

Design Journey Part 1

Group name: Opera Society Website

Members' names: Joseph Nechleba, Ian Ochola, Kanu Kanu, Gary Gao

Members' NetIDs: jdn64, iao6, kjk225, gg392

Section: 203



DJ1 Part 1: Client Selection

Client Description

Tell us about your client. Who is your client? What kind of website do they want? What are their key goals?

Our client is the recently formed Cornell Opera Society, a Cornell student based organization that brings together opera singers and others interested in the music form. They want a simple user friendly website that shows events, members, contact info, and other information about the club. Their key goals are to reach out and bring together the opera community at Cornell.

NOTE: If you are redesigning an existing website, give us the current URL and some screenshots of the current site. Tell us how you plan to update the site in a significant way that meets the final project requirements.

Target Audience

Tell us about the potential consumers of this website. How, when, and where would they interact with the website? Get as much detail as possible from the client to help you find representative users. This will make it easier for you to test your site on potential users and to generate useful personas.

The target audience of the website would be students or members of the Cornell community interested in opera. The website would be accessible through a mobile device and a computer. The website will be a simple and intuitive design, consisting of one main home page in which the user can scroll down to links for info about members, events, and other opera society details. Representative users will probably be between the ages of 18 and 24, Cornell students, and music enthusiasts.

Purpose & Content

Tell us the purpose of the website and what it is all about.

The purpose of this website is to bring together the opera community at Cornell. Until now there has been no organization that ties together people involved in opera music. The website would help to outreach to those individuals and make it easy to find information about what operatic events are going on. It would also be a place where members of the community can ask questions to those in charge of planning and event organization. Lastly, we're hoping the website can act as a log or showcase of the performances that have been put on by the Opera Society, a place where people can comfortably post themselves singing.

Content:

- The content of the website will be centrally located on a scrollable home page. We're planning on having five sections that are linked on the homepage and in a navigation bar on all pages: About, Members, Events, Contact, Past Performances, Login, and Edits.
- The About section will have general information on what the Opera Society is, its mission (to foster opera interest and performance at Cornell), and how it was formed.

- The Members section will have information on the executive board of the club, and possibly biographies of the people who hold certain positions. (i.e. president, vice president, etc.)
- The Events section will be a google calendar applet inside of the webpage that displays all the current event information of the club.
- The Contact section will allow for consumer questions and emails that will be directed to the head of the opera society.
- The Past Performances page will contain a number of embedded videos and images of performances or events put on by the opera society, a kind of showcasing of what the club has done.
- The Login page will allow the client to login to the website as an administrator.
- Lastly the Edits page will be admin accessible only, where the client can update or modify the information on the website, add to the databases, etc.

Hosting Plan

Where will the site be hosted?

We are planning to host the website on the Cornell Info 2300 Servers and moving to another host before the course servers close.

Some examples will be wordpress, squarespace, or bluehost.

Needs and Wants

In this table, collect your client's and target audience's needs and wants for the website. Come up with several appropriate design ideas on how those needs may be met. In the Memo column, justify your ideas and add any additional comments you have. There is no specific number of needs required for this, but you need enough to do the job.

Needs and wants (What does your client and audience need and want?)	Design ideas and choices (How will you meet those needs and wants?)	Memo (Justify your decisions; Additional notes)
Client wants to have a calendar to show upcoming future events for the Cornell Opera Society	Embed a Google calendar onto the calendar page of the website that lists the group's upcoming events.	Embedding a google calendar will allow the user to easily see upcoming events as well as give them the option to integrate the dates into their own personal google calendar which would allow them to see which times work better for them and help them to manage any conflicting times.

<p>Client needs to have a feature where executive board members (i.e. the two Presidents) can log in and</p> <ul style="list-style-type: none"> • Upload Music/Videos embedded in the pages • Delete Music/Videos that are embedded in the pages. 	<p>Create an administrator login button that gives administrators privileged access to upload and delete content.</p> <p>Create a database and let the Client safely modify the database with forms.</p>	<p>Creating a login button would separate basic user and administrator privileges and prevent basic users from deleting and uploading malicious content.</p>
<p>Client needs to have a feature where eBoard members can log in and</p> <ul style="list-style-type: none"> • Add/Delete members • Modify Information about members 	<p>Create a database and let the Client safely modify the database with forms.</p>	<p>The easiest way to do this would to have a database of all the members and forms so the client will not have to deal with the database directly.</p>
<p>Client needs to have a way to show the information of all members.</p>	<p>Get information from the database above and show the information on the website through creating html from php.</p>	<p>Getting information from a database will allow the information shown to change whenever the client modifies the database.</p>
<p>Client needs to have a way for the potential audience to contact them.</p>	<p>The contact page will have an email "questions" form where the user can send a question to the head of the opera society.</p>	<p>A post form with proper filtering should work.</p>
<p>Client wants to prevent spamming.</p>	<p>Submitting emails to the website will require a reCAPTCHA verification.</p>	<p>Google has a nice API that only requires one php file to implement reCAPTCHA bot prevention.</p>
<p>Client wants a way to edit text on the website</p>	<p>Edit form accessible only to an admin will allow updating of text within certain HTML nodes, such as the text displayed on the About page.</p>	<p>HTML nodes that contain the information can be easily updated with Javascript.</p>
<p>Client wants to be able to upload videos and images to the website</p>	<p>Upload form accessible only to an admin will allow uploading photos and videos to a performance gallery</p>	<p>Similar to Photo Gallery Project, admin will be able to upload multiple images and videos</p>
<p>Client wants to be able to play videos/music on the website</p>	<p>Get information from the database above and show the information on the website through creating html from php.</p>	<p>Getting information from a database will allow the information shown to change whenever the client modifies</p>

	Create a opera player like in HW3.	the database.
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DJ1 Part 2: Project requirements

Design

What design elements should be utilized? Tell us about the design elements you plan to have for the site. Do they fit your client's needs? Why did you choose to follow (or not to follow) the client's expectations? If you chose not to accommodate a need, why did you make that decision?

The client does not have any detailed expectations of the website other than it hosting information and events for the opera society. As of now (before any actual website building), we plan on implementing all of the design features listed above, and we are confident that they would fit the client's needs. The one exception to this is the opera player like in HW3, which would play mp3 files that the client could upload. We think this would be really cool, but we won't implement until we know that we have the other features completed.

Client's Edits

Does the client need the ability to edit the site after the end of the semester? If **Yes**, tell us how you site fit your client's need. If **No**, write down N/A.

Yes. The client will need to be able to upload performances videos to their website. Also, we plan on allowing the client to edit text on the Members page, About page, and Events page. That way the client can update the website without having to go through us. This will be implemented by having an edit page accessible only to an admin (the head of the opera society) through which the client can update and edit the site content or add a performance video. The events page will have an embedded google calendar synced to the website that the client will be able to modify and update with new events.

Information Architecture, Content, and Navigation

Lay out the plan for how you'll organize the site and which content will go where. Note any content (e.g., text, image) that you need to make/get from the client.

Note: As with the Needs and Wants table, there is no specific amount to write here. You simply need enough content to do the job.

Main navigation (List your site's navigation here) Site will have a navigation bar displayed on all pages with links	Sub category (List any sub categories of under the main navigation)	Content (List all the content corresponding to main navigation and sub categories)

to the pages below		
Home		Home Page will be a nicely displayed scrollable listing of links to all of the pages below.
About		Display information on what the Opera Society is, how it was formed, and what it's mission statement is. This information will be text coming from the client.
Members		Using Database, access and display all of the members of the Cornell Opera Society (e board) along with an image and a text description of them. The images and text descriptions will come from the client.
Events		Display a google calendar that shows all of the current and future events that the client is sponsoring.
Contact		Form displayed through which website user will be able to send an email to the client.
Login		Display simple login form through which the client can log into the website as an administrator.
Edits		Admin accessible only. Client will be able to login and see this page, otherwise it will be hidden. From here the client can edit and update information on the website.

Interactivity

What interactive features will your site have? What PHP elements will you include?

