Design Journey Part 2

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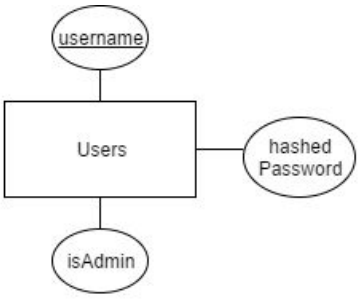
Section: 213

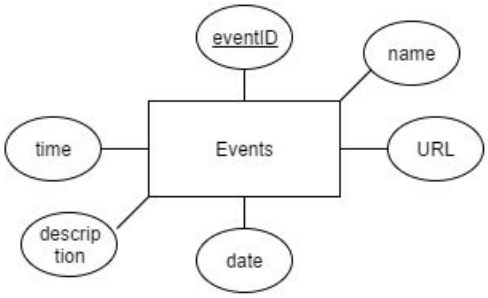
Part 1: Database Design

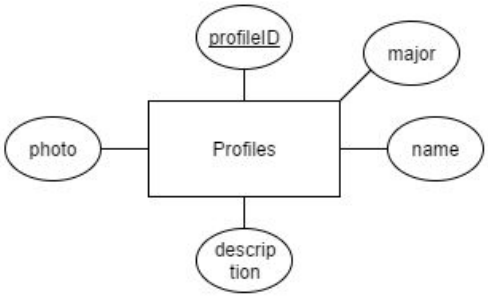
Conceptual ER Diagram (different arrows, see slide 13 of Lecture 17; relationship and ER, see lecture 16 and 18)

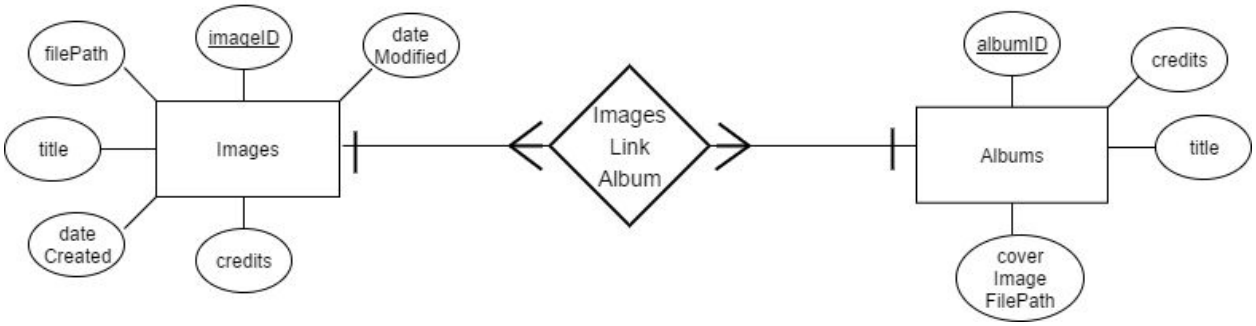
In this part, please copy and paste your ER diagram for your database below (you can make your ER diagram using any tool of your choice). Make sure the relationships between each entity are clear and well thought-out. Don't forget to indicate what kind of relationship each arrow represents. Your database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

Tables: Users, Events, Profiles, Images, Albums & ImagesLinkAlbum.
Underlined attributes are primary keys.









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: this is a description after the ER diagram has been mapped to tables in our database.

To start with, there is a *Users* table that stores information about each user who makes an account on the website. It stores the username, password & a boolean isAdmin that states whether the user has admin privileges or not. The username is unique & thus serves as a primary key, while the password is hashed and stored for security reasons.

The *Events* table stores details about each event. Each event has its own eventID (and thus it serves as a primary key). Besides this, its name, time, date & description are provided. A URL field helps point to a social media site (if it exists).

The *Profiles* table stores details about the EBoard of the Food Science Club: each is identified by his/her profileID & contains information such as his/her name, major, photo & small description.

The *Images* table contains information about each image; identified by its imageID, it also contains the title, the date it was created, the date it was modified, the filepath and the credits.

The *Albums* table contains information about each album; identified by its albumID, it also contains the title, the filepath for its cover image and the credits.

The *Images* & *Albums* table are in a many-to-many relationship with each other. This is because one image can belong to many albums, while an album can contain many images. Mapping this relationship to a table in the database gets us an *ImageLinkAlbum* table wherein each row is in the form of (imageID **i**, albumID **a**), which implies that the image with imageID **i** is in the album with albumID **a**.

Design choice: We were thinking of having a relationship between *Users* & *Profiles*, but soon realized that it wasn't necessary for all users of the website to have profiles; for example, someone who just wants to receive updates may sign up, but will definitely not need a profile on the site!

