserting a pop-up link in a web page. When a user clicks the link, a new window opens and displays the survey.
- **Email Messages** - Surveys can be deployed by sending out messages to take the survey via email. Please refer to the section, "Email Messages," for more information.

If a user attempts to access a survey that requires a login, the user will be redirected to the login page. After logging in, the user is then redirected to the correct survey. If the respondent does not already have a user account, they can create a new account, and will be redirected to the survey after doing so.

Email Lists

Email lists are groupings of individual email addresses, and are used to send email messages to groups of users. Any user with Create or Admin permission can create an unlimited number of email lists. All email lists are visible only to the user who create the list and to individuals with Admin rights.

After creating an email list, individual email addresses can be imported by using the import functionality. To do so, simply paste your email addresses into the large text box, with one email address on each line. In addition to the email address, each entry may, optionally, contain the first name, last name, and a field of custom data of your choosing. The acceptable format for each line is as follows:

Email Address, First Name, Last Name, Custom Data
Each field must be separated by a comma, and each entry must be on its own line. If you wish to omit any intermediate fields, you must insert a comma as a placeholder. The following examples all show valid entries:

bgates@microsoft.com,Bill,Gates,CEO
info@classapps.com
john_smith@hotmail.com,John,Smith
fred_jones,,Accountant

The following entries are incorrect because the omitted intermediary fields are not represented by commas:

john_smith@hotmail.com,Smith
fred_jones,Accountant

Note that both of these entries are technically correct, since data can be imported in this format. However, since the fields of data are in the wrong place, the wrong data will be displayed in the email messages.

From the main list of email lists, email addresses can be exported from any email list using the export functionality. Also from the list, all email addresses within a list can be viewed and managed, and the history of messages sent can also be viewed. In the message history page, the list of all emails and current response status can also be viewed.

**Email Messages**

A simple and elegant way to get users to respond to a survey is to send out survey messages via email. The functionality for sending out emails can be accessed in one of the following two ways:

- Select an email list on the Email List page, and then click the Send option
- On the Survey List page, click the Deploy button, followed by the Email Lists button

To send an email message, first select an email list. You may choose to send to all email addresses in the list, or to filter the email addresses to a subset of the email list.

After specifying the email recipients, click Continue. On the next page, select the desired survey from the dropdown box. Then enter the email subject, from email address, the text of the email, and any other optional fields, as explained on the page.
A number of fields, including the first name, last name, custom data, and more, may optionally be included in the text of the email. To do so, simply insert the following tokens in the location where you would like to display the appropriate field of data:

- `#SurveyLink#` - The location of the link to the survey (required)
- `#DeclineLink#` - The location of the link a user can click to decline responding to the survey
- `#FirstName#` - The first name of the email recipient
- `#LastName#` - The last name of the email recipient
- `#CustomData1#` - The first custom data field
- `#CustomData2#` - The second custom data field
- `#CustomData3#` - The third custom data field

Before the email is sent, the token will be replaced by the appropriate value for each recipient. If a token is specified but no data is available, the token is simply removed from the email.

When sending emails, there is a checkbox that can optionally be selected to determine whether the email should be sent as plain text or in HTML format. For emails using HTML format, simply include the desired HTML in the main textbox for the body of the email.

**Report Filters**

Report filters provide the ability to limit the set of responses in the reports based on custom filter criteria. For example, if a survey contains a question asking users if they have a driver's license, a report filter could be created to only display the responses where the user answered "Yes" to this question.

There are three types of report filters: Date, Question, and User Attribute. Date filters limit the responses to only the dates within the specified range. Question filters limit the responses based on answers to questions in the survey. User attribute filters limit the responses based on attributes of the user who took the survey, such as company, location, name, custom data, or any other user field.

Question filters vary depending on the type of question selected. Answers can be set to be equal to a response, contain a response, or, in the case of number and date questions, be greater than or less than a certain a value.