Much of this is up to you, however, implementing a login system is **required**. Logging in should not be required to view the site, however it must unlock extra functionality, e.g., admin functionality, comment posting, etc.

Also, describe how the interactivity connects with the needs of the clients/target audience.

We will have a login system that will let eboard members to log in and unlock extra admin functionality to modify the website. The admin functionality will include the ability to add, delete, and modify the databases for members and music. This interactivity will allow the clients to upload images or video of past performances.

Use of Existing Libraries

What libraries (e.g. editor.js, jQuery Cookie, Image Sliders, jQuery) are you planning to use for the site? What do you have to do to incorporate those libraries? How much of your own code will satisfy the project requirements?

- jQuery: used for enhanced website backend functionality
- Google reCAPTCHA API: used to prevent email spamming
- Bootstrap: grid layout for design of website

Most of the website will be based on code that we write.

Database

How will you use a database to improve the functionality of the website? Describe a possible schema that could meet your client's needs.

We will use a database to contain information for members of the Cornell Opera Society and for uploading music and video. This will improve the functionality of the website because it will allow eBoard members to change the database to dynamically change the html of the website.

One possible Schema could be the following:

Members

name	type	size	Allow null	Primary Key
member_id	int	255	false	true
name	varchar	100	false	false
position	varchar	100	false	false
major	varchar	100	false	false
class	int	255	false	false

Images

name	type	size	Allow null	Primary Key
image_id	int	255	false	true
name	varchar	100	false	false
caption	varchar	100	false	false
description	text	500	false	false
date_taken	date		false	false

Music/Performances

name	type	size	Allow null	Primary Key
Song_id	int	255	false	true
Title	varchar	100	false	false
Composer	text	100	false	false
Era	text	100	false	false
Description	varchar	500	false	false
Link/file path	varchar	100	false	false

Scale

How large will the site be (approximate number of pages) and how many hours of work will be required to complete it?

The site will be about eight pages long. We estimate that per person the final project will take about fifteen hours, so sixty hours total.

DJ1 Part 3: Work Distribution

Describe how each of your responsibilities will be distributed among your group members.

Set internal deadlines. Whose task needs to be completed first in order for another person's task to be relevant? Be specific in your task descriptions so that everyone knows what needs to be done and can track the progress effectively. Consider how much time will be needed to review and integrate each other's work. Most of all, make sure that tasks are balanced across the team.

Note: Again, you want the right number of items for the job. The table should have enough information such that each team member understands what is expected of them and by when.

Task	Team Member Names and roles	Due Date	Status
Create basic sketch of website page (including CSS)	Kanu and Joseph: basic design sketch	4/22/17	In Progress

Create database and implement tables	Ian and Gary: DB leader; Joseph: backup	4/22/17	In Progress
Create Administrator Login to add/upload/edit DB content	Kanu Kanu, Joseph Nechleba: Design and Web Development	4/26/17	In Progress
Populate Database and test admin capabilities	Ian, Gary: Populate/test using DB Kanu, Joseph: Populate/test using admin privileges	4/29/17	In Progress
Advance design layout to include displaying videos and content	Kanu Kanu, Joseph Nechleba: Design and Web Development	4/29/17	In Progress
Integrate form validation, security settings, hack prevents	Ian, Gary: back-end developers;	5/5/17	In Progress
Finalize Design Layout (add any minor design changes needed)	Kanu, Joseph: Design and Web Development	5/5/17	In Progress
Troubleshooting	Ian, Gary: DB, security testing Kanu, Joseph: design responsiveness and usability testing	5/12/17	In Progress

Who will be responsible for backing up other members should someone fail to meet a deadline? How will you communicate with each other? What are your expectations for communication? How will you share your design documents and ensure that no one disrupts each other's code? How will you manage deadlines? How you would keep track of task completion and the progress within your group?

If you will be using any tools for scheduling, sharing documents, managing tasks, etc., make sure you describe them here. This is also a good time to identify challenges (like who will be unavailable due to religious holidays or sports events), and how you will manage these challenges. Keep updating this on a regular basis for your own benefit.

We currently have a team of back-end (Ian and Gary) and front-end (Kanu and Joseph) developers. Each team will focus on their own deadlines but will also help each other if one fails to meet a deadline. We will communicate with each other using Slack. We expect everyone to communicate if they are having any issues (with code, meeting unavailability, running late, etc.) in a timely manner. To share code, we will be using GitHub to ensure that our code will not disrupt each other. We will create a shared google calendar to keep us all aware of upcoming tasks and responsibilities as well as our weekly meetings. This will help us track deadlines and progress for the site. This will be also good way to allow members to notify the group when they are not available for meetings.

DJ1 Part 4: Additional Comments

If you feel like you haven't fully explained your design choices, or if you want to explain some other functions in your site (such as special design decisions that might not meet the final project requirements), you can use this space to justify your design choices or ask other questions about the project and process.

Design Journey Part 2

Group name: Opera Society Website

Members' names: Joseph Nechleba, Ian Ochola, Kanu Kanu, Gary Gao

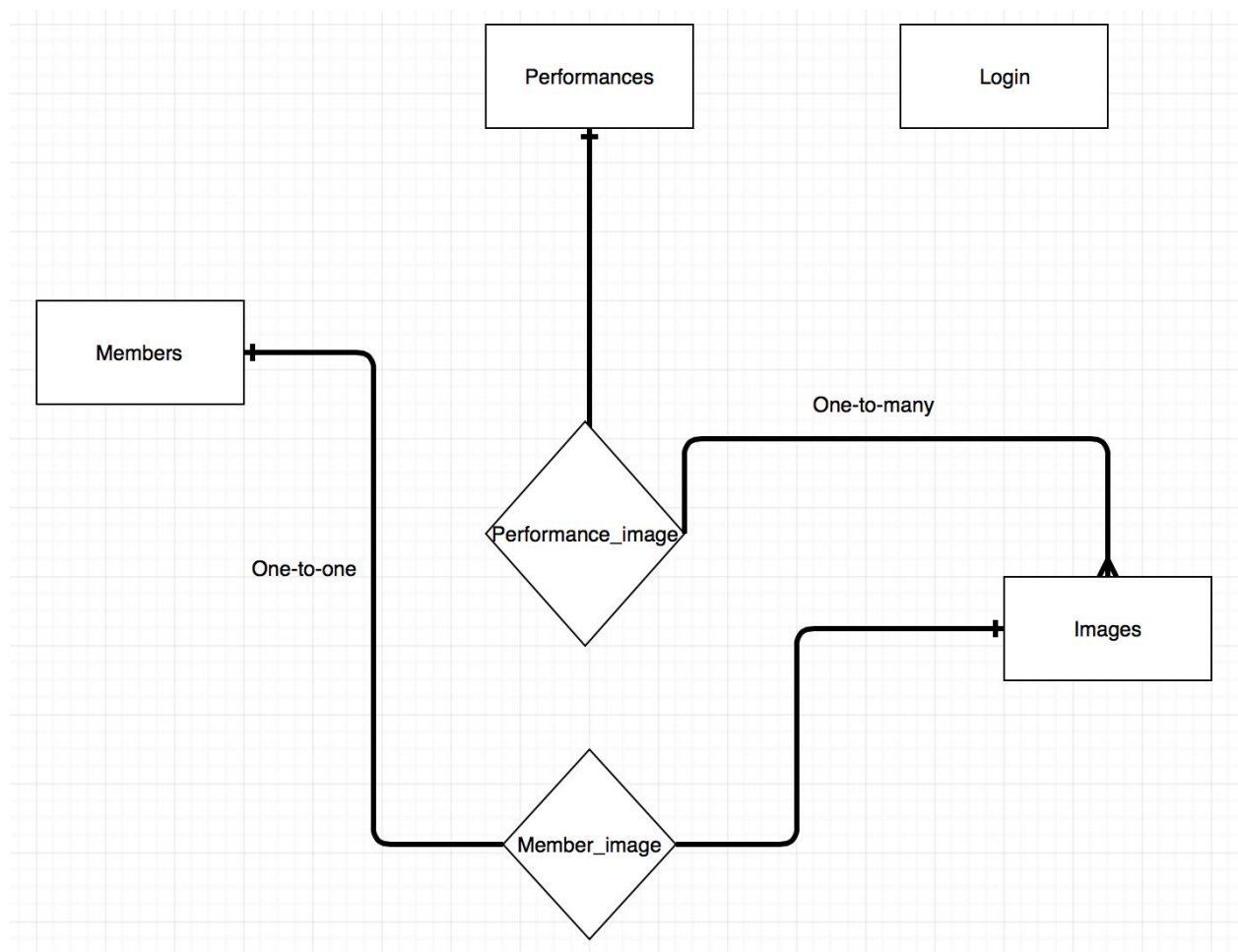
Members' NetIDs: jdn64, iao6, kjk225, gg392

