

Detailed Design

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International Online Survey (IOS)

Bad Robot Enterprises

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International Online Survey Detailed Design

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Section 1: Product Overview and Summary

A great deal of information on certain topics can be gained through the use of surveys. The International Online Survey (IOS) system will provide users with the ability to create and take surveys through a web-based program. Teachers will be able to create surveys and give them to their students and students will be able to take these surveys quickly and easily. Both types of users will be able to view survey results to gain the data they need or desire. Administrators will oversee this program and maintain functionality of the IOS.

External Design Specifications

Section 2: User displays, report formats, and user command summary

2.1: Login Page

This is the page that all users will see when first locating the website. This page is where all users will enter their username and password. If a user has not already created an account, they can click on the appropriate "Register Now" link that will take them to the account creation page.

The screenshot shows the IOS login and registration interface. At the top left, the text "IOS" is displayed in white on a dark blue background. Below this, there are two main sections: "LOG IN NOW" and "REGISTER".

The "LOG IN NOW" section contains the following elements:

- E-mail address:
- Password:
- [Forgot your password?](#)
-
- Three radio button options:
 - Save my e-mail address and password
 - Save my e-mail address
 - Always ask for my e-mail address and password

The "REGISTER" section contains two buttons:

- As a Teacher
- As a Student

2.2: Teacher Account Creation Page

This page is reached when the user has selected from the login page to register as a teacher. They are required to provide a user name and password.

IOS **Create Your Account (Teacher)**

Username :

Create your password

Password:
The password must contain at least six characters and is case sensitive.

Password strength: Weak Medium Strong

Retype password:

Create your password reset options

Question:

Secret answer:
Five character minimum; not case sensitive

e-mail address:
Optional

2.3: Student Account Creation Page

This page is reached when the user has selected from the login page to register as a student. They are required to provide a user name and password as well as some of their personal information.

IOS Create Your Account (Student)

Username :

Create your password

Password:
The password must contain at least six characters and is case sensitive.

Password strength: Weak Medium Strong

Retype password:

Create your password reset options

Question:

Secret answer:
Five character minimum; not case sensitive

e-mail address:

Enter your account information

First name:

Last name:

Gender: Male Female

Birth date: Month: Day:

State:

ZIP code:

Time zone:

I own or work with a small business

2.4: Administrator Welcome Page

The user is directed to this page when they have signed in as an administrator. They will see features available to only administrators in the top menu bar. They will also have access to information such as website survey statistics, user login information, and surveys.

IOS Administrator

Manage Account | Create Accounts | List Current Users | search

Welcome Paul Borchers Log Out

Current Stats

Total Users : 500
Current Users Logged In: 68
Total Surveys Created: 1500
Total Surveys Published: 1100

Current Users Logged In

Name	Account Type
<u>Borchers, Paul</u>	Student
<u>User1</u>	Student
<u>User2</u>	Teacher
<u>User3</u>	Student

Quality Control

Messages from Users

	Date
Can my account be	12/5/2007
What should I do if	12/8/2007

Survey Word Alerts

Survey name	# Alerts	Date	Teacher	Ban
Bob's Survey	15	11/6/07	Barker, Bob	<input type="checkbox"/>
Paul	10	11/8/07	Borchers, Paul	<input type="checkbox"/>

Surveys

Name	Topic	Date	Delete
Test Survey 1	CSIS	11/2/07	<input type="checkbox"/>
Test Survey 2	Math	11/7/07	<input type="checkbox"/>
Test Survey 3	Poly	11/8/07	<input type="checkbox"/>
Test Survey 4	Physics	11/9/07	<input type="checkbox"/>

2.5: Teacher Welcome Page

The user is directed to this page when they have signed in as a teacher. They will see features available to only teachers in the top menu bar as well as their history of surveys, and active and unpublished surveys.

IOS Teacher

Manage Account | Create a Survey | search

Welcome Paul Borchers

History

— Completed Surveys

Name	Topic	Date	Delete	Download
Test Survey 1	CSIS	11/2/07	<input type="checkbox"/>	<input type="text" value="txt"/>
Test Survey 2	Math	11/7/07	<input type="checkbox"/>	<input type="text" value="txt"/>
Test Survey 3	Poly	11/8/07	<input type="checkbox"/>	<input type="text" value="txt"/>
Test Survey 4	Physics	11/9/07	<input type="checkbox"/>	<input type="text" value="txt"/>

Active and Unpublished Surveys

— Active Surveys

Name	Topic	End Date	Delete	Stop
Active Survey1	History	11/15/07	<input type="checkbox"/>	<input type="checkbox"/>
Active Survey2	Software	11/16/07	<input type="checkbox"/>	<input type="checkbox"/>

— Unpublished Surveys

Name	Topic	Date	Activate	Delete
Paul Survey	Astronomy	11/18/07	<input type="checkbox"/>	<input type="checkbox"/>

2.6: Student Welcome Page

The user is directed to this page when they have signed in as a student. They will see features available to only students in the top menu bar as well as their history of completed surveys and non – completed surveys.

IOS Student

Manage Account search

Welcome Paul Borchers [Log Out](#)

History

Name	Topic	Date
Test Survey 1	CSIS	11/2/07
Test Survey 2	Math	11/7/07
Test Survey 3	Poly	11/8/07
Test Survey 4	Physics	11/9/07

Non-Completed Surveys

Name	Topic	Date
Excel	Excel Test	11/19/07
Novell	Novell Test	11/20/07

2.7.1: Administrator Account Management Page

This page allows an administrator to modify their account password.

The screenshot shows a web interface for account management. At the top, there is a dark blue header with the text "IOS" on the left and "Manage Your Account" in the center. Below the header, the form is organized into sections. The first section is "New Username" with a text input field. The second section is "Change Password", which includes a "Password:" label and a text input field. Below this input is a small text note: "The password must contain at least six characters and is case sensitive." Underneath the note is a "Password strength:" label followed by three buttons: "Weak", "Medium", and "Strong". The "Weak" button is highlighted. Below the strength indicators is a "Retype password:" label and a text input field. A horizontal line separates this section from the next. The third section is for a security question, with a "Question:" label and a text input field, followed by a "Secret answer:" label and another text input field. At the bottom right of the form area is a "Submit" button. At the bottom left, there is a blue hyperlink labeled "Back to Welcome Page".

2.7.2: Teacher Account Management Page

This page allows a teacher to modify their account password.

The screenshot displays a web interface for account management. At the top, a dark blue header contains the text "IOS" on the left and "Manage Your Account" in the center. Below the header, the form is organized into several sections. The first section is labeled "New Username" and features a single text input field. The second section, titled "Change Password", includes a "Password:" label followed by a text input field. A small grey tooltip box is positioned below the password field, containing the text "The password must contain at least six characters and is case sensitive." Below this, the "Password strength:" label is followed by three radio button options: "Weak", "Medium", and "Strong". The "Weak" option is currently selected. The third section is labeled "Retype password:" and has a corresponding text input field. A horizontal line separates this section from the next. The fourth section contains a "Question:" label and a text input field. Below the question field is a "Secret answer:" label and another text input field. At the bottom right of the form area, there is a rectangular "Submit" button. At the bottom left, there is a blue hyperlink labeled "Back to Welcome Page".

2.8: Administrator Account Creation Page

This page allows the Administrator to manage the creation of student and teacher accounts.

IOS Administrator

Manage Account | Create Accounts | List Current Users | search

Welcome Paul Borchers

Create An Account

Email Address :

Type of Account : Teacher
 Student

Current Stats

Total Users : 500
 Current Users Logged In: 68
 Total Surveys Created: 1500
 Total Surveys Published: 1100

Current Users Logged In

Name	Account Type	Delete
<u>Borchers, Paul</u>	Student	<input type="checkbox"/>
<u>User1</u>	Student	<input type="checkbox"/>
<u>User2</u>	Teacher	<input type="checkbox"/>
<u>User3</u>	Student	<input type="checkbox"/>

Quality Control

Messages from Users

Message	Date
Can my account be	12/5/2007
What should I do if	12/8/2007

Survey Word Alerts

Survey name	# Alerts	Date	Teacher	Ban
Bob's Survey	15	11/6/07	Barker, Bob	<input type="checkbox"/>
Paul	10	11/8/07	Borchers, Paul	<input type="checkbox"/>

Surveys

Name	Topic	Date	Delete
Test Survey 1	CSIS	11/2/07	<input type="checkbox"/>
Test Survey 2	Math	11/7/07	<input type="checkbox"/>
Test Survey 3	Poly	11/8/07	<input type="checkbox"/>
Test Survey 4	Physics	11/9/07	<input type="checkbox"/>

2.9: User Page (Teacher)

This page is reached by clicking a teacher's name in the Administrator welcome page. The page displays a unique teacher's account information and statistics.

IOS

Borchers, Paul

Teacher Profile

Name: Paul Borchers



Unpublished Surveys

Name	Topic	Date
Chairs	Siena Hall	11/18/07
Monitors	Flat/CRT	11/19/07

Active Surveys

Name	Topic	Date
Now	Catholisism	11/18/07
Phone	Contacts	11/19/07

Completed Surveys

Name	Topic	Date	Download Results
Soda	Types	11/18/07	
NetMeeting	Remote	11/19/07	

[Back to Welcome Page](#)

2.10: User Page (Student)

This page is reached by clicking a student's name in the Administrator welcome page. The page displays a unique student's personal information as well as their survey taking statistics.

IOS

Wiggin, Ender

Student Profile

Name: Wiggin, Ender
Age: 21
Gender: Male
Zip Code: 12211
State: New York
Birth Date: March 15, 1986
Education: under-graduate
Major: Computer Science

Surveys Taken

Name	Topic	Date
Test Survey 1	CSIS	11/7/07

Surveys Not Taken

Name	Topic	Date
Test Survey 4	Physics	11/1/07

Change Password

Password:

The password must contain at least six characters and is case sensitive.

Password strength: Weak Medium Strong

Retype password:

[Back to Welcome Page](#)

2.11: List Current Users Page

This page allows the administrator to browse all accounts.

IOS **List Current Users**

Sort Users A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

-OR-

Search Students Teachers Both

[Back to Welcome Page](#)

2.12: List Current Users Results Page

This page is reached by clicking search or a sort letter on the list current users page. The users are displayed according to the client's search preference.

Name	Account Type
Alfree, Tom	Student
Arket, Elizabeth	Teacher
Atkins, Gina	Student

[Back to Search](#)

[Back to Welcome Page](#)

2.13: Teacher Initial Survey Creation Page

This page is reached from the create a survey link which can be seen by teacher accounts. The page is the first page a teacher will see before going on to adding questions to their survey. The page requires the teacher to enter a survey name and topic as well as making their survey anonymous or protected.

