

**Group 10 - Roman Rychkov, John O'Brien, Kiera Gill, Sydney Blanchard**  
**Stage III – Elaboration: Database Model**

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Each team will review the specifications with stakeholders to discuss the requirements and scope of the project. All members of the team must actively participate in this review. Revise The Project Proposal and Specifications document, if applicable.

Based on the discussions, the team will develop a complete entity-relationship (ER) diagram to model the database. If you are adding to an existing system, show how and where the additional data fits into the original schema. Indicate what changes must be made to the original schema to integrate the new data

- Show all entities and the relationships between them. Be sure to clearly specify aggregation, composition, specialization / generalization, and multiplicities.
- Show attributes for each entity and relationship (where applicable).
- For each entity, indicate which attribute(s) form the primary key. Map the ER diagram to a relational schema, i.e. show the relations that evolve out of the ER diagram. Specify the keys and relationships between the relations.

Additionally, based on your research and understanding of the project requirements and scope, estimate the following:

- Initial database size (approximate number of records)
  - 74 Results/Number of Records
- Types and average number of searches
  - Types of searches: Metadata, Text contents
    - Also filterable by year, by topics/subjects (which include Trenton, Oral History, Jewish, N.J., New Jersey), and by collection (The Trentoniana Department of the Trenton Free Public Library, and emm morse Favorites)
  - Average number of searches: 2,003 total views of audio files. Most likely 1-5 searches per day based on the little amount of entries and views in the database.

Deliverables: Stage III: Submit on GitHub

- Revised Project Proposal and Specifications document, if applicable.
- Database Model Document in the “docs” folder and displayed on the wiki.
- Project milestones and issues created and/or updated(in the Stage IIb repository, as noted above).

**Entities:** Entry, Audio, Video, Transcript (weak)

**Entry (super)**

Attributes: EntryType, Length, Description, Category, DateUpload, FileSize

**Audio (sub)**

Attributes: EntryType (foreign key), AudioName, DateCreated

**Video (sub)**

Attributes: EntryType (foreign key), VideoName, DateCreated

**Transcript (Weak Entity)**

Attributes: EntryType (foreign Key), Text, AudioName

**Relationships:**

Audio IS A File (generalization)

Video IS A File (generalization)

Audio HAS A Transcript (aggregation)

Video HAS Audio (aggregation)

**Multiplicities:**

Video Is An Entry -> 1..1

Audio Is An Entry -> 1..1

Entry Is A Video -> 0..1

Entry Is An Audio -> 0..1

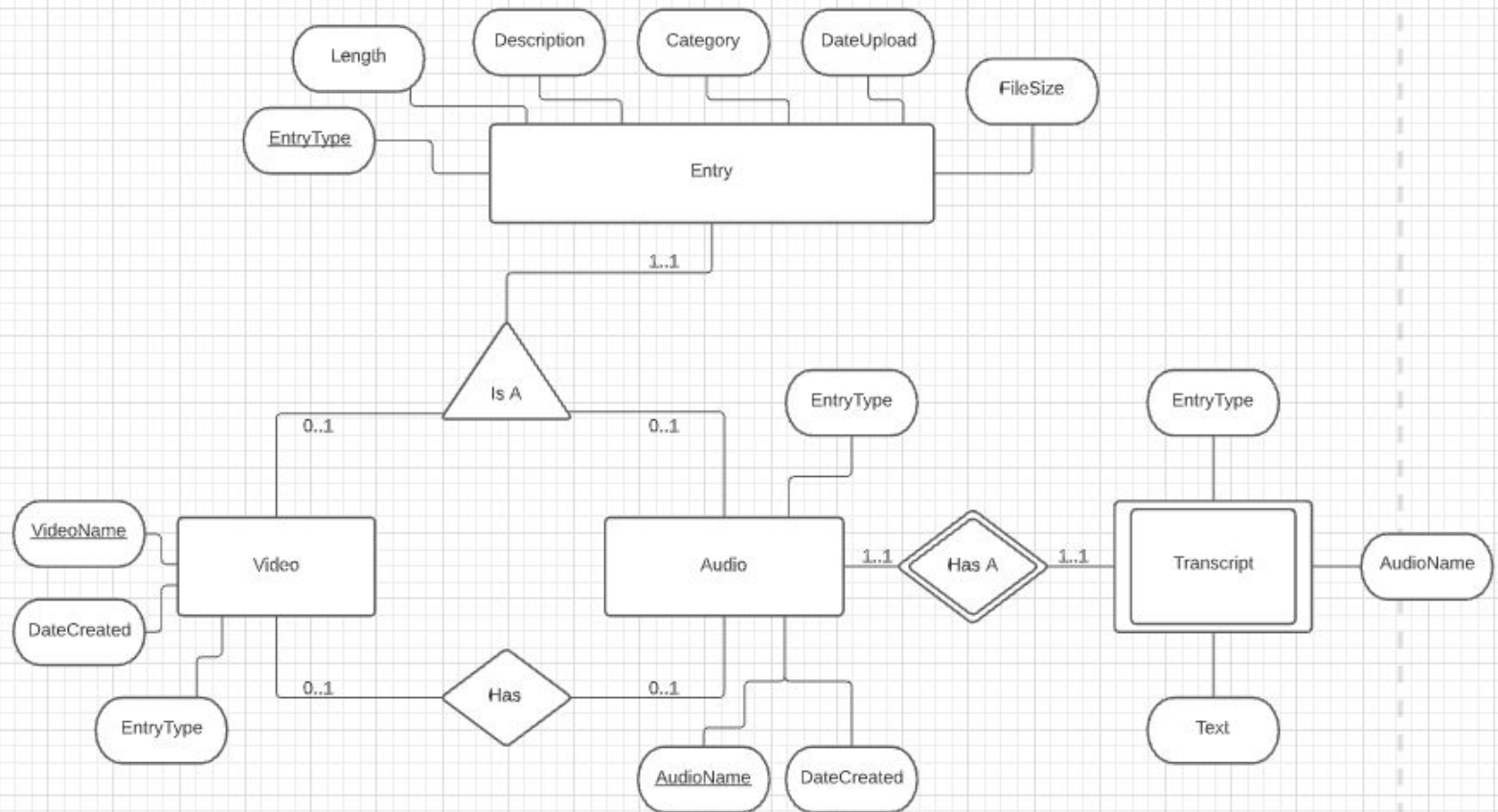
Audio Has A Transcript -> 1..1

Transcript Has An Audio -> 1..1

Video Has Audio -> 0..1

Audio Has Video -> 0..1

ER Model:



## Relational Schema

### Relational Schema Diagram