Section: 203

DJ2 Part 1: Database Design

Conceptual ER Diagram (different arrows, see slide 13 of Lecture 17; relationship and ER, see lecture 16 and 18)

In this part, please copy and paste your ER diagram for your database below (you can make your ER diagram using any tool of your choice). Make sure the relationships between each entity are clear and well thought-out. Don't forget to indicate what kind of relationship each arrow represents. Your database description should go on the next page.



The attributes are shown in the corresponding tables below as we were told in class that we didn't have to include them by the professor.

They also make the diagram horribly messed up

DJ2 Database Description

Tell us what the database does. Make sure that you include enough detail so that we are able to understand what is going on in your ER diagram.

Note: We made some changes to the database from part 1 by adding tables for login, and adding relationship tables between members and images and performances and images.

Images

name	type	size	Allow null	Primary Key
image_id	int	255	false	true
name	varchar	100	false	false
caption	varchar	100	false	false
description	text	500	false	false
date_taken	date		false	false

Login

name	type	size	Allow null	Primary Key
username	varchar	100	false	true
password	varchar	100	false	false

Members

name	type	size	Allow null	Primary Key
member_id	int	255	false	true
name	varchar	100	false	false
position	varchar	100	false	false
major	varchar	100	false	false
class	int	255	false	false

MemberImages

name	type	size	Allow null	Primary Key
member_id	int	255	false	true
image_id	int	255	false	true

Music/Performances

name	type	size	Allow null	Primary Key
performance_id	int	255	false	true
title	varchar	100	false	false
composer	text	100	false	false
era	text	100	false	false
description	varchar	500	false	false
link/file path	varchar	100	false	false

PerformanceImages

name	type	size	Allow null	Primary Key
composer	int	255	false	true
image_id	int	255	false	true

Our database links images to the members of the Cornell Opera Society and images to the performances of Opera.

DJ2 Database Description (CONT.)

As illustrated in the ER diagram, there are two relational tables that describe the database relation between the three main tables.

1) One-to-one relation

The member_image table has two fields, which are foreign keys; member_id and image_id from the members

And images tables respectively. These two fields show which image belongs to which member.

Since we intend to have profile pictures, of which one belongs to a unique person, the member_image table captures this one-to-one relation.

2) One-to-many relation

The Performance_image table has two fields, which are foreign keys; composer and image_id from the performances and images tables respectively. These two fields show which image(s) belongs to which composers. Images may include an operatic arrangement or a still teaser of what a performance of a given repertoire could be. This, therefore, necessitates a one-to-many relation which will be facilitated by the Performance-image table

DJ2 Part 2: Website Layout

Content Organization

This should be an improvement upon the table you used in **Design Journey Part 1**

Main navigation (List your site's navigation here) Site will have a navigation bar displayed on all pages with links to the pages below	Sub category (List any sub categories of under the main navigation)	Content (List all the content corresponding to main navigation and sub categories)
Home		Home Page will be organized as follows. A navigation bar will appear at the top of the page so the user can quickly go to different parts of the website. Below the navigation bar, as requested the client, will be a photo reel of five or six images (provided to us by the opera society) that fade in and out. Below this photo reel, the user will be able to scroll down and access through "text described" links the different parts of the website. Through the home page the user will also be able to jump to their social media home pages through facebook, instagram, twitter logos, etc.
About Us		Display information on what the Opera Society is, how it was formed, and what it's mission statement is. This information will be text coming from the client. It's layout will have the navigation bar on top, followed by a series of paragraphs outlining the information mentioned above.
About Opera		Page requested by the client, this will display information on what the Opera is, it's history and development. This information will be text coming from wikipedia. It's layout will have the navigation bar on top, followed by a series of paragraphs outlining the information mentioned above.
Members		Using Database, access and display all of the members of the Cornell Opera Society (e board) along with an image and a text description of them. The images and text descriptions will come from the client. The navigation bar will be on top, and below it we are imagining a series of divs, one for each of the members and their information.

Events		Display a google calendar that shows all of the current and future events that the client is sponsoring. This page will be very simple. It will have the nav bar on top and the calendar below.
Performance Gallery		This page will display images and videos that feature members of the opera society. The client will be able to add, edit, and remove these images through the edits page.
Contact		Form displayed through which website user will be able to send an email to the client. Like all other pages it will have the navigation bar on top. We will be using input post forms with proper sanitation to allow a user to send a message or question to an email address made for the opera society.
Login		Display simple login form through which the client can log into the website as an administrator. Like all other pages it will have the navigation bar on top. This page will not be visible or linked on the website itself. We will provide the client with a special url that they can input into their browser in order to access the login page. Once logged in, they will be able to edit and update information on the website.
Edits		Like all other pages it will have the navigation bar on top. Admin accessible only. Client will be able to login and see this page, otherwise it will be hidden. The edits page will allow editing of photos/videos and member information on the website.

DJ2 Navigational Structure

Explain how users will move between pages. What kind of navigational aids will you have? Will there be a menu bar? A drop-down menu? Tabs? Will you have this available across all your pages?

There will be a navigation bar displayed across all pages from which the user can access all portions of the website. On the home page, there will also be text based links to the different sections of the website. For example, on the home page below the photo reel we will have About Us in larger letters, followed by text that says “find out about the Cornell Opera Society, its formation, and mission within the Cornell community.” The div that contains this text will be a link to the About Us page of the website. We would like to have it so that a drop down menu replaces the navigation bar when the website is viewed on a smaller sized browser or mobile device.

Tell us why you chose a particular navigation scheme over other possible choices, how the overall navigation of your site will work, how the various pages will be linked, and how the the navigation categories make sense from a user’s perspective. You may find it helpful to include a diagram of your site map here.

We chose this navigation (navigation bar with individual pages) as it seemed the most intuitive way to build a website for a student club organization. The client wants a simple and clean design that is easily understood by a potential user. Also, the class (2300) seems to have emphasized a navigation bar/page setup, making a navbar design the one we are most comfortable with and the one we could code the best.

The overall navigation of the website will be through a navigation bar that displays links to all the different pages of the website. Each page will display the navbar, allowing the client to quickly go to any part of the website from any page. The only exception to this is the login page and edit page. The login page will be available only if the client enters a specific URL that we will give to them. We decided to do this because only the client needs access to the login page as an admin, and so it doesn’t need to be displayed on the website. Once logged in, an additional edit page will be displayed on the navbar, in which the client can edit and update information or photos in the database.

DJ2 Part 3: Interactive Functionality

What interactive features will your site have? What PHP and Javascript elements will you include? Describe how the interactivity meets the needs of the clients/target audience.

The client wants a simple website that cleanly displays information about their club and club events. The functionality we are planning on implementing is mostly centered around making a clean design with admin privileges, and we are confident that if we implement things like clean image display and intuitive database editing (with cleanly displayed forms) , the client will be happy with their website. Below we have outlined our functionality features.

PHP Interactivity

For each piece of PHP interactivity that you plan to implement, describe what the interaction is, how you will implement it, and which pieces of PHP code are required to complete it. You can describe these in terms of functions if you like, but only if you want to. If there is overlap between PHP and JavaScript interactivity, describe the interaction both here and in the JavaScript Interactivity section on the next page.