IOS Create A Survey

Manage Account Create a Survey search

Enter Your Survey's Topic

Enter Your Survey's Name

Make Your Questions:

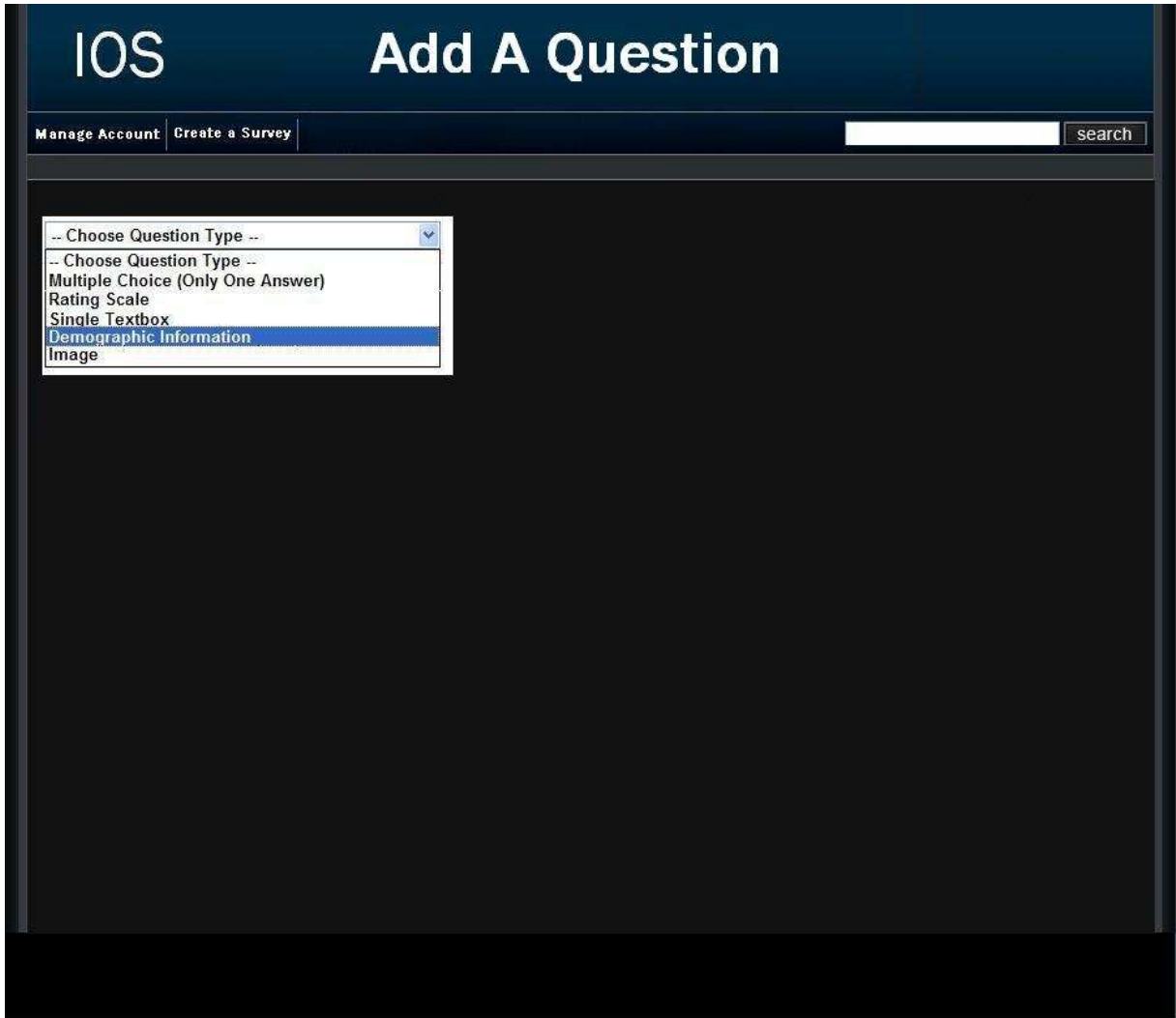
Anonymous

Protected

Submit

2.14.0: Teacher Add a Question Page (Blank)

This page is reached either through the blank edit survey page or after adding a question. This page only consists of a drop down of question types.



2.14.1: Demographic

These pages allow for a teacher to create a survey. They are provided with different questions to choose from including demographic, multiple choice, textbox, rating scale, and image related questions.

The screenshot shows a web interface for adding a demographic question. At the top, the header reads "IOS Add A Demographic Question". Below the header is a navigation bar with "Manage Account" and "Create a Survey" links, and a search box. A dropdown menu is open, showing options: "-- Choose Question Type --", "Multiple Choice (Only One Answer)", "Rating Scale", "Single Textbox", "Demographic Information" (highlighted), and "Image". Below the dropdown is a "Contact Information" form with the following fields and options:

Field	Value	Visible	Answer Required
Name:	Ryan May	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Company:	Area 51	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Address 1:	Classified	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Address 2:	Classified	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
City/Town:	Classified	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
State/Province:	Classified	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ZIP/Postal Code:	Classified	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Country:	United States	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

A "Submit" button is located at the bottom right of the form.

2.14.2: Scale

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.

The screenshot shows a web interface for adding a rating scale question. At the top, the header reads 'IOS Add a Rating Scale Question'. Below the header is a navigation bar with 'Manage Account' and 'Create a Survey' links, and a search box. The main content area is divided into several sections:

- Question Type Selection:** A dropdown menu labeled '-- Choose Question Type --' is open, showing options: '-- Choose Question Type --', 'Multiple Choice (Only One Answer)', 'Rating Scale' (highlighted), 'Single Textbox', 'Demographic Information', and 'Image'.
- Question Text:** A large text area for entering the question text.
- Row Choices (each choice on separate lines):** A text area for entering the choices for the rating scale.
- Column Choices:** A section for configuring the rating scale. It includes a dropdown for 'Select the number of ratings below' set to '4'. Below this are four rows, each with a 'Label:' input field and a 'Weight:' input field. The weights are currently set to 1, 2, 3, and 4.
- Submit:** A button at the bottom right to save the question.

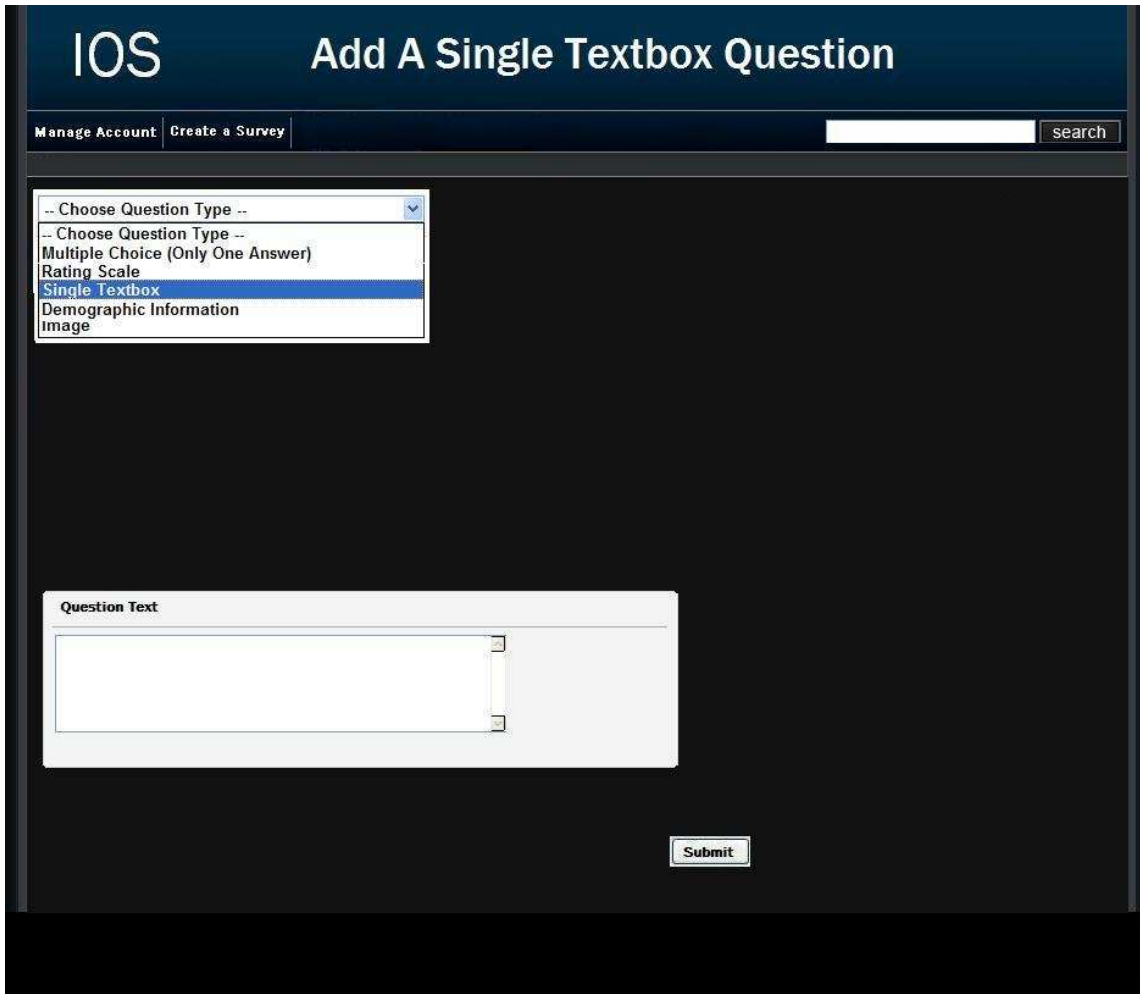
2.14.3: Multiple Choice

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.

The screenshot shows a web interface for creating a survey question. At the top, the header reads "IOS Add A Multiple Choice Question". Below the header, there are navigation links for "Manage Account" and "Create a Survey", and a search bar. The main content area features a dropdown menu for selecting a question type, with "Multiple Choice (Only One Answer)" selected. Below the dropdown are two text input fields: "Question Text" and "Answer Choices (each choice on separate lines)". A "Submit" button is located at the bottom right of the form.

2.14.4: Text Box

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.



The screenshot shows a web interface for creating a survey question. At the top, the logo 'IOS' is on the left and the title 'Add A Single Textbox Question' is on the right. Below the title, there are navigation links for 'Manage Account' and 'Create a Survey', and a search bar on the right. A dropdown menu is open, showing options: '-- Choose Question Type --', '-- Choose Question Type --', 'Multiple Choice (Only One Answer)', 'Rating Scale', 'Single Textbox' (which is highlighted), 'Demographic Information', and 'Image'. Below the dropdown, there is a text area labeled 'Question Text' with a scroll bar. At the bottom right, there is a 'Submit' button.

