Stage IIa: Project Proposal Pitch and Specifications (First Draft)
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Problem statement

After thoroughly exploring and evaluating the Trentoniana Room website, we have discovered several problems that must be addressed in order to provide the best possible user experience on this site. These problems include poor design choices, unnecessary information, and general inorganization. Each of these is further broken down below:

- ***Problem 1:*** The fonts/color for links on the landing page are inconsistent
    - ***Solution:*** Make consistent, use a red font instead of blue, underline it. Maybe some indication it's the link such as a hover feature that can easily be implemented through modifying the CSS
- ***Problem 2:*** The Internet Archive linked in the landing page is unnecessary and redundant
    - ***Solution:*** Simply remove this as a link from the page because you don't want to confuse the user by providing an abundance of information
- ***Problem 3:*** Landing Page for the Audio Database is a mess, and not user friendly (Oral History)
    - There are files with titles that are just names and numbers, rather than a name.
    - The naming is very inconsistent
    - There are no descriptions about what the file contains
    - There is only a dropdown for sorting by date archived, there should be for others
    - There is no reason to display all of the files randomly on the landing page
    - ***Solution:*** Reorganize the database in a way that makes it much easier for the user to navigate. This will be accomplished by placing each file into more specific groups by content and date.

Objective of the module.

We will address the problems and provide solutions to them to the best of our ability, providing an improved, positive experience to the users of the Trentoniana. The Audio and Visual section will be reformatted to access the appropriate files that are organized, named, and described to offer more context. In order to make this website and database more accessible, we will improve

the display of the data, the sorting, and the overall visual presentation of the site. We intend for our system to be attractive to the eye, and easily navigable: data will be displayed so as not to overwhelm the user, and provide them with as much relevant and related information.

Description of the desired end product, and the part you will develop for this class.
Our desired end product is a new and improved The Trentoniana Room website that contains the proper website tools, organized retrieval of audio and visual files found on the site, and providing proper database access for users and creators. We will organize the files into a database with proper access, and rework some issues with the website in general.

Description of the importance and need for the module, and how it addresses the problem.
The current website is very hard to navigate, and there is much to be improved on from the user interface. There are inconsistencies that make it seem unprofessional and unorganized. We will be creating a more user-friendly interface to make the site easier to use. We will be paying close attention to formatting on the site so it looks visually appealing as well.

Plan for how you will research the problem domain and obtain the data needed.
Currently, as a group, we went through the audio and visual portion of The Trentoniana Room, and noted down the issues we saw as new users to the website. After identifying the problems, we brainstormed ways of how the website could improve based on these issues. When we've developed an example product showing the new features implemented to The Trentoniana Room, we plan on presenting our product to other groups, gaining qualitative data on how useful, streamlined, and effective our changes have been. If there are points brought up by other students that will help our design, those changes will be implemented.

Other similar systems/ approaches that exist, and how your module is different or will add to the existing system.
For the video aspect, a platform like YouTube is a great example of how to display videos. We can base our approach for the video's on the style/organization YouTube utilizes. As for the other aspects, academic databases like Ebscohost, and JSTOR, provide a straightforward and visually appealing approach that makes viewing a variety of content (videos, photos, text

entries) efficient and easy. The Schomburg Center is another similar system, in terms of the organization style, though our system will be less cluttered and overwhelming to the user.

Possible other applications of the system(how it could be modified and reused.)

This could be modified and reused to sort and organize other websites, like The Trentonian Room, to help streamline other historical collections available online. The layout can be reformatted to organize any collection of historical audio and visual data.

Performance –specify how and to what extent you will address this

The database performance can be defined as the optimization of resource use to increase throughput and minimize contention, enabling the largest possible workload to be processed. We will address the performance through the workload, throughput, optimization, resources, and contention. The workload is the system commands and transactions directed through the system at any given time, and connected with throughput, the necessary hardware and software would be needed to run the database efficiently. For optimization, the purposeful parts of the database would be created (SQL formulation, database parameters, database organization, etc.) to enable the database optimizer to create the most efficient access paths to the data. Meeting the requirements of contention would also lower throughput, by allowing more than one component of the workload access to a single resource. Our database will cover all of these performance tactics to provide the best usage to the users.

Security –specify how and to what extent you will provide security features.

The security of the database will be implemented by providing only the creators and website owners to access the details of the database. Regular users will be able to access the features but not be able to implement any new features. Authentication would verify a user's credentials if they match the ones stored in the database. New data can only be added through the verification of such accounts.