- Login Function:
 - There will be a login button for admin users. After logging in admin users will have the ability to use admin features such as uploading and deleting new content and modifying information about members of the Opera Society.
 - This will be implemented by using a form from which we can get the information inputted to the form with PHP (more specifically `filter_input(INPUT_POST, ..., ...)`) and check to see if the username and password match the usernames and hashed passwords in a database with PHP. If they do match, then the user will be able to see the admin-only content. We can do this with if statements. For example if `isset($_SESSION['user'])` is true then we can display admin-only content.
- Photo Reel:
 - There will be a Photo Reel to display pictures of events. Clicking on a picture allows the user to see a caption about the picture.
 - This will be implemented by accessing our database and using SQL (more specifically `mySQL`) to get the information we need from the database like we did in the 3rd project of this class using PHP and printing the html elements.
 - We will also need to use `INPUT_GET` so when we click on an image then the URL could change to show this change (i.e. `url/photoID=1`) and more relevant information to the photo can show up.
- Contact Me:
 - There will be a page allowing users to contact the president by sending her an email to send feedback or suggestions about the group. There will be an email input box (users leave their own email) and an message input box.
 - Email input will be filtered and sanitized using php functions and we could also use additional php functions like `'mail(...)` to send an email with the corresponding form entries.
- Add Picture/Video(admin):
 - Admins will be able upload multiple pictures through a form
 - This will be implemented by filtering and sanitizing the input from the form and using PHP and `mySQL` to modify the correct tables of the online database we have.
 - Admins will be able to post their youtube video links to our form
 - This will be implemented by filtering and sanitizing the input from the form and using PHP and `mySQL` to modify the correct tables of the online database we have.
- Search:
 - There will be a text input for the search
 - Search input will be retrieved using the POST method and then validated using `filter_sanitize` functions in PHP

JavaScript Interactivity

For each piece of JavaScript interactivity that you plan to implement, describe what the interaction is, how you will implement it, and which pieces of PHP code are required to complete it. You can describe these in terms of functions if you like, but only if you want to. If there is overlap between PHP and JavaScript interactivity, describe the interaction both here and in the PHP Interactivity section on the previous page.

- Photo Reel:
 - There will be a Photo Reel to display pictures of events. Buttons will be programmed using javascript that will allow the user to click from picture to picture.
 - We will use the onclick javascript function
- Delete Picture/Video (admin):
 - Admins will be able to interactively delete pictures or videos on the website
 - There will be a delete button in the corner of every picture/video where the user can just click on that button to delete that picture
 - A button will allow the user to toggle between hiding and showing all delete buttons on a page
 - We will use the onclick javascript function
- Search:
 - There will be a text input for the search
 - Search results will be displayed in real time as the user is typing. We will use onkeyup function in javascript to get the user's input as they type and then return the results to the website in real time with jquery.
- Scroll Button:
 - When the user has scrolled down to the bottom of the home page, there will be a button they can press that automatically scrolls to the top of the home page (and vice-versa if the user has scrolled to or is currently at the top of the home page) This button will be programmed with the scrollIntoView function in javascript.
- Real-Time Validation:
 - We will validate user input in real time for different text inputs such as entering an email address. We will use the onkeyup function to get users input as they type. We will then display a message on screen to check for basic invalid submissions (such as not having an "@" in an email address submission). We will do all other validation onsubmit using PHP.
- Bios:
 - On the Members page if you click on the photo of the member, their bio will show up. We will use the javascript functions hide() and show() to hide and show the bio when the photo is clicked (using onclick() to track when the photo is clicked).

Compared to the first milestone, did you make any changes to your plan to use the existing libraries (e.g. editor.js, jQuery Cookie, Image Sliders, jQuery) for the site? If so, write down the libraries, what you have to do to incorporate those libraries, and how much of your own code will satisfy the project requirements. If there is no change, write down N/A.

N/A

Design Journey Part 3

Group name: Opera Society Website

Members' names: Joseph Nechleba, Ian Ochola, Kanu Kanu, Gary Gao

Members' NetIDs: jdn64, iao6, kjk225, gg392

Section: 203



DJ3 Part 1: Necessary Information

1. Please provide us your login username and password
(if your site has multiple login systems, please specify which username and password corresponded to which login system)

I think this is asking for the login information to our login function of the website.

Username: abbi

Password: password

2. Please provide us your DB login username and password

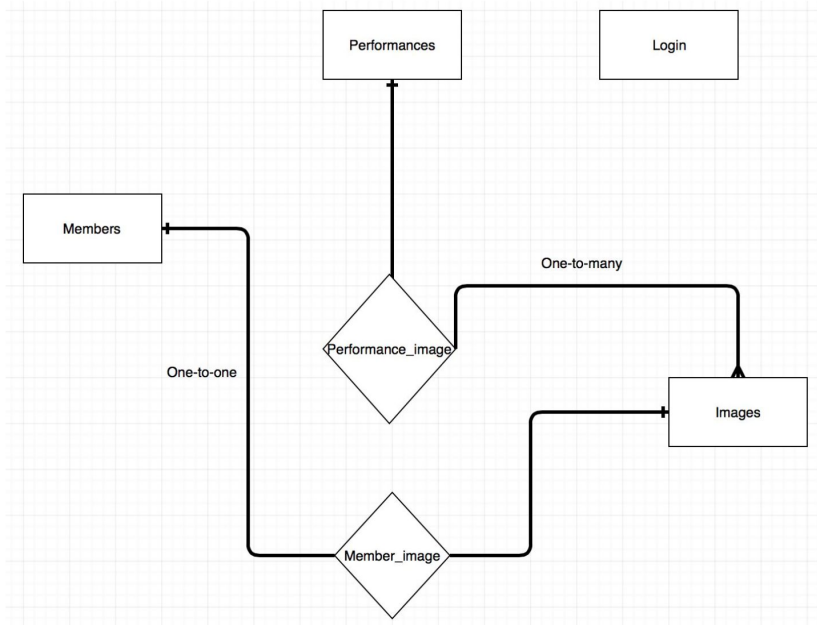
Username: fp_operasoc

Password: password

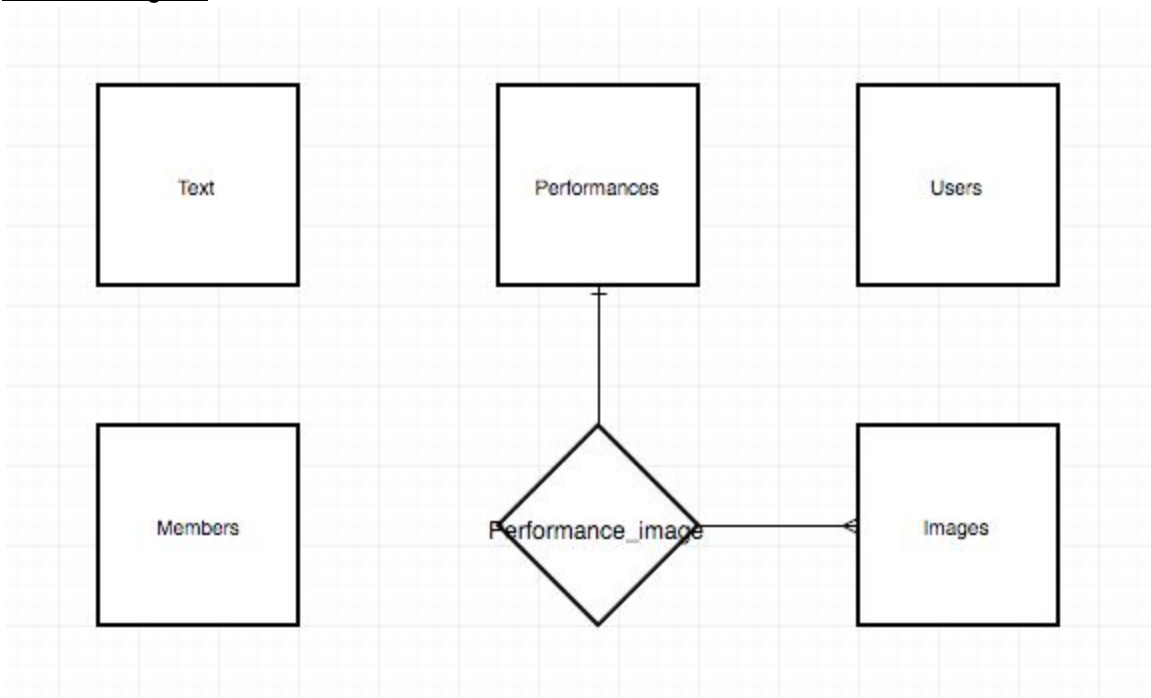
DJ3 Part 2. Database Revision and Implementation

Include your physical ER diagram here and describe any changes you made based on feedback from the previous milestone. Also describe the physical ER diagram (tables, fields, keys, and relationship, please see lecture 17 slides 21).