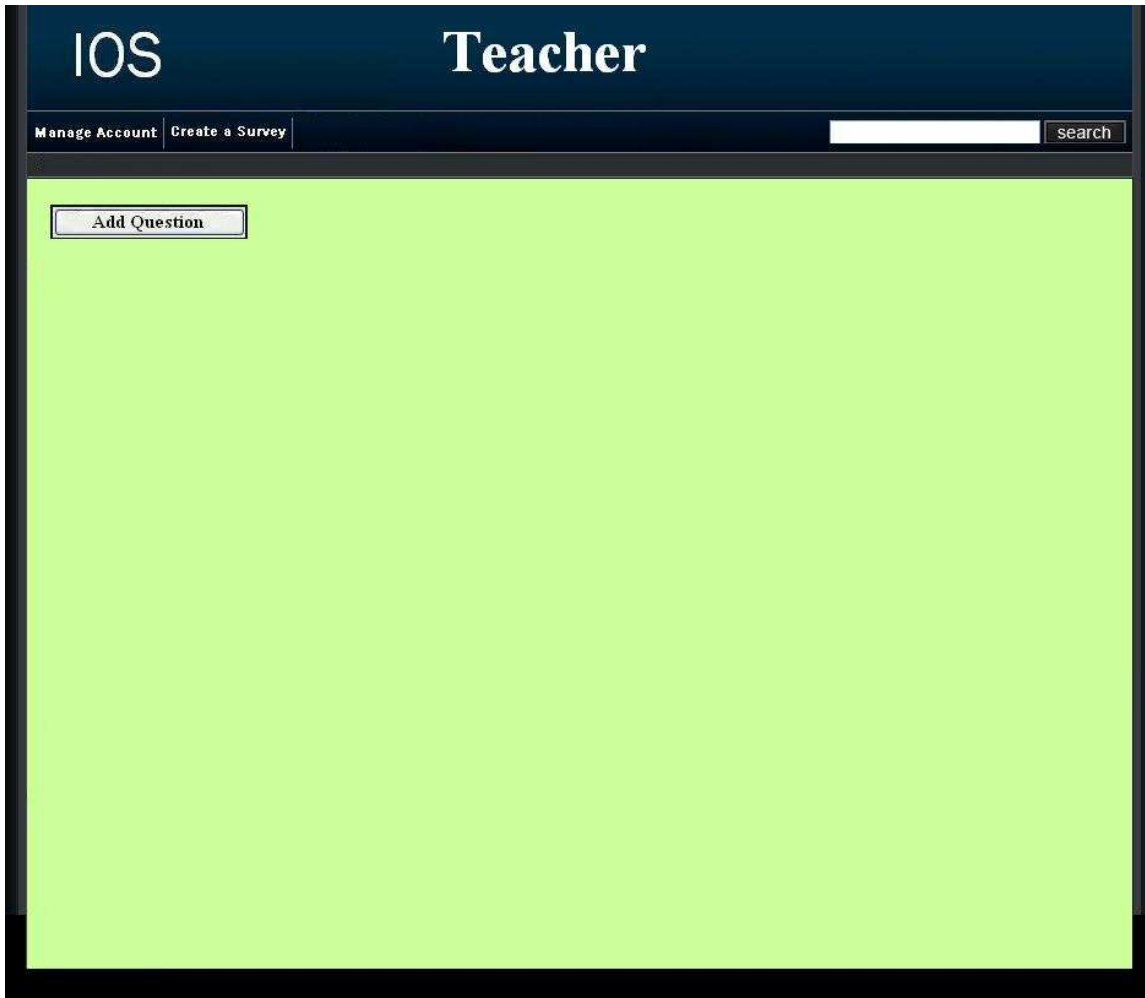
2.14.5: Image

These pages allows for a teacher to create a survey. They are provided with different questions to chose from including demographic, multiple choice, textbox, rating scale, and image related questions.

The screenshot shows a web interface for adding a question. At the top, the header reads 'IOS Add An Image Question'. Below the header is a navigation bar with 'Manage Account' and 'Create a Survey' links, and a search box. The main content area features a dropdown menu for 'Choose Question Type' with options: 'Multiple Choice (Only One Answer)', 'Rating Scale', 'Single Textbox', 'Demographic Information', and 'Image' (which is selected). Below the dropdown is a text area labeled 'Image Description'. Underneath is a section titled 'Choose New Image' with a radio button for 'Upload an Image from your Computer' and a 'Browse' button. A 'Submit' button is located at the bottom right of the form.

2.15.1: Teacher Edit Survey Page (Blank)

This page is reached after submitting the required information on the create a survey page. Clicking the "add a question button" will bring the teacher to a page where they can finally start to choose between questions to add to their survey.



2.15.2: Teacher Edit Survey Page

IOS
Teacher

Manage Account Create a Survey search

Add Question

--Add Question From Pool--

What is Software Engineering

How much do you like doing Software Engineering

What do you do in Software Engineering

What are 4 Different Definitions of Software Engineering

Move this question

↑ ↓

Delete

1. What is Software Engineering

sample answer

sample answer

sample answer3

sample answer 4

Move this question

↑ ↓

Delete

2. How much do you like doing Software Engineering:

	little	little more	neutral
documents	☺	☺	☺
tests	☺	☺	☺
presentations	☺	☺	☺

Move this question

↑ ↓

Delete

3. What do you do in Software Engineering?

Move this question

↑ ↓

Delete

4. What are 4 different definitions of Software Engineering

ACM

IEEE

Pressman

Eauer

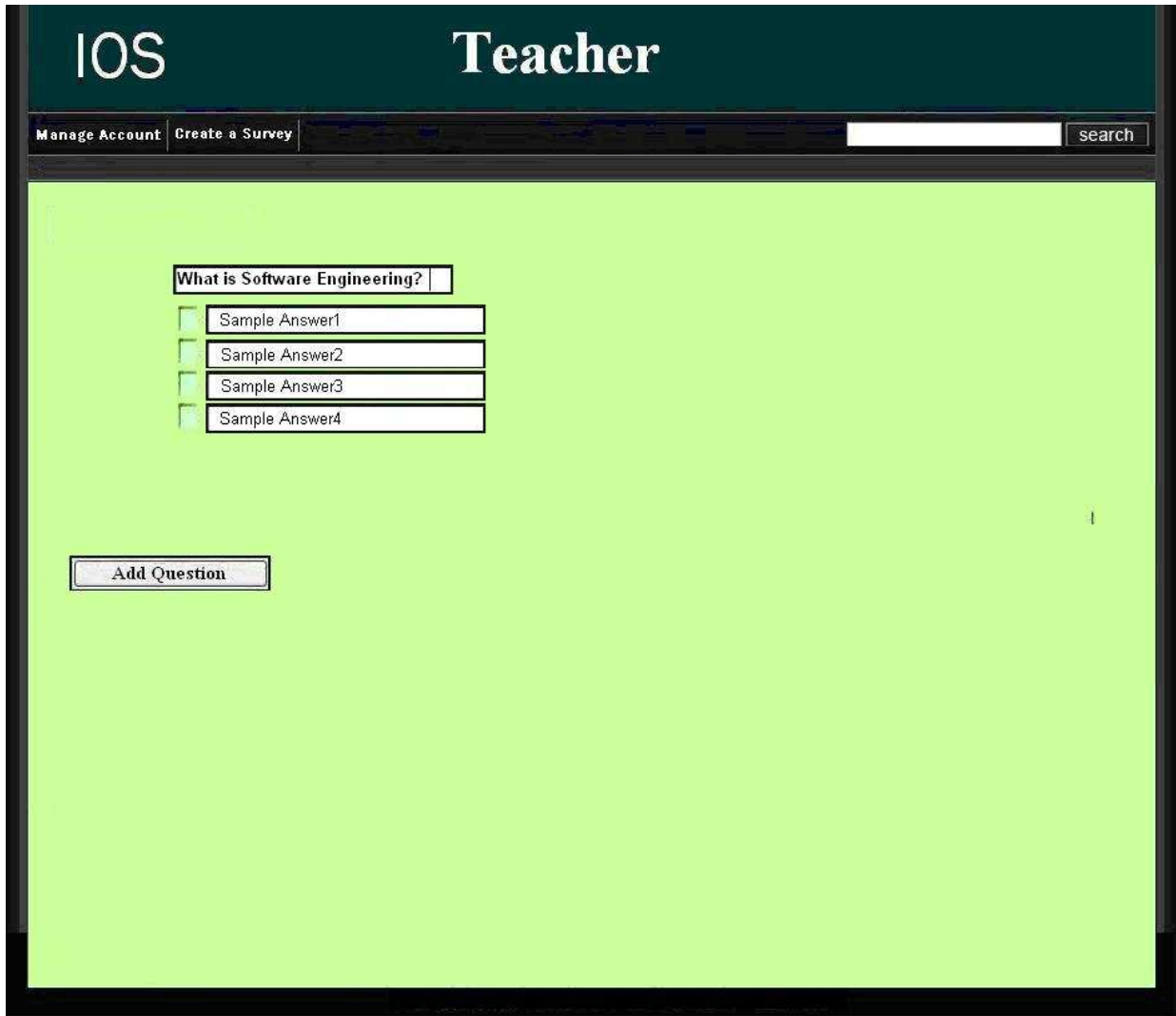
Preview

Save

Activate

2.15.3: Add Questions From Pool Page

This page allows a teacher to select from previously made questions with the ability to edit them.



2.16: Teacher Survey Activation Setup Page

This page allows a teacher to activate a survey. The teacher is required to input the email addresses of the students he/she wants to have rights to take the survey. There is an option to create student accounts if necessary as well.

IOS
Teacher

Manage Account | Create a Surveysearch

Welcome Paul Borchers
Log Out

Survey Activation Setup

Give permission to these students:

Email	<input type="text"/>		<input type="button" value="Add"/>
Address	<input type="text"/>		<input type="button" value="Submit"/>
Email	<input type="text"/>		
Address	<input type="text"/>		
Email	<input type="text"/>		
Address	<input type="text"/>		

Create Student Account

Username	<input type="text"/>	Password	<input type="text"/>	<input type="button" value="Add"/>
----------	----------------------	----------	----------------------	------------------------------------

History

— Completed Surveys

Name	Topic	Date	Delete	Download
Test Survey 1	CSIS	11/2/07	<input type="checkbox"/>	<input type="button" value=".txt"/>
Test Survey 2	Math	11/7/07	<input type="checkbox"/>	<input type="button" value=".txt"/>
Test Survey 3	Poly	11/8/07	<input type="checkbox"/>	<input type="button" value=".txt"/>
Test Survey 4	Physics	11/9/07	<input type="checkbox"/>	<input type="button" value=".txt"/>

Active and Unpublished Surveys

— Active Surveys

Name	Topic	End Date	Delete	Stop
<u>Active Survey1</u>	History	11/15/07	<input type="checkbox"/>	<input type="checkbox"/>
<u>Active Survey2</u>	Software	11/16/07	<input type="checkbox"/>	<input type="checkbox"/>

— Unpublished Surveys

Name	Topic	Date	Activate	Delete
<u>Paul Survey</u>	Astronomy	11/18/07	<input type="checkbox"/>	<input type="checkbox"/>

2.17: Student Account Management Page

This page allows a student to edit their account information such as their username, password, and personal information.

IOS

Manage Your Account

New Username :

Change Password

Password:
The password must contain at least six characters and is case sensitive.

Password strength: Weak Medium Strong

Retype password:

Question:

Secret answer:

Edit Your Account Information

First name:

Last name:

Gender: Male Female

Birth date: Month: Day:

State:

ZIP code:

Time zone:

I own or work with a small business

[Back to Welcome Page](#)

2.17.1: Student Survey Page

This page allows the student to answer questions of a survey that they have been given permission to take.

