# DAMG6210 – Database Design Document – Project Team 4

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- Database Topic: Podcast Streaming Application Database

- Database Description:

    Our podcast streaming app's database stores information about podcasts and user preferences such as searches, ratings, and playlists. This allows users to search, listen, download, rate, and create personal playlists and favorite lists. The database is designed for an efficient user experience and secure data storage.

- Database Objectives:

    o Persist information related to podcasts, such as Speakers, Ratings, Genres, Collections, and Subtitles

    o Manage user information and preferences, such as Playlists, Favorites, and Downloads.

- Business Rules:

    The Podcast App offers a comprehensive listening experience for users who are looking to discover and enjoy a wide variety of podcasts.

    o Downloads: This feature allows users to download their favorite podcasts, enabling them to access the content offline at any time.

    o Playlists: Users can create their own playlists, which are private and personalized lists of podcasts. Each playlist can be customized with specific podcasts that meet the user's interests.

    o Favorites: The "Favorites" feature is a many-to-one relationship that enables users to mark their favorite podcasts with a "heart." This feature creates a list of all the podcasts that the user has marked as favorites.

    o Podcast Management: With the ability to download, add to playlists, and add to favorite lists, the Podcast App provides a comprehensive and easy-to-use interface for managing podcasts.

    o User Registration and Login: To use the app, users must first register and then log in. After logging in, users can search and discover new podcasts to listen to, as well as manage and enjoy their existing collection.

- Design Decisions: 15 Entities
  - Speaker
    - Contains information about a speaker
    - One-to-Many: Collections, Genre
  - Collection
    - Contains information about a collection
    - One-to-Many: Speakers, Genre, Podcasts
  - Speaker_Collection
    - Associative entity for Speaker and Collection
  - Genre
    - Contains information about a podcast genre
    - One-to-Many: Collection, Speaker, Podcasts
  - Collection_Genre
    - Associative entity for Genre and Collection
  - Speaker_Genre
    - Associative entity for Genre and Speaker
  - Podcasts
    - Contains information about Podcasts
    - One-to-Many: Collections, Playlist, Downloads, Favorite
    - One-to-One: Subtitle
    - Many-to-One: Rating, Genres
  - Podcast_Collection
    - Associative entity for Podcasts and Collection
  - Podcast_Playlist
    - Associative entity for Podcasts and Playlist
  - Subtitles
    - Contains subtitles of a podcast
    - One-to-One: Podcasts
  - Users
    - Contains user information
    - One-to-Many: Playlists, Downloads, Favorite
  - Playlists
    - A specific list of podcasts created by users

- Many-to-One: Users
- One-to-Many: Podcasts

o Favorites
  - A list of podcasts that users have marked "Favorite"
  - One-to-One: Users
  - One-to-Many: Podcasts
o Downloads
  - Contains user's downloaded podcasts
  - Many-to-One: Users
  - One-to-Many: Podcasts
o Rating
  - Contains user's rating of a podcast
  - One-to-Many: Podcasts