

DatabaseManager manages the connection to the datastore. It optimizes the connection to the datastore using caching, and other capabilities to be added over time. It should provide a local observer design pattern to let the rest of the application know when there are updates. Ideally, also eventually implement observer design pattern against the server backend, so polling isn't needed.

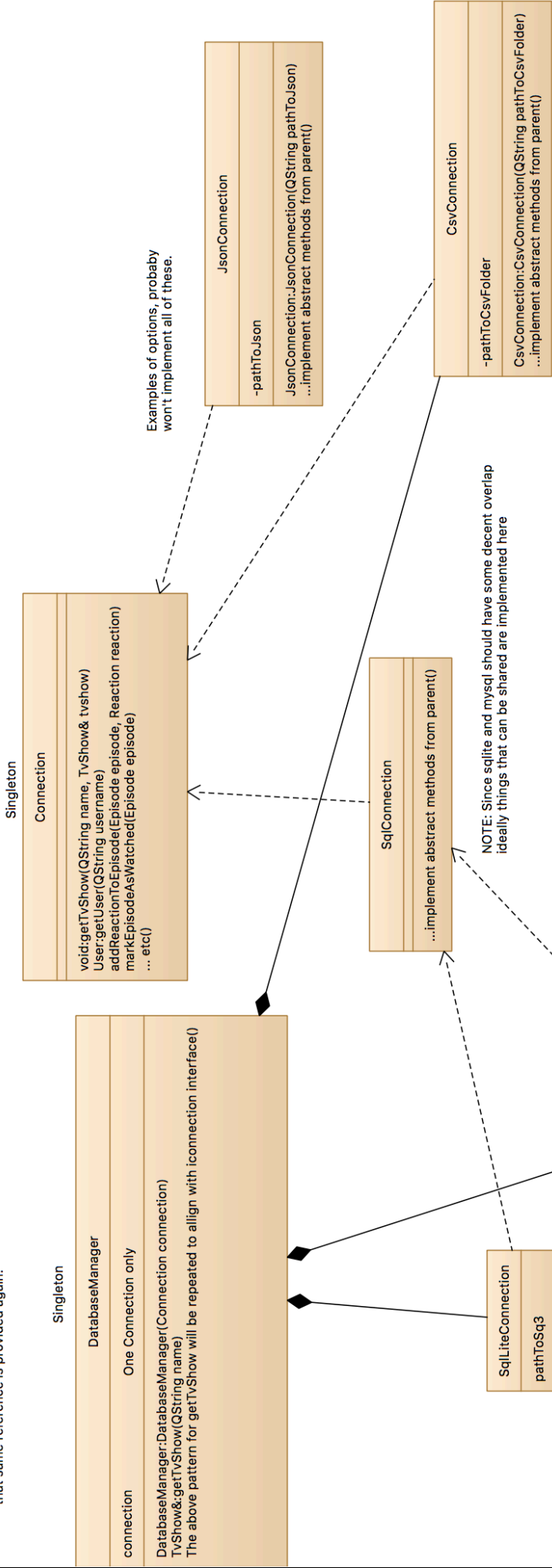
NOTE: The local in-memory cache will allow the application to refresh as much as it wants, and not worry about db impact, or user experience impact.

NOTE: Since DatabaseManager is doing caching, when a method is called that returns a reference to data that is cached, the cache (maybe in a dictionary) should be searched so that if that object has already been created and a reference provided before, that same reference is provided again.

Connection defines the methods the application can use to:

- Get data from the datastore
- Add data to the datastore
- Modify data in the data store
- When an object is to be returned from a function, that is backed by the database, a reference should be returned.

NOTE: In order to have just one location to define what type of connection to use, Connection will be mostly abstract, except for its default constructor. The default constructor will implemented code to return the connection type the developer wants to be active. We may move the definition into a config file, but that isn't required.



NOTE: Unless there are security concerns, there will most likely be just a single user connection to the db, used by the application, this is not the same as the user accounts for each end user.