IOS Take A Survey

Manage Account | Take A Survey | search

1. What is Software Engineering?

sample answer
 sample answer
 sample answer
 sample answer

2. How much do you like doing Software Engineering:

	little	little more	neutral	love it
documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. What do you do in Software Engineering?

4. What are 4 different definitions of Software Engineering:

ACM
IEEE
Pressman
Eauer

2.17.2: Teacher Preview of Survey Page

This page allows a teacher to look at what their survey would look like at their current progress.

IOS Preview

Manage Account Take A Survey search

1. What is Software Engineering?

sample answer
 sample answer
 sample answer
 sample answer

2. How much do you like doing Software Engineering:

	little	little more	neutral	love it
documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. What do you do in Software Engineering?

4. What are 4 different definitions of Software Engineering:

ACM
IEEE
Pressman
Eauer

2.18: Search Results Page

This page is reached by clicking search or a sort letter on the list current users page. The users are displayed according to the client's search preference.

The screenshot shows a web interface with a dark green header containing the text 'IOS List Current Users'. Below the header, there is a search result section titled 'Results for Alfred'. This section contains a table with two columns: 'Name' and 'Account Type'. The table lists three users: Tom Alfrece (Student), Elizabeth Arket (Teacher), and Gina Atkins (Student). At the bottom of the search results, there is a blue underlined link that says 'Back to Welcome Page'.

Name	Account Type
Alfrece, Tom	Student
Arket, Elizabeth	Teacher
Atkins, Gina	Student

[Back to Welcome Page](#)

2.19: Lost Password Recovery Page

This page is reached by clicking the "forgot your password?" link on the login page. The user is required to fill in information to have their password emailed to them.

IOS Password Recovery

***Please enter your secret answer and your email address. Your password will be emailed.**

Question:

Secret answer:

e-mail address:

2.20 Format of results downloads

This is the format of the file that is downloaded when a teacher clicks on the download txt file button next to the survey name on the Teacher Welcome Page.

	Gender	Age	Marital Status	Children	College Name	Private/Public College	Grad_Yr	Yr_since_Grad	Cumulative GPA
1	1	29	0	0	Siena College	1	2000.00	7.00	3.4
2	1	42	1	1	SUNY Albany	0	1990	17.00	2.8
3	0	26	0	0	Siena College	1	2002	5.00	2.90
4	1	32	1	0	Siena College	1	1997	10.00	3.4
5	1	56	0	0	SUNY Cortland	0	1973	34.00	3.2
6	0	55	1	1	Lee College	1	1982	25.00	2.8
7	1	24	0	0	Cortland State	0	2005	2.00	3.5
8	1	25	0	0	Ithaca College	1	2003	4.00	3.6
9	1	50	1	1	Worcester State	0	1983	24.00	3.6
10	0	50	1	1	Worcester State	0	1978	29.00	3.5
11	0	24	0	0	Siena College	1	2005	2.00	2.99
12	0	25	0	0	Siena College	1	2004	3.00	3.2
13	0	23	0.00	0	Siena College	1	2006	1.00	3.3
14	0	30	1.00	1	Siena College	1	2002	5.00	3.2
15	0	47	1.00	1	SUNY Plattsburg	0	1981	26.00	3.3
16	0	48	1.00	1	LeMoyne	1	1981	26.00	3.45
17	0	47	1	1	SUNY Albany	0	1996	11.00	3.2
18	0	46	1	1	SUNY New Paltz	0	1985	22.00	3.5
19	0	38	1	1	SUNY Albany	0	1994	13.00	3.74
20	1	23	0	0	Hudson Valley Community College	0	2004	3.00	4
21	0	34	1	1	UNC Charlotte	0	1999	8.00	3.85
22	0	33	1	1	SUNY Plattsburg	0	1997	10.00	2.90
23	0	35	0	0	Syracuse	1	1994	13.00	3.1
24	0	48	1	0	Niagra	1	1980	27.00	3.7
25	0	55	0	1	Ohio State	0	1975	32.00	2.75
26	0	56	1	1	SUNY Cortland	0	1973	34.00	2.83
27	1.00	54	0	0	Pratt Institute	0	1983	24.00	4

Section 3: Logical data stores

The following information presents a detailed description of the data stored in the International Online Survey database. The data is presented in a layout of the table structure.

permanent_users

This table stores all information about our permanent user accounts including students, teachers, and administrator. It also keeps track of whether the user is logged into the IOS web pages for the administrator.

column name	type	Comments
userid	int	Primary Key - Odd number.
username	nvarchar(16)	User specified username.
password	nvarchar(16)	user specified password
email	nvarchar(32)	pm15borc@siena.edu
user_type	int	User type: 10 = student, 20 = teacher, 30 = admin
secret_quetion	ntext	Question used to reset password if the user has lost their password.
secret_answer	ntext	Answer needed to reset password in Forgot Password page.
firstname	nvarchar(16)	User supplied first name.
lastname	nvarchar(16)	User supplied last name.
gender	nvarchar(16)	User supplied gender.
birthdate	smalldate	Birthdate in format MM/DD/YYYY
state	nvarchar(16)	User supplied state or province of residence.
zip	int	User supplied zip or postal code of residence.
time_zone	nvarchar(32)	User supplied time zone.
logged_in	boolean	Keeps track of if user is logged in. true = logged in, false = offline

anonymous_users

This table stores all the anonymous user accounts that have been created. The userid is kept from being the same in the permanent_users table by being even while the permanent_users userid is always odd. This userid is used in the surveys_taken and the questions answers tables for each type of question.

column name	type	Comments
userid	int	Primary Key - Even number

surveys

This table stores all the surveys that have been created in the IOS web application. It keeps track of various information and what survey level the survey is. The survey level is whether the survey is unpublished, active, or completed. Unpublished surveys are still editable but students cannot take them yet. Active surveys can be taken by students and are not editable. Completed surveys are not editable, students cannot take them anymore, but the teacher can download results.

column name	type	Comments
survey_id	int	Primary Key
userid	int	Gotten from permanent_users table, teachers only.
survey_name	nvarchar(32)	Teacher inputted survey name.
survey_topic	nvarchar(32)	Teacher inputted survey topic.
survey_date	smalldate	Date of survey creation in format: MM/DD/YYYY
survey_type	int	Teacher selected survey type. 10 = protected, 20 = anonymous
survey_level	int	10 = unpublished, 20 = active, 30 = completed
word_alerts	int	How many words that have been marked as illicit.

surveys_taken

Keeps track of all instances of a userid taking any survey on the IOS web application. When a teacher allows a student to take a survey a new entry is added with the student userid with the status set to false meaning they have not taken the survey but are allowed to. Anonymous users will have a new entry added with the status field set to true meaning they have taken the survey.

column name	type	Comments
survey_id	int	Taken from surveys table.
userid	int	Got from permanent_users table and anonymous, students only.
survey_name	nvarchar(32)	Teacher inputted survey name.
survey_topic	nvarchar(32)	Teacher inputted survey topic.
survey_date	smalldate	Date of survey creation in format: MM/DD/YYYY
survey_type	int	Teacher selected survey type. 10 = protected, 20 = anonymous
survey_level	int	10 = unpublished, 20 = active, 30 = completed
status	boolean	Keeps track of whether the survey has been taken. Set to true for anonymous users. false = not taken, true = taken
date_taken	smalldate	Date the survey was taken in format. MM/DD/YYYY

questions

This table stores all questions that have been created on the IOS web application. Information stored in this table is an unique question_id and the type of question chosen by the creating teacher. Each question will be associated with a survey_id taken from the surveys table.

column name	type	Comments
survey_id	int	Taken from surveys table.
question_id	int	Primary Key
question_type	int	There are five types of questions and they each have a numerical representation in the database. 10 = demographics, 20 = scale, 30 = multiple choice, 40 = textbox, 50 = image

demographic

This table stores all information about the demographic question type. It has to match up with a question_id in the question table. Each field has a Boolean option of whether they can be seen by the student and whether it is required to be entered.

column name	type	Comments
question_id	int	Taken from questions table.
name_vis	boolean	If the name field is visible.
name_req	boolean	If the name field is required.
company_vis	boolean	If the company field is visible.
company_req	boolean	If the company field is required.
address_vis	boolean	If the address field is visible.
address_req	boolean	If the address field is required.
city_vis	boolean	If the city field is visible.
city_req	boolean	If the city field is required.
state_vis	boolean	If the state field is visible.
state_req	boolean	If the state field is required.
zip_vis	boolean	If the zip field is visible.
zip_req	boolean	If the zip field is required.
country_vis	boolean	If the country field is visible.
country_req	boolean	If the country field is required.
question_num	int	Position to display in survey.

demographic_answers

This table stores all the answers to a question of demographic type.

column name	type	Comments
userid	int	From anonymous or permanent users, but students only.
question_id	nvarchar(16)	From questions table.
name	nvarchar(16)	User inputted name.
company	nvarchar(16)	User inputted company.
address	nvarchar(16)	User inputted address.
city_town	nvarchar(16)	User inputted city or town.
state	nvarchar(16)	User inputted state.
zip	int	User inputted zip or postal code.
country	nvarchar(16)	User inputted country.

scale

This table stores all information about the scale/ratings question type. It has to match up with a question_id in the question table. Each column header or ratings point must be specified and as well as every sub-question or row text. The row_num and col_num fields keep track of how many rows and columns text needs to be stored.

column name	type	Comments
question_id	int	Taken from questions table.
question_text	ntext	Teacher inputted question text.
row_num	int	Number of rows that will be used.
col_num	int	Number of columns that will be used.
col1	nvarchar(16)	Column text. Ratings values that student can choose from.
col2	nvarchar(16)	Column text.
col3	nvarchar(16)	Column text.
col4	nvarchar(16)	Column text.
col5	nvarchar(16)	Column text.
col6	nvarchar(16)	Column text.
col7	nvarchar(16)	Column text.
col8	nvarchar(16)	Column text.
col9	nvarchar(16)	Column text.
col10	nvarchar(16)	Column text.
row1	nvarchar(16)	Row text. Used when multiple questions are being answered for this question section.
row2	nvarchar(16)	Row text.
row3	nvarchar(16)	Row text.
row4	nvarchar(16)	Row text.
row5	nvarchar(16)	Row text.
row6	nvarchar(16)	Row text.
row7	nvarchar(16)	Row text.
row8	nvarchar(16)	Row text.
row9	nvarchar(16)	Row text.
row10	nvarchar(16)	Row text.
question_num	int	Position to display in survey.

scale_answer

This table stores all the answers to a question of scale type.

column name	type	Comments
Userid	int	Taken from anonymous and permanent tables, only students.
question_id	int	Taken from questions table.
row_num	int	Number of sub questions.
row1	nvarchar(16)	User inputted answer.
row2	nvarchar(16)	User inputted answer.
row3	nvarchar(16)	User inputted answer.
row4	nvarchar(16)	User inputted answer.
row5	nvarchar(16)	User inputted answer.
row6	nvarchar(16)	User inputted answer.
row7	nvarchar(16)	User inputted answer.
row8	nvarchar(16)	User inputted answer.
row9	nvarchar(16)	User inputted answer.
row10	nvarchar(16)	User inputted answer.