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)	**Sub category** (List any sub categories of under the main navigation)	**Content** (List all the content corresponding to main navigation and sub categories)
Home		● An eye-catching home page that embodies the vision of the club and makes navigation simple from the get-go. ● In addition to an automatic image slider with various images of the club members at various event and a list of the club's various sponsors, the page will include a login form, some information for new members, a way to subscribe to the listserv, and a Facebook Like Button plugin for its page
About Us		● A more in-depth description of what the club represents and information that will make it easy for prospective members interested in joining. ● Include the names of some companies that work with the club to host opportunities/events to enhance club credibility & attract more students..
Events	1. Upcoming events 2. Past events	● A list view of events filtered by date, i.e., upcoming events vs past events. The list view should provide much more detail than the calendar, including a full description of the event, a link to the event page. This should be searchable as well to allow easy access to the users. 1. **Upcoming events** List upcoming events or information sessions the club is hosting and other various mandatory or optional meetings for members to attend. 2. **Past events** Archived events that the club has hosted, including the description of each event along with possible images.

Calendar	1. Daily view 2. Weekly view 3. Monthly view	● Calendar view of upcoming events, which can be toggled to display events for the day, week, or month. ● The calendar view displays concise information about the events, & directs users to the individual event pages, which contain more details, when an event is selected. This allows to access more information in less amount of time. ● We are also trying to send an email to the user for future correspondence for an event when he/she clicks on a particular event 1. **Daily view:** list events on the day, some details in description(s) of event(s) that day but directs users to individual event pages containing more details when selecting the event. 2. **Weekly view:** list events on the week, directs users to individual event pages containing more details when selecting an event 3. **Monthly view:** list events on the month, directs users to individual event pages containing more details when selecting an event
Photos		● Photos pleasantly organized into albums by events. Basic information about even album should include the event name, date, etc. (similar to Project 3) ● Potentially use JS here to enhance aesthetics.
Contact Us		● A simple form to email the club and basic instructions on how to reach out to the board if needed. ● Emails directly from web page; does not open pop-up window

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?

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.

Because we are making a pretty standard website, we chose to use a traditional sticky navigation bar on the top. We also plan to add a footer. Our navigational structures will have white text on a black background so that the text is very visible for contrast. This ensures the user can easily click these links if he/she wants to go to a particular page. This will be present on all pages, to enhance accessibility.

The footer will have a Facebook button that links to the Food Science Club's Facebook page. In addition, we might put some important information in there if required.

Depending on the content we put, some pages might automatically redirect to other pages upon mouse clicks or other events. These will also add to user experience.

We chose this design structure because both our client & target audience will use the site as a source of information; this structure ensures information is easy to access & most users of the site will also be very accustomed to this layout. While using a funkier layout may seem to be more aesthetic & "cooler", we don't want to confuse our users with features that they find inaccessible & difficult to use. However, to make sure our site is not just "plain vanilla", we have added some effects to the navbar that also help in identifying which page the user is currently at.

The navigational bar will turn into a dropdown menu on smaller screens, where the limited screen space can be used for content.

The navigational categories include Home, About Us, Events, Members, Photos, Contact Us & a login button. Why this navigation makes sense for the target audience is outlined below (for each group mentioned in Design Journey 1):

- Admins: Upon successful login of an admin, there will be more categories involving addition, deletion or modification of events/photos/other details.