One or more report filters may be applied to a survey. All of the filters are combined using "AND" logic, meaning that all filters must evaluate to "True" in order for a response to be included in the results.
If a report has filters, the filters are applied to the overview report, the individual report, the text report, and the data export functionality.

When working with a report with many questions, you may want to run multiple reports with various combinations of filters. Rather than deleting filters, you can set any filter to active or inactive on the page that displays the main list of report filters.

**Results Sharing**

Results sharing provides the ability to share your survey results with others. Recipients of report shares do not have to log into the application, and can be granted very granular access to survey reports and functionality.

You can set up an unlimited number of report shares per survey. For each share, you specify the email address(es) it should be sent to, as well as deciding which of the following features should be accessible to the recipients of that particular report share:

- **Viewable Reports** - Select the types of report that recipients of this report share are able to view.
- **Export Data** - Select whether or not recipients of this report share should be allowed to export data.
- **Report Filtering** - Select whether or not recipients of this report share should be allowed to use report filtering.
- **View Open-Ended** - Select whether or not recipients of this report share are allowed to view open-ended responses.
- **Active** - Select whether or not recipients of this report share is currently active.

Once a report share has been created, you can send it to the recipients using the Send functionality in the application. This functionality allows you to create a custom email to the user, and it includes the URL link to the survey. The URL includes an encoded ID that uniquely identifies the share. When the user clicks on the link, they only have access to the survey reports and functionality as specified in the report share.

At the top of the main list of report shares for each survey is a status that indicates Enabled or Disabled, as well as a button for toggling between these two statuses. You can enable or disable report sharing for all share recipients by setting this status. Also, you can temporarily enable or disable report sharing for any individual report share by setting the active status of that particular share.
Exporting Data

The "Export Data" page enables a user to export the responses to a survey. The data is exported as a comma-delimited file (CSV), which can be opened with Excel.

There are two formats for exporting the data format. The first format, called, "User Responses," exports one row of data per entire response, with each of the questions displayed as a column. The second format, called, "Individual Responses," exports each individual response on its own row. In this second format, if a user selected more than one response for a multi-select question, each individual response appears on its own row.

In "User Response" format, the minimum user data displayed for each row is the username. In "Individual Response" format, the minimum data displayed for each response is the text of the question, the text of the response, and the ID of the response. In addition, the "Export Data" page contains a series of optional fields, each preceded by a checkbox. Any field that is selected before exporting the data is included as a column of data in the CSV file.

The additional data fields that can be exported include both response and user data. The optional response fields are username, IP address, date started, time started, date completed, and time completed. The optional user fields are first name, last name, email address, company, current position, and location.

Managing Users

All users in the system must be assigned a role, which dictates what actions the user can perform. The three roles, along with a description of each, are as follows:

- **User** - This is the least powerful role, and allows a user permission only to take surveys.
- **Create** - In addition to allowing a user to take surveys, this role allows a user to create, deploy, and manage surveys. A user with the Create permission may only view surveys they own (as indicated in the Owners field of the Survey Options page).
- **Admin** - A user with this role has the same right as a user with Create permission, with the added benefit that they have full access to all surveys in the system. In addition, users with Admin permission can manage user accounts, as well as set the security level for all users.

Users in the system can be managed by anyone who has "Admin" permissions. All users can update and modify their own user information, but cannot set their own security level.
All users in the system must have a unique username. Note that usernames are not case-sensitive.

**Importing Users**

Users can easily be registered in the application database by doing a bulk import of users. To access this functionality, select the "Users" link in the top-level navigation, and then click on the "Import" button. Individual users can be specified by entering or pasting each user’s information onto a separate line in the large text box. If you are exporting the users from another data source, export the data in the same format required for the upload.

The fields of data that can be imported for each user are shown below, with required fields show in red. The required format for each line is as follows:

**Username, Password, First Name, Last Name, Email Address, Current Position, Company, Location, Custom Data 1, Custom Data 2, Custom Data 3**

Each field must be separated by a comma, and each entry must be on its own line. If you wish to omit any intermediate fields, you must insert a comma as a placeholder.