multiple

This table stores all information about the multiple choice question type. It has to match up with a question_id in the question table. The teacher can use up to 5 answers for the question and the row_num field keeps track of how many answers there are for every question.

column name	type	Comments
question_id	int	Taken from question table.
question_text	ntext	Teacher inputted question text.
row_num	int	Number of possible answers.
row1	nvarchar(16)	Teacher inputted possible answer.
row2	nvarchar(16)	Teacher inputted possible answer.
row3	nvarchar(16)	Teacher inputted possible answer.
row4	nvarchar(16)	Teacher inputted possible answer.
row5	nvarchar(16)	Teacher inputted possible answer.
question_num	int	Position to display in survey.

multiple_answer

This table stores all the answers to a question of multiple type.

column name	type	Comments
userid	int	Taken from anonymous and permanent tables, only students.
question_id	int	Taken from questions table.
answer	ntext	User inputted answer.

textbox

This table stores all information about the single textbox question type. It has to match up with a question_id in the question table. This includes the question id, question text, and the position in the survey.

column name	type	Comments
question_id	int	Taken from question table.
question_text	ntext	Teacher inputted question text.
question_num	int	Position to display in survey.

textbox_answer

This table stores all the answers to a question of textbox type.

column name	type	Comments
userid	int	Taken from anonymous and permanent tables, only students.
question_id	int	Taken from questions table.
answer	ntext	User inputted answer.

image

This table stores all information about the image question type. It has to match up with a question_id in the question table. The file is stored on the web server.

column_name	type	Comments
question_id	int	Taken from question table.
question_desp	ntext	Teacher inputted question description or text.
question_num	int	Position to display in survey.
filename	nvarchar(32)	File location on server.

image_answer

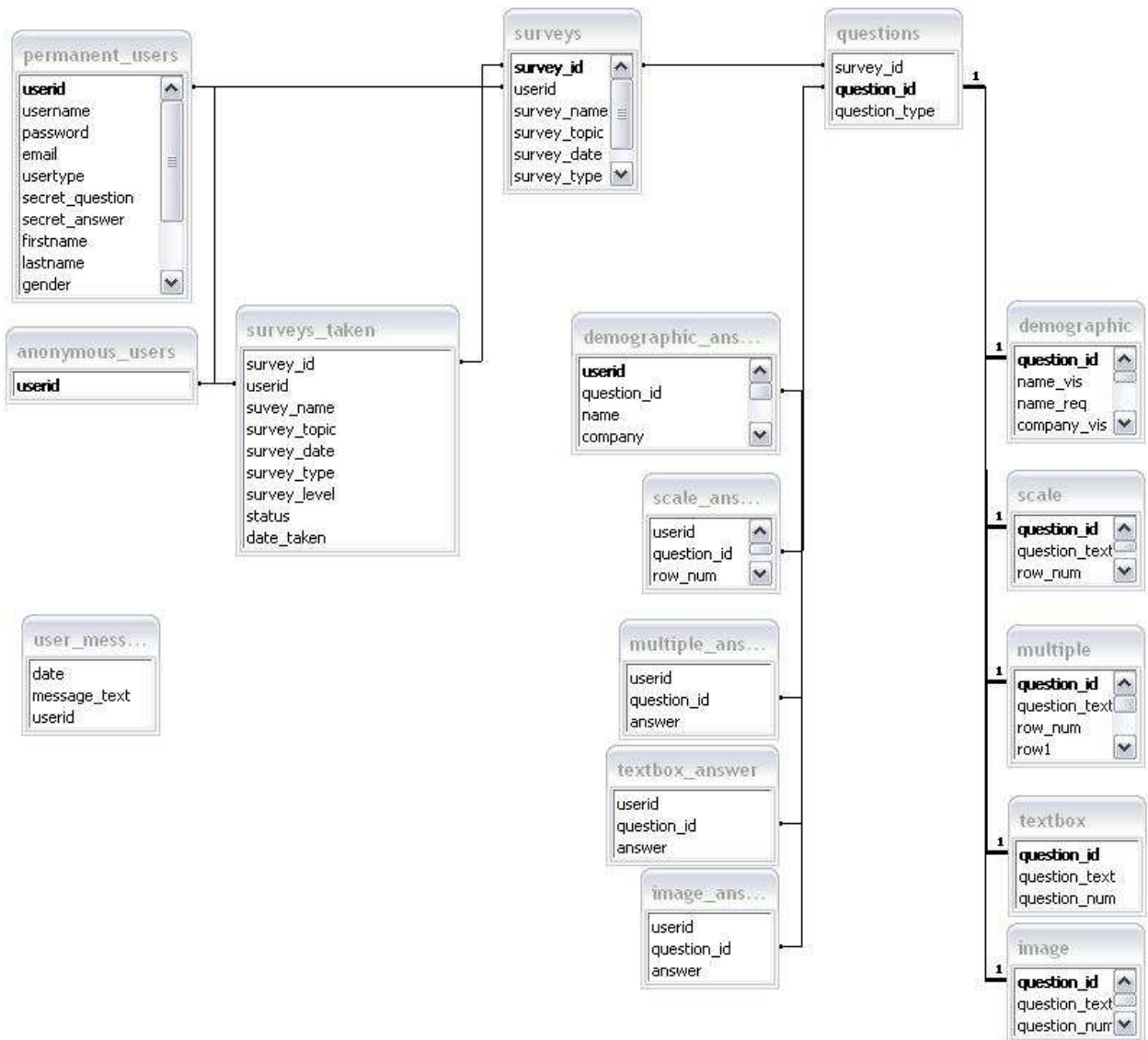
This table stores all the answers to a question of image type.

column name	type	Comments
Userid	int	Taken from anonymous and permanent tables, only students.
Question_id	int	Taken from questions table.
Answer	ntext	User inputted answer.

user_messages

This table keeps track of user messages to the IOS administrators which the administrators can view on their welcome screen once the administrators login to the IOS web application.

column name	type	Comments
date	smalldate	Date message was sent.
message_text	ntext	Message text from user.
userid	int	Id of user that created the message.



Section 4: Logical data dictionary

Administrator Homepage

Data Flow

Description: Main page for Administrator.

Location: 0,1

Source: Database

Destination: Administrator

Administrator Login Information

Data Flow

Description: Administrators information to log in.

Location: 0

Source: Administrator

Destination: Maintain Website

Registration Request

Data Flow

Description: Request for accounts from Student or Teacher.

Location: 0

Source: Teacher/Student

Destination: Administrator

Teacher Registration E-mail

Data Flow

Description: E-mail to Teacher confirming account creation.

Location: 0

Source: Administrator

Destination: Teacher

Student Registration E-mail

Data Flow

Description: E-mail to Student confirming account creation with or without password.

Location: 0

Source: Administrator

Destination: Student

Maintain Website

Process

Description: General Action described for the Administrator general duties.

Location: 0

Source: Database

Destination: Administrator

Administrator Login Verification

Data Flow

Description: Administrators login information checked against database entry.

Location: 0

Source: Maintain Website

Destination: Database

Survey Diagnostics

Data Flow

Description: Information about Surveys size, dates, names, etc.

Location: 0

Source: Administrator

Destination: Database

Administrative Maintenance

Data Flow

Description: Edited information about Teachers, Students, Surveys.

Location: 0

Source: Database
Destination: Maintain Website

Account Request

Data Flow

Description: General account information request to edit/create/delete.

Location: 0, 1

Source: Administrator
Destination: Database

Account Information

Data Flow

Description: Teacher and Student account information.

Location: 0, 1

Source: Database
Destination: Maintain Website

Teacher Homepage

Data Flow

Description: Main page for general access to Teachers account.

Location: 0, 1

Source: Database
Destination: Teacher

Teacher Login Information

Data Flow

Description: Teacher information to log in.

Location: 0, 1

Source: Teacher
Destination: Manage Teacher Request

Teacher Registration Request

Data Flow

Description: Request sent to the Administrator for an account.

Location: 0, 1

Source: Teacher

Destination: Administrator

Teacher Registration E-mail

Data Flow

Description: E-mail sent to Teacher from the Administrator to confirm account creation.

Location: 0, 1

Source: Administrator

Destination: Teacher

Teacher Login Verification

Data Flow

Description: Message sent to program confirming correct Teacher Login.

Location: 0, 1

Source: Database

Destination: Manage Teacher Request

Survey Data

Data Flow

Description: Information directly used in the creation of a survey.

Location: 0, 1

Source: Manage Teacher Request

Destination: Database

Survey Results Request

Data Flow

Description: Teacher/Students request for survey results.

Location: 0, 1

Source: Manage Teacher Request/Manage Student Request

Destination: Database

Survey Results

Data Flow

Description: Statistical Data compiled for analysis.

Location: 0, 1, 1

Source: Database

Destination: Manage Teacher Request/Manage Student Request

Student Homepage

Data Flow

Description: Main page for general access to Student account.

Location: 0

Source: Database

Destination: Student

Manage Teacher Request

Process

Description: General Action described for the Teacher general duties.

Location: 0

Source: Database

Destination: Teacher

Manage Student Request

Process

Description: General Action described for the Student general duties.

Location: 0

Source: Database
Destination: Student

Student Login Information

Data Flow

Description: Student information to log in.

Location: 0, 1

Source: Student
Destination: Manage Student Request

Student Registration Request

Data Flow

Description: Request sent to Administrator for account activation.

Location: 0, 1

Source: Student
Destination: Administrator

Student Registration E-mail

Data Flow

Description: E-mail sent to student confirming account creation.

Location: 0, 1

Source: Administrator
Destination: Student

Survey Request

Data Flow

Description: Request for given survey so that it can be taken.

Location: 0, 1

Source: Manage Student Request
Destination: Database

Survey

Data Flow

Description: Actual survey to be taken.

Location: 0

Source: Database

Destination: Manage Student Request

Login Information

Data Flow

Description: Administrators login information.

Location: 1

Source: Administrator

Destination: Verify Administrator Login

Verify Administrator Login

Process

Description: Source that takes in Administrator's login information.

Location: 1

Source: Database

Destination: Administrator

User Verification

Data Flow

Description: Verification of Administrator's login information.

Location: 1

Source: Verify Administrator Login

Destination: Database

Control Panel

Data Flow

Description: Tools used by Administrator to edit surveys/accounts.

Location: 1

Source: Retrieve Administrator Website

Destination: Administrator

Retrieve Administrator Website

Process

Description: Creation of Administrators website from database information.

Location: 1

Source: Database

Destination: Administrator

Account Page

Data Flow

Description: Specific webpage that shows the accounts for the Administrator to edit.

Location: 1

Source: Manage User Accounts

Destination: Administrator

Manage User Accounts

Process

Description: Administrators utility for editing other user accounts.

Location: 1

Source: Database

Destination: Administrator

Manage User Account Data

Data Flow

Description: Data that has been manipulated to change entries in the database.

