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Database Design

SWDV 691

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Teeny Tiny Explorers will still be utilizing a relational database and will be created using MySQL. The structure of the web application needs to provide the ability to access specific information. There is not a need for a document database for this application. A relational database is best for applications that need table-based databases. The web application will need to have table-based databases for the information to be stored and accessed.

Previously the MVP included multiple tables such as members(users), events, and local groups. After the review of the application, the events table has been moved to a stretch feature. The events table will not be implemented in the MVP for this web application. The focus of the web application is to allow users to search for local nature-based playgroups in their area. The meet-ups are different from events, in the case of this web application. The events would be events such as holiday events and happen outside of recurring local group meet-ups. The MVP does not need the events table to meet the minimum requirements for functionality.

The tables that will be utilized in the MVP are the member (users) and local groups tables. Users need to have the ability to search each table. Hosts and administrators will utilize the member's table. They will need to be able to explore the table by member name, county, and state. Hosts have administrative permissions to create, update, and modify any member data if needed. The member table will be utilized to keep track of current and past members. The group table is the focus of the web application for users, as the web application is for parents and or caregivers seeking local nature-based playgroups in their area. The local group's table needs to be searchable by location, such as a county and state. Users will utilize the group table to search

for a local Teeny Tiny Explorer group near them. An example of a user that would explore the group table would be a mother that just moved to a new area. The user is looking to find like-minded parents in the area that prioritize getting their children outdoors. The user wants to find a group near Monroe County in Michigan. Searching the table will allow the user to see if there are local groups in Monroe County. If there are no groups in her area, she has the option to sign up to become a host. If there are results for her search, the user can view the contact details for the group host to join the local group.

The events table is now a stretch feature and will be added and implemented after the MVP is created and deployed. The events table would function similarly to the group table, but the user would search for local events instead of looking for groups. An example of a user utilizing the data on this table would be a parent seeking upcoming events for the end of November. The parent has off work the last week of November and wants to take their children to extra-local events outside of the regular meet-up with their local group. The user can search the table for events by county, state, and or date.

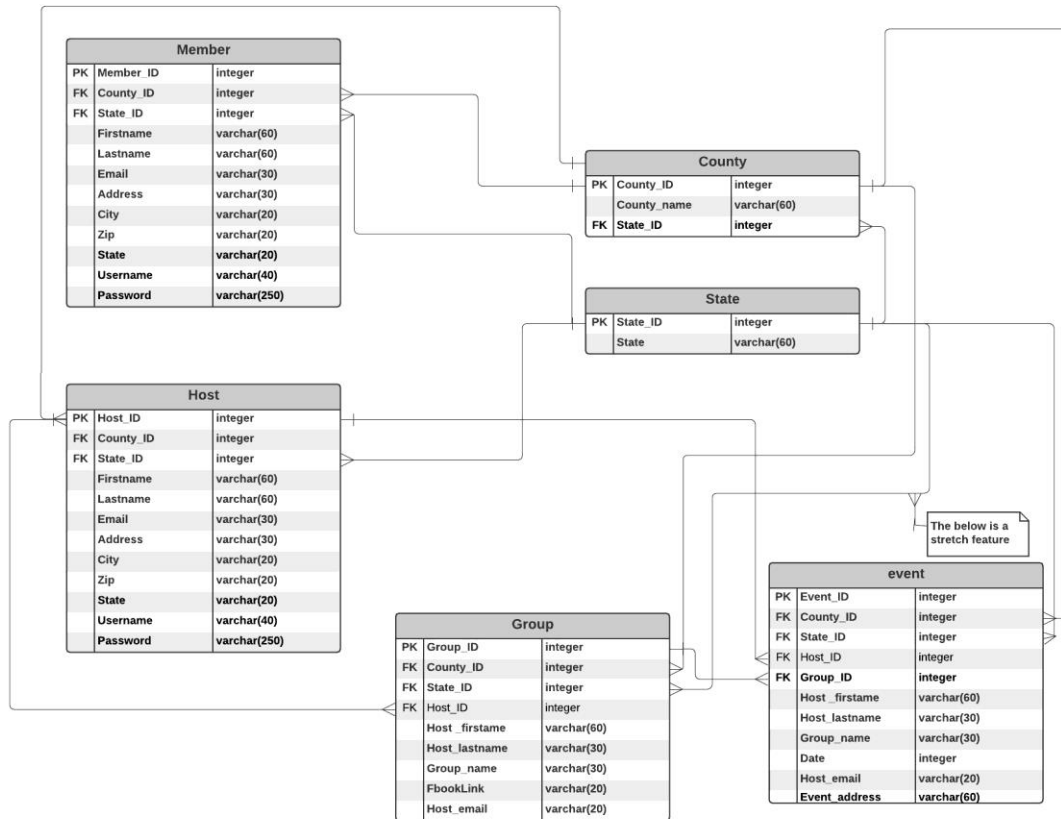
The member, county, state, and host table tables will be utilized in the MVP. The primary need for the member table is to keep track of all members within Teeny Tiny Explorers. The data is used for login information and groups and events hosted by Teeny Tiny Explorers. Hosts have administrative permissions and can search the member data for contact information if needed. If the member is also a host, their data will be stored on the host table. Hosts can read, write, and edit other tables as they have administrative permissions. Administrative permissions are needed as the hosts run local groups, utilize the tables' data, and keep track of membership.

The county table in the database was created because one of the leading search options for groups and events is a county. As hosts make and run local groups based on county, it is

essential to have the ability to search by county for groups. Members join their local Teeny Tiny Explorers playgroup based on their location and group in their county. The need for the state table is like the county table. Including the state, a table is vital as the web application will not be limited to one state. The web application is for users from anywhere in the United States, and there may be states with counties that have the same name. The state table allows users to have another option to organize the data by location.

Each table was chosen with the main functionality for a minimal viable product in mind. The web application aims to solve the problem of parents and caregivers struggling to find local nature-based playgroups and events. Teeny Tiny Explorers not only serves as a directory for groups and events, but it is also a membership site with hosts that oversee local groups and track membership in the application. The site's goal as a directory and membership site requires multiple searchable datasets and a relational database structure. The data utilized must be organized and have many to many relationships, as indicated in the diagram below. There are two different diagram versions. The first one is with the stretch feature included, and the second one does not show the differences in relationship paths.

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2.