Old ER Diagram



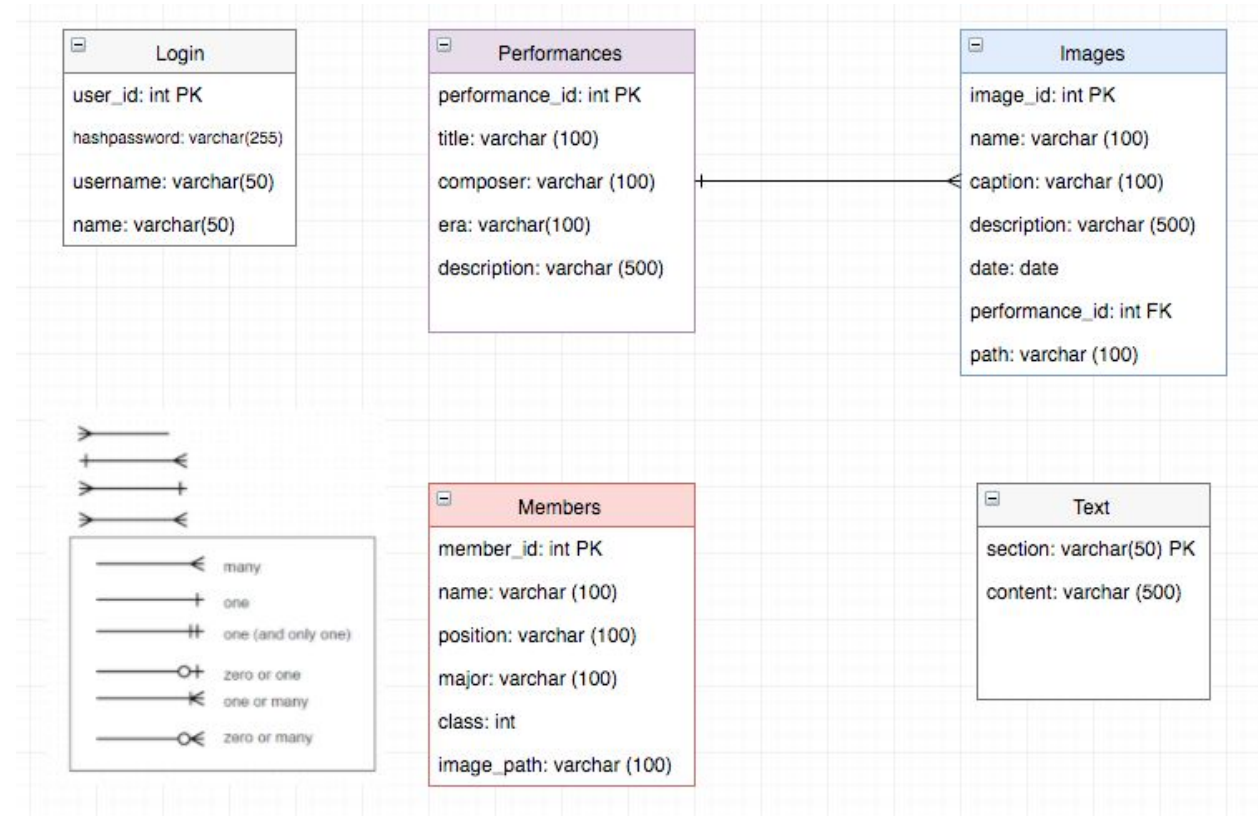
New ER Diagram



Our previous [conceptual] ER diagram was good according to the feedback from the previous milestone, but I met with the Professor for about 20 minutes to make our diagram better and he helped us make some changes:

- I removed the one to one relationship between members to images and instead added an additional field to Members (image_path) so that each member could have one image.
- I added a new entity 'Text' that would become a table to store paragraphs for a relevant subsection. (i.e. About me could store the html for the about me paragraph and this would allow the admin to change paragraphs on her website and to add or delete them).
- Renamed Login entity to Users

Physical ER Diagram



Our resulting physical ER diagram looks less complicated but should be sufficiently complicated according to the professor.

We have multiple tables:

- **Login:** This table is used to store login information for the admin. It has fields for user_id, hashpassword, username, and name. The primary key is the user_id. The hashpassword and the username will be compared to inputted usernames and passwords to see if the user wrote the correct login information. This table has no relationship to the other tables.
- **Members:** This table is used to store information about all the members of the Cornell Opera Society. There are fields for the name, position, major, class, and file paths for each member. The primary key is the member_id. This table has no relationship to the other tables.
- **Text:** This table is used to store text for relevant sections of the website, so the admin is able to modify the text on the website for sections like 'About Opera', 'About Us', etc. There are two fields for the name of the section and the contents of the paragraph for the section. The primary key is the name of the section. This table has no relationship to the other tables.

- Performance: This table is used to store the performances of the Opera Society. It has many fields. It's primary key is the performance_id. It also has fields for the title, composer, era, and description of the performances. It has a one to many relationship with the Images table. That is, one performance can have many images. Note that this is not a many-to-many relationship like in project 3.
- Images: This table is used to store images of performances. It's primary key is the image_id the foreign key is the performance_id. It has fields for the name, caption, description, date, and file path for the images. This table is in a many-to-one relationship with the performances table.

DJ3 Part 3: Testing Protocol

How are you going to choose users?

How will they be representative of the target audience? How will you find them? Where will you meet them? Will you compensate them?

We are going to choose unbiased, average users to test our website. We feel that most of the people in our main target audience will have average levels of technical experience so we will seek out users who have average technical backgrounds. We think our target audience will have little, some, or a lot of interest in opera so we will seek out users who have even a slight interest in opera. We will find most of these users on-campus; users will include students, staff, and faculty. We will meet them on central campus locations such as Uris Library or Cafe Jennies; we will give the users preference on where they would like to meet. They will be given little compensation such as free snacks or drinks.

What tasks are you going to have them do? How would these tasks connect with the client's needs?

Task name/id	Task description	Task goal/what's being tested/expected outcomes
First impression	Ask the user to look at the site for 5 seconds and describe their emotional and intellectual reactions	Want to see whether the design communicates client's key site goals to the target audience; want to see if people get the metaphor right away.
Homepage Navigation	Ask the user to navigate the homepage	Want to see whether our homepage design and layout makes sense and is navigable to the average user.
About Us	Ask the user to tell us 1 or 2 facts about the club and to name some members	Want to know whether our about us page serves it's function of describing the club to group; want to see if this page has too much information
About Opera	Ask the user to tell us some basic opera facts	Want to see whether our about opera page is easily findable; want to see whether our about opera page is necessary/helpful to the average user
Contact the President	Ask the user to tell send an email to the president	Want to see the usability and ease of using the contact form on our website; Want to know the user's reactions to the email and if the response email makes sense;
Add an Event	Ask the user to add an opera society event to their personal google calendar	Want to see the usability of ease of adding events to their personal calendar; want to know the user's reactions to this functionality and if it is helpful or unnecessary
Gallery Navigation	Ask the user to find and use our performance gallery displayer	Want to see how well the user interacts with the display; Want to see if captions are easily readable; want to see if pictures sizes are easily viewable
Suggestions	Ask the user to give us any suggestions	Want to know if there was anything the user felt could be improved, added, or deleted to make their experience better.