Location: 1

Source: Manage User Accounts

Destination: Database

Survey Page Request

Data Flow

Description: Administrator request to survey edit page.

Location: 1

Source: Administrator

Destination: Manage Surveys

Manage Surveys

Process

Description: Administrators ability to edit surveys.

Location: 1

Source: Database

Destination: Administrator

Manage Survey Data

Data Flow

Description: Actual changes in survey data.

Location: 1

Source: Manage Surveys

Destination: Database

All Active Surveys

Data Flow

Description: List of all surveys currently in progress and completed.

Location: 1

Source: Database

Destination: Manage Surveys

Feedback

Data Flow

Description: User feedback to Administrator.

Location: 1

Source: Database

Destination: Manage Surveys

Survey Page

Data Flow

Description: Administrators webpage for editing surveys.

Location: 1

Source: Manage Surveys

Destination: Administrator

Verify Teacher Login

Process

Description: Ability of our program to check login for Teacher.

Location: 1

Source: Database

Destination: Teacher

Register Teacher Account

Process

Description: Our programs ability to set up an account creation for a Teacher.

Location: 1

Source: Database

Destination: Teacher

Create Survey

Process

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Description: The program that allows Teachers to create surveys.

Location: 1

Source: Database
Destination: Teacher

Verify Student Login

Process

Description: Ability of our program to check login for Student.

Location: 1

Source: Database
Destination: Student

Register Student Account

Process

Description: Our programs ability to set up an account creation for a Student.

Location: 1

Source: Database
Destination: Student

Fill Out Survey

Process

Description: Ability of Student to take a survey.

Location: 1

Source: Database
Destination: Student

Profile Change Conformation

Data Flow

Description: Message sent to Administrator showing Change in Administrator Account Information.

Location: 2

Source: Change Administrator Account Information

Destination: Administrator

Administrator Information

Data Flow

Description: Personal information the Administrator may need for logging in purposes.

Location: 2

Source: Administrator

Destination: Change Administrator Account Information

Change Administrator Account Information

Process

Description: A process taken by the Administrator within our program.

Location: 2

Source: Database

Destination: Administrator

Add Teacher Request

Data Flow

Description: The data needed to create a Teacher account.

Location: 3

Source: Administrator

Destination: Add Teacher Account

Create Teacher Request

Data Flow

Description: Request to the database creating a Teacher account.

Location: 3

Source: Add Teacher Account
Destination: Database

Teacher Account Information

Data Flow

Description: Teacher account personal information.

Location: 3

Source: Database
Destination: Add Teacher Account

Add Teacher Account

Process

Description: Ability of creating a new Teacher account with information from the database.

Location: 3

Source: Database
Destination: Administrator

Delete Teacher Request

Data Flow

Description: Administrators request to delete a Teacher Account.

Location: 3

Source: Administrator
Destination: Delete Teacher Account

Delete Teacher Account

Process

Description: Programs ability to delete a Teacher Account.

Location: 3

Source: Database
Destination: Administrator

Add Student Request

Data Flow

Description: Request to create a Student Account.

Location: 3

Source: Administrator

Destination: Add Student Account

Add Student Account

Process

Description: Ability of program to Create a Student Account.

Location: 3

Source: Database

Destination: Administrator

Create Student Request

Data Flow

Description: Data sent to Database to create a Student Account.

Location: 3

Source: Add Student Account

Destination: Database

Delete Student Account

Process

Description: Programs ability to send data to Database to delete a Student Account.

Location: 3

Source: Database

Destination: Administrator

Delete Student Request

Data Flow

Description: Data sent to Database to delete a Student Account.

Location: 3

Source: Delete Student Account

Destination: Database

Student Account Information

Data Flow

Description: Specific information about the Student Account

Location: 3

Source: Database

Destination: Delete Student Account

Student Account Information

Data Flow

Description:

Location:

Source:

Destination:

Survey Password

Data Flow

Description: Anonymous survey takers password for specific survey to take.

Location: 0

Source: Anonymous

Destination: Manage Student/Anonymous Request

Anonymous Survey

Data Flow

Description: Survey that an Anonymous Survey taker, takes.

Location: 0

Source: Manage Student/Anonymous Request

Destination: Anonymous

Download Results

Process

Description: The action our program takes when a request for the survey data is made.

Location:

Source:

Destination:

Add Survey

Process

Description: Process of adding a survey to the database.

Location: 2

Source: Database

Destination: Teacher

Add Survey Request

Data Flow

Description: Request to the Database to add a survey

Location: 2

Source: Add Survey

Destination: Database

Add Survey Confirmation

Data Flow

Description: Data sent to Teacher when a survey is successfully added.

Location: 2

Source: Database

Destination: Teacher, Add Survey

Delete Survey

Process

Description: Programs ability to delete a survey from the database.

Location: 2

Source: Database

Destination: Teacher

Delete Survey Request

Data Flow

Description: Teachers request to delete a survey from the Database.

Location: 2

Source: Teacher

Destination: Delete Survey

Delete Survey Conformation

Data Flow

Description: Conformation sent to the Teacher that a survey delete was a success.

Location: 2

Source: Database

Destination: Delete Survey, Teacher

Edit Survey

Process

Description: Process in which the Teacher edits a survey.

Location: 2

Source: Database
Destination: Teacher

Edit Survey Conformation

Data Flow

Description: Database conformation sent to the Teacher to confirm an edit succeeded.

Location: 2

Source: Database, Edit Survey
Destination: Teacher, Edit Survey

Results Gathering

Process

Description: Programs ability to gather the information from the taken surveys so a teacher can see the results.

Location: 2

Source: Database
Destination: Teacher

Download Results

Process

Description: The ability of the program to download survey results in many forms that the Teacher/Student may need for data collection.

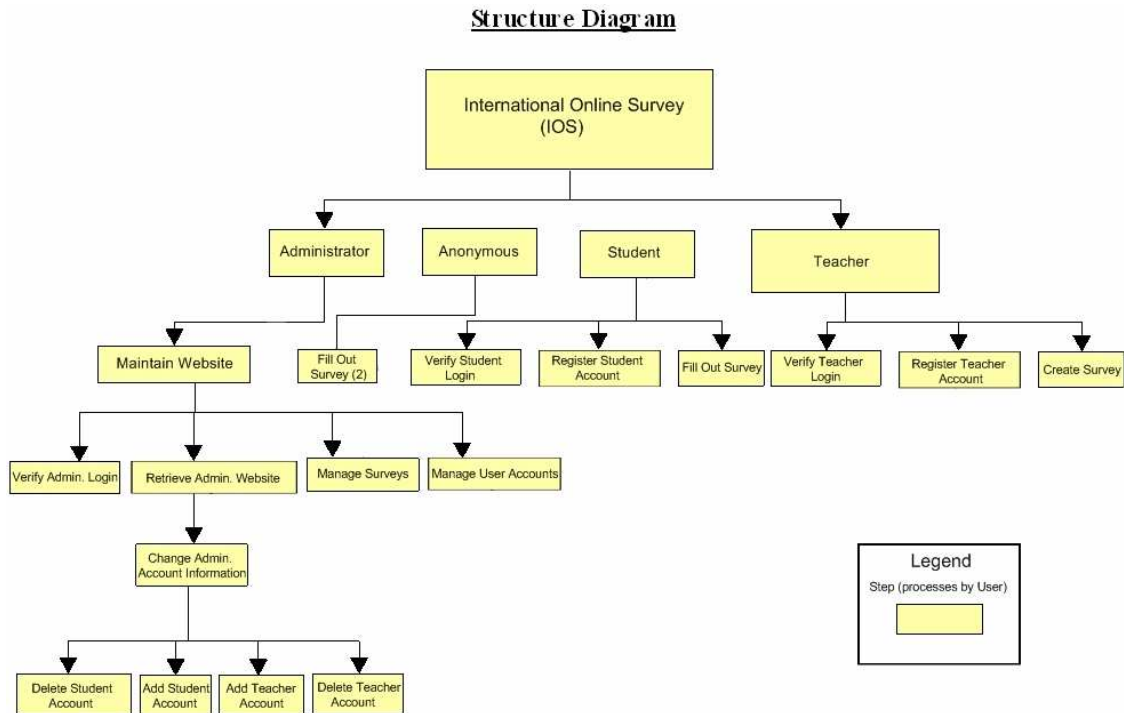
Location: 3

Source: Database
Destination: Teacher, Student

Architectural Design Specification

Section 5: Structure diagram

Structure Diagram - The Structure Diagram is used to provide a road map of how the application is built by using the data flow diagram as a template.



Section 6: Data Flow Diagrams

See attached Data Flow Diagram Document.

Testing Requirements

Section 7: Functional Requirements Inventory

Functional Requirements Inventory

The following list outlines the required functionality to be included in the final solution. The requirements are listed according to user case and then by screens the user will view.

General:

- The International Online Survey is web-based.
 - It will be built in php and html with a mysql database.

Administrator:

- The Administrator user will have an account.
- The Administrator user will have a username and password.
- The Administrator user will have a secret question and answer to retrieve a forgotten password.

Login Screen:

- The Administrator will log in with correct username and password.
- An incorrect login will provide an appropriate error message.
- If the Administrator has forgotten his/her password the Administrator can click on the forgot password link.

Administrator Welcome Screen:

- The Administrator will be able to view all surveys in the Surveys section.
 - Administrator will be able to scroll through a list of surveys.
 - Administrator can use the search bar to search for users and surveys.
- The Administrator will have a link to list all of the current users.
 - Administrator will be taken to the List Current Users Page where the Administrator can search for a specific user or list then alphabetically.
 - This page can also be gotten to from entering a name in the Search bar at the top of the page.
- The Administrator will be able to see site statistic in the Current Stats section.
 - Displayed will be total users, current users logged in, total surveys created, and total surveys published.
- The Administrator will be able to see all users that are currently logged in.
 - This is located in the Current Users Logged In section.
- The Administrator will be able to view messages from users.
 - This is located in the Quality Control section.
 - It will show shot snippet of the message and the date it was sent on.

- The Administrator will be able to view surveys that have words that have been marked as offensive by the developers.
 - The Administrator will see a list of surveys and a button next to the survey name to ban that survey.
- The Administrator can create new accounts through the Create Accounts button.
 - Administrators can create new student and/or teacher accounts.
 - Create Account button will take the administrator to the Account Creation Page.
- The Administrator will have a link to manage their account.
 - Administrator can change their username, password, secret question, and secret answer.
- The Administrator will be able to logout from the welcome screen by clicking the "Logout" link.

Manage Account Screen:

- The Administrator will be able to change their account name, password, secret question, and secret answer.
- The Administrator will be able to submit new values for any fields or return to the administrator home page.

Change User Password Screen:

- The Administrator user will be able to choose a user for which the password is to be changed.
- The Administrator will enter a new password for the chosen user.
- The Administrator will submit changes.
- A message will appear indicating that a change has been accepted.
- The Administrator user will be able to exit the change user password screen.

Create An Account Screen:

- The Administrator will be able to input a new username and hit submit.
 - Upon submission a randomly created password will be returned.
 - The Administrator must then send the username and password to the individual.
- The Administrator user will be able to exit the create an account screen.

