## Database Design

## Developer: Rachel Conrey

## Overview

The application will use DuckDB to manage a relational database.

## Justification

DuckDB is an in-memory database that allows for the processing of large amounts of data quickly. This makes it a great choice for this application, which is based on data. DuckDB uses a columnar storage format, which works well for visualizing and querying analytical applications. DuckDB uses SQL to query the database. SQL queries will create the application's business logic.

## Data Structure

The data structure will contain tables to enter and view personal data, track training data, and use the data to provide analytics and reporting. The following is a brief overview of each table:

- The member_data table will store personal data to include name, contact information, and emergency contact information.

- The login table will handle authentication for the application and allow appropriate access based on the roles.

- The roles table lists the available roles with descriptions.

- The training_status table provides members with their individual training status and allows the admin to view and update the entire organization's training status.

- The training database will list all the required training courses based on the venue and season.