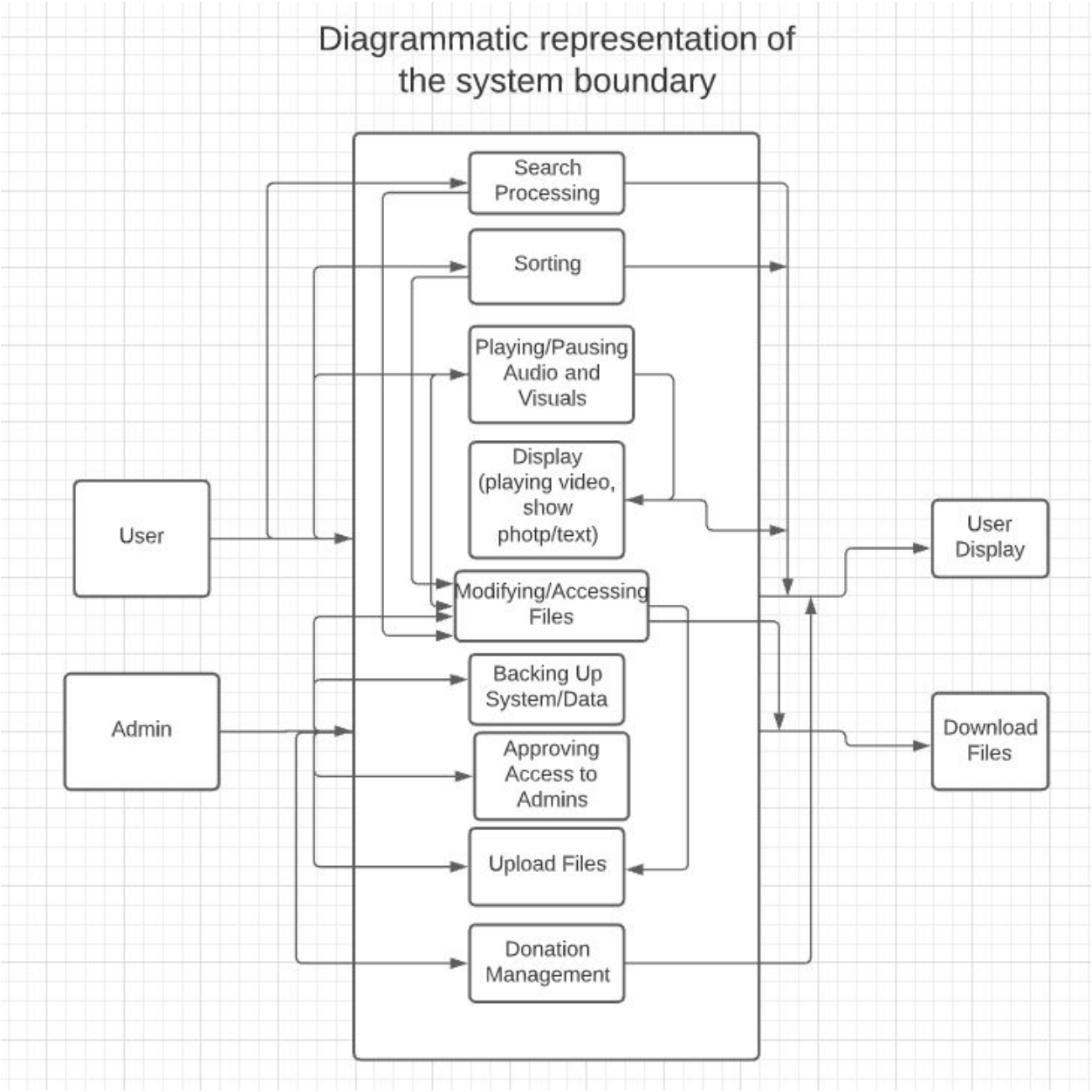
Backup and recovery –specify how and to what extent you will implement this.

Having backup data in case the site is corrupted or there is an issue with the database would be useful. We will implement some method of a backup, but we'll need to decide how often it will be backed up. This will depend on the frequency of how entries there are. It may be necessary to only back it up once a week.

Technologies and database concepts the team will need to learn, and a plan for learning these.

We will need to learn how to implement a database into a website, and be able to manipulate the output to fit how we'd like it to appear on the user interface. We also need to learn how to sort entries, and display them based on user input. Backing up the database is another component we need to learn. In our 315 Class, we hope we'll learn how to create the database and fill it with entries, as well as how to sort them and back them up. We may need to do extra research on implementing it into the website, which we will do by watching tutorials/reaching out to professors for assistance if needed.

A diagrammatic representation of the system boundary that specifies what data you will model and which queries you will implement



1-page quad chart; see: Quad_instructions_template.pptin the Canvas files section

TCNJ THE COLLEGE OF NEW JERSEY

Database Project for Trentonia Room

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Need

An intuitive way to access historical audio and visual files from The Trentoniana Room website.

Audio and visual files are accompanied by corresponding information that enhances the informational experience.

Information is organized in a professional fashion, where formats for titles, caption, transcripts, are uniform in appearance and style.

Approach

The system will meet the needs of users looking for an interactive, intuitive interface that neatly compartmentalizes data such as audio and visual files.

The system will be formatted in a simplistic way to ensure the needs of a range of users will be met, and met effectively. Users will be able to access relevant information to their search queries quickly and through compartmentalized groups of data organized by time, location, or term.

Benefit

Anyone who will use the website will benefit from the improved appearance and performance of our version.

Loyal users will notice The Trentoniana Room's improvement, acting as a testament to the organization's ability to change and improve, securing their loyalty for years to come.

Competition

The benefit of our model will already be better than the previous version, since our main objective is to improve upon its shortcomings.

Other similar systems include Ebscohost, and JSTOR for our plan to organize the video/audio files. Youtube's organization for video files is another similar system to our database's schematic plan. The Schomburg Center is another similar system, in terms of the organization style,though our system will be less cluttered and overwhelming to the user.

2/18/21