List Current Users Screen:

- The Administrator will be able to sort users alphabetically by selecting a letter.
- The Administrator will be able to search the users by account type.
- The Administrator will be able to search the users by typing in an account name in the search bar.
- The Administrator will be sent to the list current users results page after the search.

- The Administrator user will be able to exit the list current users screen.

List Current Users Results Screen:

- The Administrator will view search results alphabetically.
- The Administrator will be able see account names and account types of the search results.
- The Administrator will be able to click on the accounts to view information about them.
- The Administrator user will be able to exit the list current users results screen.

User Page (Teacher)

- Administrator can click on a users name in the Current Users Logged In section of the Administrator Home Page or through the List Current Users page.
- Administrator will see all Active Surveys, Published Surveys, and Unpublished Surveys.
 - There will be three sections with Active, Published, and Unpublished with the surveys name, topic, and date associated with that survey.
 - Clicking on a survey name will display the Preview Survey page.

User Page (Student)

- Administrator can click on a users name in the Current Users Logged In section of the Administrator Home Page or through the List Current Users page.
- Administrator will see all Active Surveys, Published Surveys, and Unpublished Surveys.
 - There will be three sections with Active, Published, and Unpublished with the surveys name, topic, and date associated with that survey.
 - Clicking on a survey name will display the Preview Survey page.

Survey Preview Screen

- Administrator will be able to view the survey but will not be able to edit the survey.

Teacher:

- The Teacher user will have an account established by the Administrator or the Teacher can create their own account through the login page Button to Register Now As a Teacher.
- The Teacher user will have a username and password that the teacher has picked.

Login Screen:

- The user will log in with correct username and password.

- If the correct password has been lost the teacher can click on the Forgot Your Password to go to the Forgot Password page.
- An incorrect login will provide an appropriate error message.
- To create a new teacher account the user can click on the Register Now as a Teacher to go the Teacher Account Creation page.

Create Your Account:

- The Teacher will be able to input a username, password, select a secret question, and secret answer.
- The Teacher will be able to submit the inputted data.

Teacher Welcome Screen:

- The Teacher will have a button to manage their account.
 - Takes the Teacher to the Manage Your Account page for the Teacher accounts.
- The Teacher will have a button to create a survey.
 - Takes the Teacher to the Initial Create a Survey page.
- The Teacher will be able to view all surveys the Teacher has created.
 - These are separate into three groupings.
 - Unpublished, Active, and Completed.
- The Teacher can view all of their Unpublished Surveys and choose to delete them on make them active with the Activate Button.
 - Upon clicking on Activate the survey will be moved to the Active Surveys section.
 - Upon deleting the survey will no longer be viewable.
- The Teacher can view all of their Active Surveys
 - Clicking on the survey name will take them the teachers to a currents results page.
 - Upon clicking the delete button the survey and all questions answer up to this time will be deleted from the database.
 - Upon clicking the stop button the survey will be moved to the Completed Surveys section of this page.
- The Teacher can view all of their Completed Surveys
 - Clicking on the delete button in the Completed Surveys section will delete that surveys questions and answer from the database.
 - Clicking on the download button will allow the Teacher to download an excel file format.
- The Teacher will be able to select a specific survey and view those results.
- The Teacher will have access to a search bar, which searches the entire site.
- The Teacher will be able to logout from the welcome screen by clicking the "Logout" link.

Manage Account Screen:

- The Teacher will be able to change their account name, password, secret question, and secret answer.
- The Teacher will be able to submit new values for any fields or return to the Teacher home page.

Initial Survey Creation Screen:

- The Teacher will be able add a name to the survey.
- The Teacher will be able to add a topic to the survey.
- The Teacher will be able to make the Survey Anonymous or Protected.

Survey Creation - Add a Question Screen:

- The Teacher will be able to choose from a number of question formats (multiple choice, T/F, short answer, etc.).
- The Teacher will be able to save the survey.
- The Teacher will receive a confirmation when the survey is saved.

Survey Creation – Demographic Question Screen:

- The Teacher will be able to choose whether the following fields will be visible and/or required.
 - Name, Company, Address 1, Address 2, City/Town, State/Province, ZIP, Postal Code, and Country.
 - The Teacher will be able to click on a checkbox next the field they want to disable or enable.
- The Teacher will be able to submit the question by clicking on the Submit button.

Survey Creation – Ratings Scale Screen:

- The Teacher will be able to enter the questions text.
- The Teacher will be able to enter in how many rows they would want and what the text will be for each.
 - There will be a input text box where the Teacher can put each rows text on a different line.
- The Teacher will be able to select how many Columns the Teacher would want.
 - The limit of Columns or scale is 10.
 - The Teacher can input these in the input text boxes.
- The Teacher will be able to submit the question by clicking on the Submit button.

Survey Creation – Multiple Choice Screen:

- The Teacher will be able to input the text for the question.
- The Teacher will be able to input the choices for answers.
 - The Teacher will have to put these answer on different lines in the text input box provided.
- The Teacher will be able to submit the question by clicking on the Submit button.

Survey Creation – Single Textbox Screen:

- The Teacher will be able to input the text for the question.
- The Teacher will be able to submit the question by clicking on the Submit button.

Survey Creation – Image Screen:

- The Teacher will be able to input the text for the question or a description of the image.
- The Teacher will be able to input the file location on their local computer or browser for the image on their local computer by clicking on the browse button.
- The Teacher will be able to submit the question by clicking on the Submit button.

Survey Creation – Edit Survey Screen:

- The Teacher will be able all questions for a survey.
- The Teacher will be able to add new questions by clicking on the Add Question button.
- The Teacher will be able to exit the Create a Survey page.

Student:

- The Student user will have an account established by the Administrator, Teacher, or through the front page Create an Account button for Students.
 - If created by a teacher or administrator, their username and password will be given to them by their teacher or administrator outside of the IOS web pages.
- The Student user will have a username and password.

Login Screen:

- The user will login with correct username and password.
- An incorrect login will provide an appropriate error message.

Create Account Screen:

- The Student will be able to input their desired username and password.
- The Student will have to retype their password.
- The Student will be able to select the secret question the Student wants and what the answer to the question will be.
- The Student has the option of entering in their first name and last name.
- The Student has the option of entering in their gender.
- The Student has the option of entering in their birthday date.
- The Student has the option of entering in their state and zip code.
- The Student has the option of entering in their time zone.
- The Student can submit the information by clicking on the Submit button.

Welcome Screen:

- The Student will have a link to manage their account.
- The Student will have a list of surveys that the Student can take.
 - This is in the Non-Completed Survey section.
 - The Student will be able to click on a survey and will be directed to the complete survey screen.
- The Student will be able to view completed and incomplete surveys.
- The Student will have access to a search bar, which searches the entire site.
- The Student will be able to logout from the welcome screen by clicking the "Logout" link.

Create Account Screen:

- The Student will be able to change their username and password.
- The Student will have to retype their password.
- The Student will be able to select the secret question the Student wants and what the answer to the question will be.
- The Student has the option of entering in their first name and last name.
- The Student has the option of entering in their gender.
- The Student has the option of entering in their birthday date.
- The Student has the option of entering in their state and zip code.
- The Student has the option of entering in their time zone.
- The Student can submit the information by clicking on the Submit button.

Take a Survey Screen:

- The Student will be able to answer all questions for a survey.
- The Student will be able to save their progress and come back at other time and finish.
- The Student will be able to submit their answers.
- The Student will be notified if any questions were left blank.
- The Student will be notified that their survey was submitted successfully.
- The Student will be able to exit the take a survey screen.

Search Results Screen:

- The user will view search results alphabetically.
- The user will be able see account names and account types or survey names.
- The user will be able to click on the accounts or surveys to view information about them.

Teacher/Student:

Password Recovery Screen:

- The user must answer their secret question and submit their email address.
- The user will be sent an email containing their account password.
- The user will be shown a message if the secret question was answered wrong or if the email address entered was not found.

Non-Functional Requirements Inventory

- The system should be quick and smooth, using fast servers and databases.
- The system should also be aesthetically pleasing.

Section 8: Acceptance Test

See attached Test Plan Document.

Section 9: Unit Tests

See attached Test Plan Document.

Section 10: Parameter Specifications

The following is a list of the machines that we will conduct our development work on. It lists the machine's specifications as well as the software on the machines that will be used in order to develop our product.

Systems:

Dell Dimension Dim4550
Intel Pentium 4 2.40 GHz
1GB of RAM

Macintosh iMac
2.0GHz Intel Core 2 Duo
1GB of RAM

Server:

Oracle version 10.1
MySQL version 4.1.14
PHP version 4.3.11
Apache version 2.0.46

Browser Environnement:

Microsoft Internet Explorer version 7.0.5730.13
Mozilla Firefox version 2.0.0.14
Apple Safari 3.0

Software:

Adobe Acrobat Standard version 7.0
Adobe Reader version 7.0
Microsoft Office Word 2003 11.6359.6360 SP1
Microsoft Office PowerPoint 2003 11.6361.6360 SP1
WinSCP version 4.0.4 (Build 346)
Putty release 0.60
Macromedia Dreamweaver MX 2004 Education Edition version 7.0
Macromedia Fireworks MX 2004 Education Edition version 7.0 (Build 288)
Visible Analyst Education Edition version 7.5.5
Microsoft Project 2000 9.0.2001.0219 SR-1
Microsoft Windows XP Professional Version 2002 Service Pack 2

Section 11: Subprogram Interface Specifications

The modules included with the International Online Survey are the Administrator, the Teacher, the Student, and the Anonymous [user]. These four modules or users work independently of one another, while some of the data they create is shared through the database. Each user does their specific tasks to create the desired outcome of functionality from the International Online Survey.

Section 12: Detailed Design Specification

Documentation Prologue for Each Routine

Administrator User

Login

1. The user submits login information to the CMS.
2. The CMS verifies the login information.
3. If login information contains correct user name and password combination, the user is directed to his/her homepage.

Manage Account

1. The user modifies his/her account.
 - a. Username
 - b. Password
 - c. Secret Question and Answer
2. The changes are submitted to the CMS.

Forgotten Password

1. The user clicks on the forgotten password link and enters his/her answer to their secret question as well as his/her email address.
2. An e-mail is sent to the user's registered e-mail account with a random username and password which can be changed after the user logs in.

Delete a Survey

1. The user navigates to the welcome page, and under the "Surveys" division clicks the button next to the survey to be deleted.
2. The survey will be deleted from the database and removed from the survey list on the welcome page.

Ban a Survey

1. The user navigates to the welcome page, and under the “Quality Control” division clicks the button next to the survey to be banned.
2. The survey will be inactivated, and the specific question causing the ban deleted from the database and survey. The user in charge of the survey will be notified of this change to their survey via email.

List Current Users

1. The user navigates to the welcome page, and clicks the List Current Users link at the top of the page.
2. The user will have the ability to either list the current users alphabetically or search for users.
3. Clicking the search button or a letter listed will display the users.