What's your script?

How are you going to welcome them? Reassure them that you're testing the site, not them? Get them to think aloud while they use the site?

How are you going to introduce each task? What wording will you give the user? Will you give them any information in advance (probably not -- they won't have it in a real deployment -- but for sketches and early prototypes you might tell them that some things don't work)? How will you remind them to think aloud? How will you decide when to "give up" on the task?

Afterwards, what specific questions or general opinions will you ask for about their experience or the site? How will you thank them?

"Welcome to see the Opera Society Website. We would like you to use our website so we can get a sense of how our users will be interacting with it. While you are using it, we would like you to think aloud by stating what you think, how you feel, and any questions you might have while navigating through our site. Examples would be "Wow this is really cool", "How do you do this?", or "I wish this was easier to access."

To make this a bit more structured and to ensure that we get to all the points on our website, I have formed some basic tasks for you to complete. If you're ever having trouble completing any of these, just say you can't do it and we will move on. Also, some parts are not finished yet just go as far as the website will let you to answer the question/complete the task.

First before we start, I would like to know your first impression of the sight. What are some things that you thought when you first saw it. You can say anything."

[Response]

"Great. Now I would like you to navigate and use the homepage. While you're doing this make sure to think aloud and tell us what you're thinking as you're using it."

[Response]

"Thanks. Now I would like you to tell me 2 facts about some members in the group. *[if necessary remind them to think aloud]*."

[Response]

"Thanks. Now can you tell me some things about opera that you can learn from our website? *[if necessary remind them to think aloud]*."

[Response]

"Great. Now, please send an email to the president telling her your thoughts about the new site. *[if necessary remind them to think aloud]*."

[Response]

"Awesome. Now tell me when the next opera society event is and add the date to your google calendar. *[if necessary remind them to think aloud]*."

[Response]

“Awesome. Now tell me when the next opera society event is and add the date to your google calendar.
[if necessary remind them to think aloud].”

[Response]

“Great Job, we’re almost done! Now I would like you to look some pictures from opera society events.
[After they find photo gallery] Try using the gallery to see some amazing photos and read awesome captions. *[if necessary remind them to think aloud].*”

[Response]

“Awesome. We’re done for with the basic testing for now. Now, can you give me some suggestions? Do you have any lingering thoughts about what you did like/what we could have done better.”

[Response]

“How would you rate the user experience on a scale of 1-10?”

[Response]

“How would you rate design on a scale of 1-10?”

[Response]

“How would you rate the website as a whole on a scale of 1-10?”

[Response]

“Thank you so much. We really appreciate the feedback. You are awesome for doing this and will really help us get a good grade on the project! Definitely reach out to me if you have any more opinions and suggestions.”

[End]

DJ3 Part 4: Testing Note

You should have at least 2 testing users.

User 1

1. Who is your user, e.g., where do they come from, what is their background, etc.?

My user is my roommate, Jesse. He is a Cornell student (Junior) studying environmental engineering. He has moderate technical experience.

2. How does this user represent your target audience/client's needs?

Much of our target audience is Cornell students so he is a good example of an unbiased student we think would use the site in the future.

Tasks for user 1	User's reaction/feedback/problems?	Re-design ideas and other notes - <i>what are the different solutions you can think of to address the feedback/problem?</i>
First impression	"It looks alright. I like the navigation bar."	Maybe add something to grab the user's attention as they go onto the site.
Homepage Navigation	"Easy and simple to navigate"	Stick to original design
About Us	He was able to tell me where to go to get this information. Also mentioned that he would like pics of members.	Nav bar feature is helpful. Implement accordingly and include pics of members.
About Opera	He was able to tell me where to go to get this information. He thought this was a cool addition to the website.	Nav bar feature is helpful. Implement accordingly and make sure to keep design consistent with rest of site.
Contact the President	He was able to find where to do this on the website. Also mentioned to possibly combine this with the about us page.	Nav bar feature is helpful. Possibly add a contact me button on the about us page.
Add an Event	He was able to find where to do this on the page. He however does not use google calendar so would not be particularly useful for him.	Nav bar feature is helpful. Re-evaluate if using a google calendar in the future since many people may not use this.
Gallery Navigation	He was able to find where to do this on the page. Likes this addition to the website.	Nav bar feature is helpful. Stick to original design and implement accordingly.
Suggestions	"It looks good. I would say to use more colors on the website and add more pics."	Think about incorporating more colors and make sure to add the pictures to the pages to make the site more lively.

3. Other notes from this user that will be useful to think about when redesigning.

Having links to pages on the navigation bar is very helpful.

User 2

1. Who is your user, e.g., where do they come from, what is their background, etc.?

My user is my friend Maria. She is a sophomore Hotel Major. She has little technical experience and also has an interest in the arts.

2. How does this user represent your target audience/client's needs?

She is a Cornell student, which comprises much of our target audience, and also is interested in the arts which is helpful because she is more likely to be interested in the opera society and our website.

Tasks for user 1	User's reaction/feedback/problems?	Re-design ideas and other notes - <i>what are the different solutions you can think of to address the feedback/problem?</i>
First impression	"It looks simple."	Maybe add something to grab the user's attention as they go onto the site.
Homepage Navigation	"It's simple to use."	Original design is good.
About Us	She was able to tell me where to go to get this information.	Original idea for design is good. Implement accordingly.
About Opera	She was able to tell me where to go to get this information. She thought it was cool that they were having an about opera section.	Original idea for design is good. Implement accordingly.
Contact the President	She was not able to find where to do this on the website. (She thought "contact" meant the page would list the contact info of the members.)	Think about changing the nav bar link title and or moving the contact the president button to a different location.
Add an Event	She was able to find where to do this on the page. She thought this was a good addition.	Original idea for design is good. Implement accordingly.
Gallery Navigation	She was able to find where to do this on the page.	Original idea for design is good. Implement accordingly.
Suggestions	"Make the website a little more exciting. I don't know how though."	Possibly add more colors and more features to grab the user's attention

3. Other notes from this user that will be useful to think about when redesigning.

The website should grab the user's attention.

Testing Summary and Iteration

What did you learn? About your users? About your site? About yourselves?

We learned that our site could use a little more work in terms of design and implementation. We are going to make updates based on the user feedback. Also we learned that users think opera society is a really cool group to make the project on and will have really interesting content. More introspectively, we learned about different ways we could help each other out in making updates.

What are three key changes you made based on the testing, what alternatives did you consider, and why are they appropriate changes?

1. Updated Home design
 - Changed from basic black/white to adding red on some pages. This is appropriate because it was a suggestion from the client.
2. Updated Navigation Bar pages
 - Made them more clear and centered so they are easily accessible. Users will now be able to use it with ease.
3. Automated Gallery on page load
 - Made the pictures run automatically so we can immediately catch the user's attention as they open the website.

If you make any changes to the testing protocol for round 2, tell us what they are here.

