

Audio-Transcript Database Implementation

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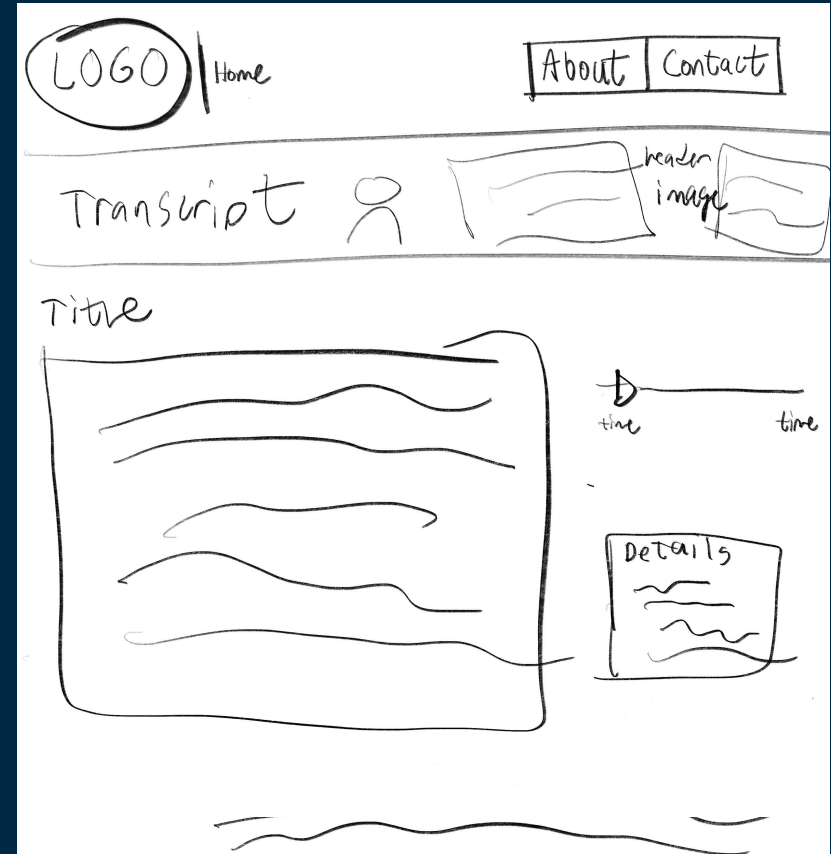
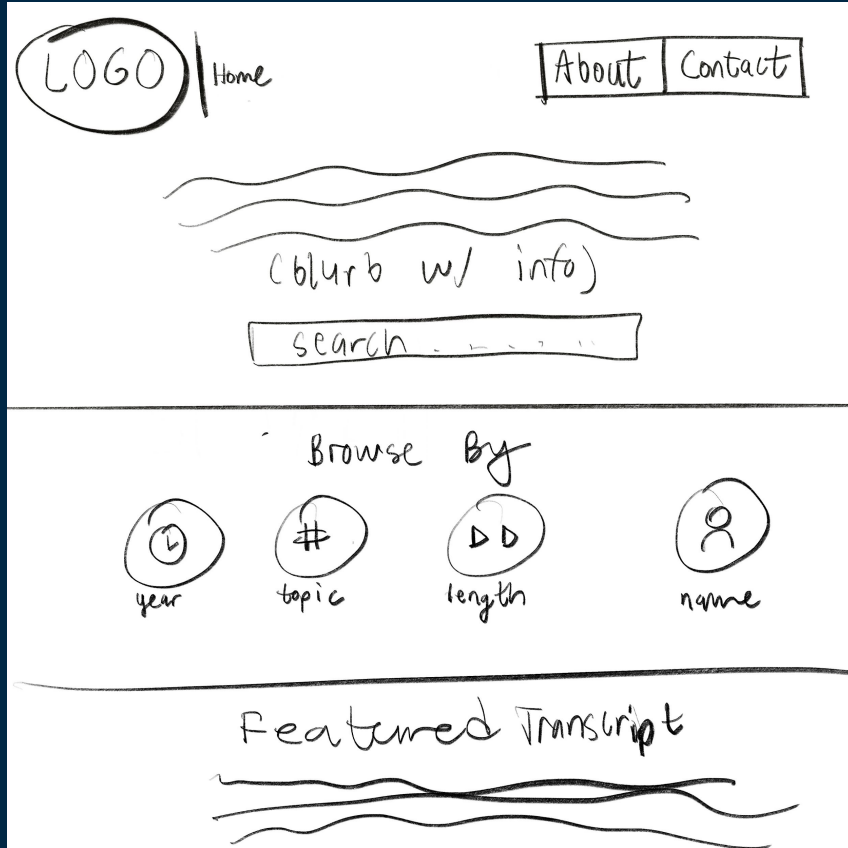
Problem Statement

- The Trentoniana website is difficult to navigate and the audio files are not easily accessible
- Audio files & transcripts are not linked to each other
 - No way for the public to access transcripts
- There is no way to search for specific dates, names, etc. on audio files
- Having solely audio files makes it extremely difficult, if not impossible, for people who are hard of hearing to access
- There is no way for viewers to address problems → there is no way for moderators to know how to improve the website

Project Concept

- Audio-transcript files are tagged with topics, names, dates for a convenient search option as well as a search bar on main page
- Similar to YouTube → each audio file would display number of views each file has and the number of comments and “likes”
- Similar to TED TALKs → user can listen to audio file and has the option to view the transcript
 - Audio file and transcript sync up while playing the file, so the transcript portion is highlighted and matches time stamp of audio file
 - A user may not want to listen to the entire audio file to find information so having a transcript will be helpful for that reason
 - For some users, it may be difficult or impossible to only listen to an audio file, so transcripts will help them follow along better
- Submission box for new audio files, records, or suggestions
 - ie. “Report an error” or “Suggest a new file to be transcribed”
- ● Audio files and transcripts are the focus of the site for easy accessibility

User Interface



Database Schema

- Entities include Audio Files, Comments, Tags and Users specialized into Moderator and Admin
- Audio Files will have an attribute transcript which is a file containing the text of the transcript
- Audio files will also have a name attribute, a view count and like count of type int, and a date of the time the file originated from.
- All users can view audio files, make suggestions and will have a guest user ID. Users will also have a clearance level and will be specialized based on their level of clearance.
- Moderators and Admin will have a username and password and be able to review files and Comments. Admin can create new Moderators and Admin users and edit files directly. User capabilities are indicated by boolean attributes.
- Audio Files will have Tags. Each Tag will have a name and tag ID. One Tag can apply to many files and files can have many different Tags.
- Tags will define some type of characteristic of the topic of an Audio File.
- Comments made by users will relate to some Audio file. Comments will have a date, and the comment itself as attributes.

Security Features

- We plan to implement a few security features for our implementation
- The implementation will have a User ID and password for the moderators and admins of the system, the basic user won't need a User ID and password as they just need to be able to view or comment in the database
- Don't store passwords in plain text, store the passwords using a hashing function like SHA-2
 - When the user tries to sign in, use the hashing algorithm on what the user entered for the password and compare it with the hash stored in the database, and if it matches let them sign in
 - Make requirements for the password, like minimum length, uppercase, etc.
- Administrators will have the most power in the implementation, having access to all the database information, and the ability to create moderators