Teacher User

Login

1. The user submits login information to the CMS
2. The CMS verifies the login information
3. If login information contains correct user name and password combination, the user is directed to his/her homepage.

Registration

1. The user clicks on the Register Now as a Teacher link
2. The user fills out the information required to register
3. The user may fill in the optional information or leave it unfilled
4. The user clicks the submit button
5. The user is automatically logged in and directed to his/her welcome page

Manage Account

1. The user modifies his/her account.
 - a. Username
 - b. Password
 - c. Secret Question and Answer
2. The changes are submitted to the CMS.

Forgotten Password

1. The user clicks on the forgotten password link and enters his/her answer to their secret question as well as his/her email address.
2. An e-mail is sent to the user's registered e-mail account with a random username and password which can be changed after the user logs in.

Create a Survey

1. The user enters the desired survey name and topic and selects to make their survey Anonymous or Protected.
2. The user is directed toward a page which displays questions they have added as well as an Add a Question button.

3. Clicking the Add a Question button directs the user to a page that allows them to select the type of question to be added to their survey.
4. After choosing the type of question and filling out the required fields for the question, the user clicks submit and is directed back to a page that displays questions they have added as well as an Add a Question button and preview button.
5. The user then can save their progress by clicking the save button, activate their survey by clicking the activate button, or preview the survey at its current state by clicking the preview button.

Activate a Survey

1. The user enters navigates to the Unpublished Surveys subdivision under the Active and Unpublished Surveys division.
2. Clicking the button next to the unpublished survey will prompt the user to enter the email addresses of the students that will be given permission to take it. There is also a choice for the teacher to create a new student if necessary.
3. Clicking the Add button will add more email fields and clicking the submit button will give the specified students permission to take the survey.
4. Filling the fields for username and password will create a new user in the database.

Delete a Survey

1. The user can delete any survey under the History or Active and Unpublished Survey divisions by clicking the delete button next to each survey.
2. The selected survey will be deleted from the database

Stop a Survey

1. The user navigates to the Active Surveys subdivision under the Active and Unpublished Surveys division.
2. After clicking the stop button corresponding to the survey to be stopped, the survey will be added to the Completed Surveys division

Student User

Login

1. The user submits login information to the CMS
2. The CMS verifies the login information
3. If login information contains correct user name and password combination, the user is directed to his/her homepage.

Registration

1. The user clicks on the Register Now as a Student link
2. The user fills out the information required to register
3. The user may fill in the optional information or leave it unfilled
4. The user clicks the submit button
5. The user is automatically logged in and directed to his/her welcome page

Manage Account

1. The user modifies his/her account
 - a. Username
 - b. Password
 - c. Secret Question and Answer
 - d. Personal Information
2. The changes are submitted to the CMS

Forgotten Password

1. The user clicks on the forgotten password link and enters his/her answer to their secret question as well as his/her email address.
2. An e-mail is sent to the user's registered e-mail account with a random username and password which can be changed after the user logs in.

Take a Survey

1. The user can take any survey that has not been started or finished by navigating to the Non-Completed Surveys division and clicking on the link that corresponds to the survey name.
2. The user is brought to the last save point of that survey.

Pseudocode for Each Routine

The following is the logic that determines the course of action that is being taken for each routine.

Administrator User

Login

```
if (login(user name, password) == TRUE)
    display(user's my account page);
else display(do nothing);
```

Manage Account

```
submit_changes( changes made to account );
update_database();
display_page( current_page );
```

Forgotten Password

```
if(secret_question, user_email)==TRUE)
send_mail(user_email, username, password );
```

Delete a Survey

```
if(Search(survey) == TRUE)
    delete(survey);
    alert(teacher_of_survey);
    display(success message);
else
    display(error message);
```

Ban a Survey

```
if(Search(survey) == TRUE)
    delete(question_from_survey);
    inactivate(survey);
    alert(teacher_of_survey);
    display(success message);
else
    display(error message);
```

List Current Users

```
if(searchBtn.clicked==TRUE)
    Search(name_from_field);
    Display();
else
    String alpha = letter chosen;
    SortStudents(alpha);
    Display();
```

Teacher User

Login

```
if (login(user name, password) == TRUE)
    display(user's my account page);
else display(do nothing);
```

Registration

```
boolean required_information_missing = true;
display_welcome_page();
while( required_information_missing )
{
    if( all required fields entered )
        required_information_missing = false;
    else
        display_welcome_page(missing_fields);
}
```

Manage Account

```
submit_changes( changes made to account );
update_database();
display_page( current_page );
```

Forgotten Password

```
if(secret_question, user_email)==TRUE)
send_mail(user_email, username, password );
```

Create a Survey

```
topic=entered_topic;
title=entered_title;
perm=radPerm;
update(onAddClick(question_type),info)
if(saveClick==TRUE)
    SurveyStatus(survey, unpublished);
if(activateClick==TRUE)
    SurveyStatus(survey, active);
```

Activate a Survey

```
SurveyStatus(survey, active);
```

Delete a Survey

```
if(Search(survey) == TRUE)
    delete(survey);
    alert(teacher_of_survey);
    display(success message);
else
    display(error message);
```

Stop a Survey

```
SurveyStatus(survey, completed);
```

Student User

Login

```
if (login(user name, password) == TRUE)
    display(user's my account page);
else display(do nothing);
```

Registration

```
boolean required_information_missing = true;
display_welcome_page();
while( required_information_missing )
{
    if( all required fields entered )
        required_information_missing = false;
    else
        display_welcome_page(missing_fields);
}
```

Manage Account

```
submit_changes( changes made to account );
update_database();
display_page( current_page );
```

Forgotten Password

```
if(secret_question, user_email)==TRUE)
send_mail(user_email, username, password );
```

Take a Survey

```
DisplayTake(survey);
```


Section 14: Appendix

14.1 Glossary of Terms

CSS – Cascading Style Sheets – These are used to describe a specific style for a web page or set of pages, a website.

Database - A collection of data arranged for ease and speed of search and retrieval.

Data Flow Diagram – A representation of the functional decomposition of a system.

Gantt Chart - A chart that depicts progress of jobs in relation to time. It is often used in planning and tracking a project.

Hypertext Markup Language (HTML) – Predominant markup language used for the creation of web pages.

Internet - A vast computer network linking smaller computer networks worldwide. The Internet includes commercial, educational, governmental, and other networks, all of which use the same set of communications protocols.

Internet Explorer(IE) – Microsoft based program used for browsing the Internet.

Linear Sequential Model / Classic Waterfall Model – A systematic, sequential approach to software development that begins at the system level and progresses through analysis, design, coding, testing, and support.

MySQL – A Multithreaded, multi-user Relational Database Management System.

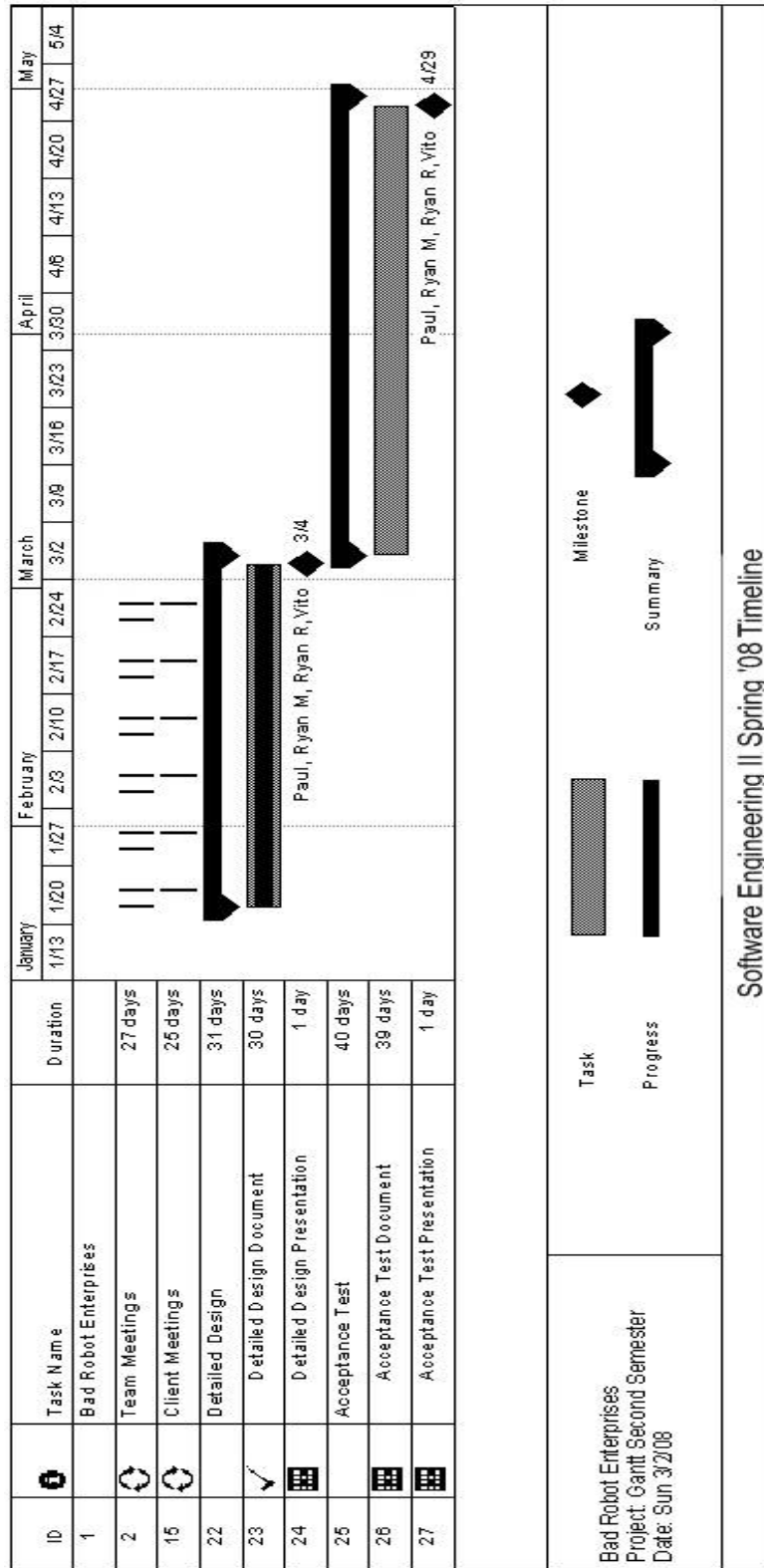
OS X - The latest operating system for Macintosh computers, based on the Linux kernel but with a more user-friendly graphic interface. It includes networking capabilities.

PHP – PHP Hypertext Preprocessor – An open source (free) programming language that is used for dynamic pages and is a high-level scripting language.

Profiles – User created accounts that will be customizable according to each specific person.

XHTML – Extensible HyperText Markup Language – has same capabilities of HTML but is more restricted to allow for conformity among multiple platforms.

14.2 Timeline (Gantt chart)



14.3 Packaging Specifications

Bad Robot Enterprises will install all the necessary files and features of the International Online Survey on the Siena Computer Science network, Oraserve. There will then be a web address supplied for users to access our application.