N/A

Design Journey Part 4

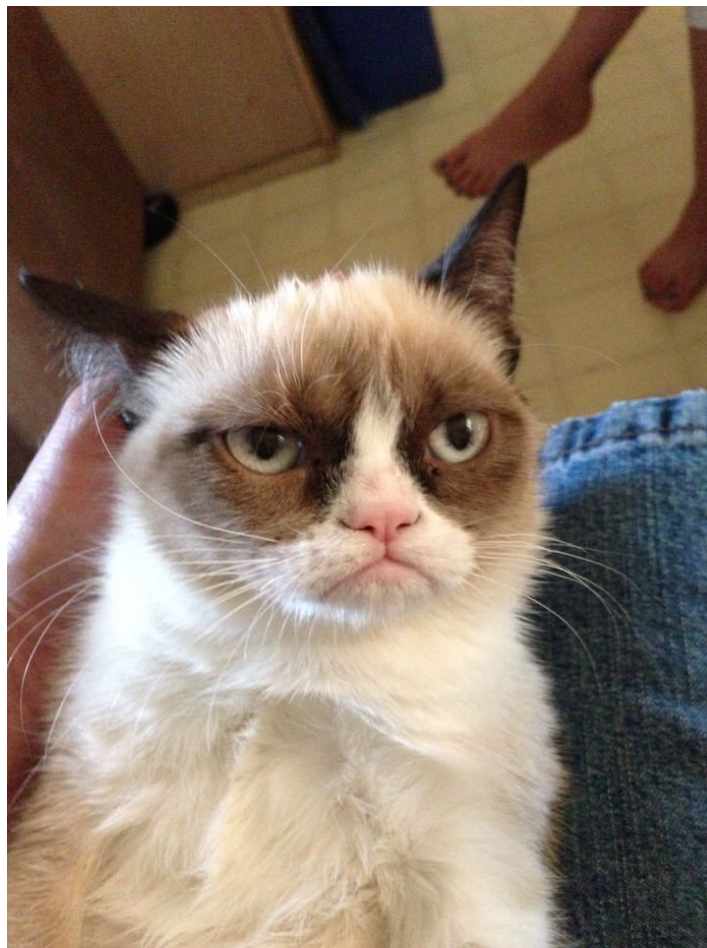
Group name: Cornell Opera Society

Group name: Opera Society Website

Members' names: Joseph Nechleba, Ian Ochola, Kanu Kanu, Gary Gao

Members' NetIDs: jdn64, iao6, kjk225, gg392

Section: 203



Part 1: Necessary Information

1. Please provide us your login username and password. Remember, your username and password should be hashed.
(if your site has multiple login systems, please specify which username and password corresponded to which login system)

Username: abbi

Password: password

2. Please provide us your DB login username and password

Username: fp_operasoc

Password: password

Use of Existing Libraries

As there may have been some changes, please give us the most up-to-date list of existing libraries that you are using for your website (e.g. editor.js, jQuery Cookie, Image Sliders, jQuery). What did you have to do to incorporate those libraries? How much of your own code satisfied the project requirements?

We actually only used jQuery in the end as we found other ways to do our other functionalities with Javascript, CSS, and PHP.

- jQuery: used for enhanced website backend functionality. We used it in combination with AJAX to send data taken from the website with jQuery through clicking. We incorporated jquery by including the script of it from google.
 - This code satisfied a good amount of the project requirements because it was pretty complicated to use jQuery with combination with AJAX, php, and mysqli to get information as an javascript object to be parsed with a php script to send updates to the database.

Part 2: Testing Protocol

1. How are you going to choose users?

How will they be representative of the target audience? How will you find them? Where will you meet them? Will you compensate them?

We are going to choose unbiased, average users to test our website. We feel that most of the people in our main target audience will have average levels of technical experience so we will seek out users who have average technical backgrounds. We think our target audience will have little, some, or a lot of interest in opera so we will seek out users who have even a slight interest in opera. We will find most of these users on-campus; users will include students, staff, and faculty. We will meet them on central campus locations such as Uris Library or Cafe Jennies; we will give the users preference on where they would like to meet. They will be given little compensation such as free snacks or drinks.

2. What tasks are you going to have them do? How would these tasks connect with the client's needs?

Task name/id	Task description	Task goal/what's being tested/expected outcomes
First impression	Ask the user to look at the site for 5 seconds and describe their emotional and intellectual reactions	Want to see whether the design communicates client's key site goals to the target audience; want to see if people get the metaphor right away.
Homepage Navigation	Ask the user to navigate the homepage	Want to see whether our homepage design and layout makes sense and is navigable to the average user.
About Us	Ask the user to tell us 1 or 2 facts about the club and to name some members	Want to know whether our about us page serves it's function of describing the club to group; want to see if this page has too much information
About Opera	Ask the user to tell us some basic opera facts	Want to see whether our about opera page is easily findable; want to see whether our about opera page is necessary/helpful to the average user
Contact the President	Ask the user to tell send an email to the president	Want to see the usability and ease of using the contact form on our website; Want to know the user's reactions to the email and if the response email makes sense;
Add an Event	Ask the user to add an opera society event to their personal google calendar	Want to see the usability of ease of adding events to their personal calendar; want to know the user's reactions to this functionality and if it is helpful or unnecessary
Gallery Navigation	Ask the user to find and use our performance gallery displayer	Want to see how well the user interacts with the display; Want to see if captions are easily readable; want to see if pictures sizes are easily viewable
Suggestions	Ask the user to give us any suggestions	Want to know if there was anything the user felt could be improved, added, or deleted to make their experience better.

3. What's your script?

How are you going to welcome them? Reassure them that you're testing the site, not them? Get them to think aloud while they use the site?

How are you going to introduce each task? What wording will you give the user? Will you give them any information in advance (probably not -- they won't have it in a real deployment -- but for sketches and early prototypes you might tell them that some things don't work)? How will you remind them to think aloud? How will you decide when to "give up" on the task?

Afterwards, what specific questions or general opinions will you ask for about their experience or the site? How will you thank them?

"Welcome to see the Opera Society Website. We would like you to use our website so we can get a sense of how our users will be interacting with it. While you are using it, we would like you to think aloud by stating what you think, how you feel, and any questions you might have while navigating through our site. Examples would be "Wow this is really cool", "How do you do this?", or "I wish this was easier to access."

To make this a bit more structured and to ensure that we get to all the points on our website, I have formed some basic tasks for you to complete. If you're ever having trouble completing any of these, just say you can't do it and we will move on. Also, go as far as the website will let you to answer the question/complete the task.

First before we start, I would like to know your first impression of the sight. What are some things that you thought when you first saw it. You can say anything."

[Response]

"Great. Now I would like you to navigate and use the homepage. While you're doing this make sure to think aloud and tell us what you're thinking as you're using it."

[Response]

"Thanks. Now I would like you to tell me 2 facts about some members in the group. *[if necessary remind them to think aloud]*."

[Response]

"Thanks. Now can you tell me some things about opera that you can learn from our website? *[if necessary remind them to think aloud]*."

[Response]

"Great. Now, please send an email to the president telling her your thoughts about the new site. *[if necessary remind them to think aloud]*."

[Response]

"Awesome. Now tell me when the next opera society event is and add the date to your google calendar. *[if necessary remind them to think aloud]*."

[Response]

“Awesome. Now tell me when the next opera society event is and add the date to your google calendar.
[if necessary remind them to think aloud].”

[Response]

“Great Job, we’re almost done! Now I would like you to look some pictures from opera society events.
[After they find photo gallery] Try using the gallery to see some amazing photos and read awesome captions. *[if necessary remind them to think aloud].*”

[Response]

“Awesome. We’re done for with the basic testing for now. Now, can you give me some suggestions? Do you have any lingering thoughts about what you did like/what we could have done better.”

[Response]

“How would you rate the user experience on a scale of 1-10?”

[Response]

“How would you rate design on a scale of 1-10?”

[Response]

“How would you rate the website as a whole on a scale of 1-10?”

[Response]

“Thank you so much. We really appreciate the feedback. You are awesome for doing this and will really help us get a good grade on the project! Definitely reach out to me if you have any more opinions and suggestions.”

[End]

Part 3: Testing Notes

You should have tested your site on at least three representative users.

User 1

1. Who is your user, e.g., where do they come from, what is their background, etc.?

My user is my roommate, Jesse. He is a Cornell student (Junior) studying environmental engineering. He has moderate technical experience.

2. How does this user represent your target audience/client's needs?

Much of our target audience is Cornell students so he is a good example of an unbiased student we think would use the site in the future.

Tasks for user 1	User's reaction/feedback/problems?	Re-design ideas and other notes - <i>what are the different solutions you can think of to address the feedback/problem?</i>
First impression	"Simple and clean nav bar, likes the picture."	Keep the simple design consistent throughout the website.
Homepage Navigation	"Easy and simple to navigate, not very cluttered"	Stick to new and simpler design that Kanu made.
About Us	Header picture is good, good way of displaying the mission statement of the club. Doesn't like the large login button.	Make the login button smaller!
About Opera	Information cleanly displayed, not much to say other than that's different than the about us page.	Make a header image similar to the about us page.
Contact the President	He was able to find where to do this on the website. Liked that it was combined with the about us page.	Contact me button easy to use
Add an Event	Was able to add and navigate the calendar correctly	Google calendar is very intuitive
Gallery Navigation	Likes the simple search and image display. Clean. Doesn't like the header image at the top.	Delete the header image!
Suggestions	Even though the simple/intuitive design is easy to use, it'd be nice to have more pictures and color.	Incorporate more red and whitespace into the design.

