5-2 Milestone Four: Enhancement Three – Databases

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Enhancement three was to convert the existing MongoDB non-relational database into an SQLite database to provide a more structural database for relational search capabilities. Since the database was a table storage system vice a flat file structure, code was updated to provide new data structures needed to populate the desired data in the appropriate record fields. In doing so a new database model was created to compliment the business classes created for the animal, outcome, breed, and species services that were the core base of functionality to the system. Each service had its own database model to help establish and store the needed data for program operations. Each of the models are accessed using the primary databas.js file permitting the operations to access and store the data into the appropriate recordsets from the service modules.

Since the SQLite database is stored in a db.sqlite file and SQLite does not provide record authentication, a user object was created to be used as a program login function to validate user access to system functionality. After login through credential verification, new users could be created that are given the ability to access and perform operation as specified by the program. A user service is extended to exercise the user object and permit access to the main-menu for normal program operations. The services that permit user access and creation of a new user account are handled through the user-screen file for entering user data and the user-service file to accomplish validation as well as the ability to create a new user access object.

Artifacts included to show the database setup and configuration include all the model files for animal, breed, outcome, species, and users as well as the primary database.js file. Additionally, a csv file containing the existing program database of 10,000 records that is loaded using seed database function of the database.js file. The last artifact included is the db.sqlite database file populated with the data from the provided csv file.