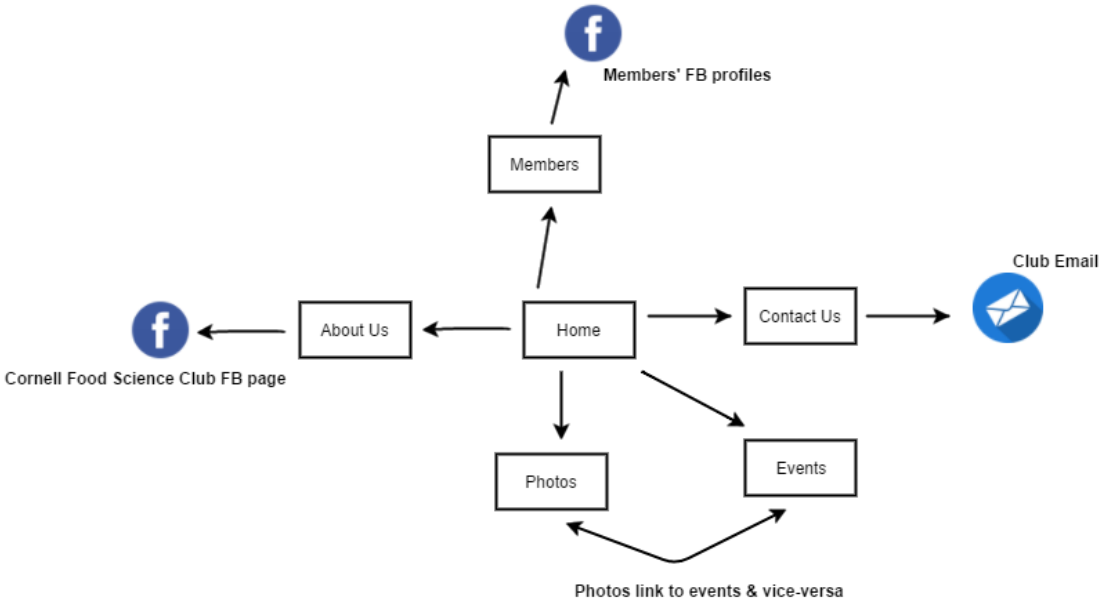
- General members of the Cornell Food Science Club: They would be most interested in the Events & Pictures sections, both of which have separate links on the navigation bar, thus making it very easy for them to view what they want to see on the site.

- Students (namely Cornell students): Because of its appearance as a typical website, it will be easy for this group to survey events, lookup upcoming events or look at past event photos

- Members of the general public: In addition to the above, there is an "About Us" tab that will help this group find the purpose of this website & the Food Science Club.

NOTE: This is a tentative design; only included to show a visualization of what was described above.

Tentative Site Map:



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 client/target audience.

PHP

- Login form
- Contact form
- Search form
- Photo album
- Event page
- General

JavaScript

- jQuery
- Calendar
- Facebook likes
- Contact form
- Animated slides

All the above is as per our audience needs (Design Journey Map 1) & Part 2 (Design Journey Map 2). For example, the Facebook like button will allow users to connect with the Cornell Food Science Club on Facebook, thus also spreading awareness about the club. Another example, the login form will be used by the club admins to change content. Other features listed above fulfil other needs of the audience. In a nutshell, we have listed the above to capture all possible interactivity for users & have tried to make them as intuitive and appealing as possible.

A lot of the JavaScript is to make the site look nicer. We will take care to ensure that these do not impair the functionality of the website in any way in case JavaScript has been turned off in the browser.

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 form:** Admins can login using PHP to validate login input. A call to the database will retrieve a Boolean identifying whether the user has admin rights. Passwords will be hashed using *sha256* hashing (with the possibility of adding a salt to it). When creating a new user, upon validating user input to ensure fields are not left empty, a call to the database will validate whether the username is unique and print an error message if not.

- **Contact form:** Allows anyone to contact the club by email through a simple mail form that is executed through PHP validation and an HTML form that is “echoed” through PHP. We are also thinking of client-side validation with JavaScript: it will also look nicer than the default HTML5 validation.

- **Search form:** Calls to database, selects selected field(s) (or all fields if none specified) and identifies events that most closely match the search parameters. Examples of fields to be searched include the event name, date, time, and description.

- **Photo album**: We will use PHP to make calls to the database containing images and albums and properly populate the various albums and event pages using these calls (much like P3).

- **Event page**: All events will contain a link to any images (if they exist) relating to the event. This will be done by encoding the specific unique imageID within the linked URL.

- **General:** Each page will contain elements that are loaded dynamically via PHP include files that will maintain repetitive code in order to help reduce load times.

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 JS 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.

- **jQuery**: This will be used across the entire website for multiple purposes including dynamically changing components. This may include something near a small food icon that changes depending on the page or additional styling for each image. Will probably involve basic jQuery such as potentially involving changing the *src* attribute of the image.

- **Calendar**: We will likely be using Google Calendar API to make calls/design our event calendar to navigate between monthly, weekly, and daily views. We may also use JavaScript here to style the calendar for aesthetic purposes.

- **Facebook likes**: We will implement our Like feature using Facebook API.

- **Contact form:** Allows anyone to contact the club by email through a simple mail form that is executed through PHP validation and an HTML form that is “echoed” through PHP. We are also thinking of client-side validation with JavaScript: it will also look nicer than the default HTML5 validation.

- **Animated slides:** We will implement our slideshows through AnimeJS, a JavaScript animation engine and/or ReactJS, a dynamic front end component.

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

Part 4: Additional Comments

If you feel like you haven't fully explained your design choices, or you want to explain specific functions in detail, do so here. You can use this space to justify your design choices or ask other questions about the project and process.

N/A