3. Other notes from this user that will be useful to think about when redesigning.

.Really likes the Header image on the About Us page! Try to replicate!

User 2

1. Who is your user, e.g., where do they come from, what is their background, etc.?

My user is my friend Maria. She is a sophomore Hotel Major. She has little technical experience and also has an interest in the arts.

2. How does this user represent your target audience/client's needs?

She is a Cornell student, which comprises much of our target audience, and also is interested in the arts which is helpful because she is more likely to be interested in the opera society and our website.

Tasks for user 1	User's reaction/feedback/problems?	Re-design ideas and other notes - <i>what are the different solutions you can think of to address the feedback/problem?</i>
First impression	The photo of the singer on the home page is very high quality! Really cool way of making the Opera in Cornell red.	Use the alternating red words in other aspects of the website.
Homepage Navigation	Drop down about menu is good way to save space on the navigation bar.	Break About into About Us and About Opera on other parts of the website.
About Us	Thought the edit option needed styling.	If time style the editing features for the admin.
About Opera	The information was interesting! Maria's never really been exposed to opera before, and she thought the wikipedia entry was a good intro.	Keep the content text in the About Opera section.
Contact the President	Was able to use the revamped Contact the Opera society button, which directly accesses the email app on the computer.	Keep the contact link directly connected to the email application.
Add an Event	Huge calendar good. She really liked that it's mobile friendly.	Make sure all pages are mobile friendly!
Gallery Navigation	Thought images should be a little bit bigger. Really liked that you could click on an image and it would be shown at a larger scale in a slideshow.	Resize images so only four display. Keep the javascript slideshow gallery functionality.
Suggestions	Make the login page prettier!	Make the login page design consistent with the other pages, even though it's an admin feature.

3. Other notes from this user that will be useful to think about when redesigning.

Consistency across the whole entire website is a must!

User 3

1. Who is your user, e.g., where do they come from, what is their background, etc.?

My user is my friend Simon. He is a math major with interests in music and he loves a large variety of music and can play multiple instruments pretty well. He has not as good technical Experience

2. How does this user represent your target audience/client's needs?

Simon is very interested in music and is highly active in the music community. He's a person who we think would be likely to visit a site about opera.

Tasks for user 3	User's reaction/feedback/problems?	Re-design ideas and other notes - <i>what are the different solutions you can think of to address the feedback/problem?</i>
First impression	"It looks really good! Color scheme works well."	Keep the simple white red and black color format.
Homepage Navigation	"Clear and crisp. Thinks it's really cool for a student organization website. White background on some of the pages looks bad though."	Make all the non-admin pages have a black background.
About Us	"Sidebar navigation a little too wide., but overall great design."	He thought it looked a little too fat, make the width of the nav-ctr a bit smaller.
About Opera	"Information is good,	"Keep as is"
Contact the President	"It is cool"	"He likes having it link into another application" It's safer too because we rely on their authorization/sanitization
Add an Event	"okay"	Make more events
Gallery Navigation	"Seems good"	Make the images smaller so clicking on them makes a difference in size
Suggestions	"The login page is different"	Restyle it

3. Other notes from this user that will be useful to think about when redesigning.

Simon thinks this is a very cool website and he thinks we should look at other opera websites.

Part 4: Testing Summary and Iteration

1. What did you learn about your users? About your site? About yourselves?

We learned that our site could use a little more work in terms of design and implementation. We are going to make updates based on the user feedback. Also we learned that users think opera society is a really cool group to make the project on and will have really interesting content. More introspectively, we learned about different ways we could help each other out in making updates.

2. What are three key changes you made based on the testing? What alternatives did you consider? Why are these changes appropriate?

4. Updated Home design
 - Changed from basic black/white to adding red on some pages. This is appropriate because it was a suggestion from the client. Also made the website more like other famous opera websites.
5. Updated Navigation Bar pages
 - Made them more clear and centered so they are easily accessible. Users will now be able to use it with ease. Made less Navigation Bar buttons so less cluttered and made navbar on the side for non home pages to emulate other famous opera websites.
6. Made a script to make the contact link open up the computers mail program
 - Testers seemed to think this was more convenient and cooler than writing it on the website.
 - Also is more secure

If you make any changes to the testing protocol for round 2, tell us what they are here.

N/A

Part 5: Final Notes to the Clients

1. Describe in some detail what the client will do (or would have to do) in order to make this website go live. What is the deployment plan?

The deployment plan is to transfer the hosting of the website from the Info 2300 servers to another service. We are planning to move them to another surface but as they are a new club, they are currently unsure of their fundings and do not know which service they should move to. We suggested blue host or wordpress if they had the funds. Depending on the hosting, we can help move the database for them as well.

2. Include any other information that your client needs to know about your final website design. For example, what client wants or needs were unable to be realized in your final product? Why were you unable to meet those wants/needs?

We wouldn't able to do a photo reel with all the images rotating places. We also didn't incorporate their logo. We were not able to meet their needs because the photo reel was not that important to them and their logo was contrasting black and white and really hard to make it look good with the website. However, they were happy with all the other needs and we actually did more than they wanted as well. Our clients were surprised we did so much for them as they only wanted a minimalistic simple website.

Part 6: Final Notes to the Graders

1. Give us three specific strengths of your site that sets it apart from the previous website of the client (if applicable) and/or from other websites. Think of this as your chance to argue for the things you did really well (justify the wow factor of your website).

A. You can edit any text with the class edit given it also has a unique name and id by using jQuery to get the html information to send with AJAX in which we have a php file extract the information sent with AJAX and make a mysqli connection to update the Database. You do this by logging in as an admin and clicking on some text. We also used javascript for more leisurely of life scripts to bring up the popup window and refresh the page and make things look better.

B. Our gallery is really cool and has a nice design and you can click on it and it brings up a popup of the bigger sized images and it has buttons to change the picture and an x out button to close the popup. You can slide through through the images like theater screening.

C. Our website is extremely mobile friendly. It has collapsable navbars and all images and text wrap around the smaller screen accordingly. Everything can be viewable on a mobile screen. Everything scales and the navbar changes when the size is smaller.

2. Tell us about things that don't work, what you wanted to implement, or what you would do if you keep working with the client in the future. Give justifications.

We wanted to make the admin able to edit multiple text at once but it caused visual errors and problems with sending post information. We also wanted to make the admin have red highlights and other features in the text editor, but clicking on those caused errors because the span didn't have an id field and if it did it would have affected how the functionality of editing text worked. The clients were fine with the implementation.

If we had more time as well, we could have made a photo reel for them if we could keep working with them in the future. We also could've designed and more favorable looking logo. We couldn't implement these because the logo contrasted with every design we looked at. We could also add more content given that they didn't have that many pictures.

We also wanted to implement pictures in the member section, but the President and Vice President did not want their faces published. They actually wanted no web presence for their website and wanted the members of the club to be anonymous (at least images of them) to the world. Had we had more time, we could have populated the members table with real people who did want to be known on the webpage or convinced our clients that pictures of them were okay. But as it stands, we didn't implement pictures for the members because of our clients' wishes.

In addition, if we could have keep working with the clients in the future we could have considered convincing them to use a forms to send emails with the google recaptcha api like we did before, but they

preferred the more safe looking mail programs preinstalled with computers.

3. Tell us anything else you need us to know for when we're looking at the project.

Our website has two navbars before it is emulating one of the bigger opera webpage designs. We also took some of the pictures from online as placeholders because the opera society has very little content as they just started. Many of the pictures were from a website which didn't require copyright as they were free to use.