7-2 Project Two: README File

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CS-340 : Client/Server Development

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## **About the Project/Project Title**

I work for Global Rain, and our current project involves assisting Grazioso Salvare, an international pet rescue and training company with five animal shelters across Texas. Grazioso Salvare needed a database to identify suitable pets from their shelters for various training programs.

* An explanation of the purpose of the CRUD Python module

This project dives deeper into the understanding of CRUD which is the create, read, update and delete function that will assist Grazioso Salvare to execute the needs they require to assist them in searching their database.

## **Motivation**

We recommend using MongoDB for this project due to its robust file communication capabilities and NoSQL features. Using the CRUDfunctions is straightforward and using MongoDB, will align with our goals of enhancing project satisfaction, facilitating client interactions, promoting reusability, and ensuring ease of access.

**Installation and Reproducing**

The development and testing process was all done within the SNHU virtual lab environment, where our class used the Linux operating system in partnership with the Apporto server system. The MongoDB database operated on a Linux platform, where both the Linux and MongoShell were configured to serve distinct purposes. The .csv file was meant to be imported into the MongoDB database, while a user profile with administrative privileges was created. Then, a Python script was developed, using the power of the pymongo library to establish a connection to the MongoDB AAC database using the credentials of the user to become accessible. The Python code also featured CRUD (Create, Read, Update, Delete) functions designed to change the database as needed with specific requirements when called upon.

## **Usage**

## A description of the Python driver for Mongo that was used and why it was chosen:

## Choosing to utilize the Python driver for MongoDB is the fact that there is much reliability and capabilities when working with MongoDB. The Python driver seamlessly integrates with MongoDB, providing a convenient and efficient means of interacting with the database.

## An explanation of the attributes and working functionality of the CRUD operations:

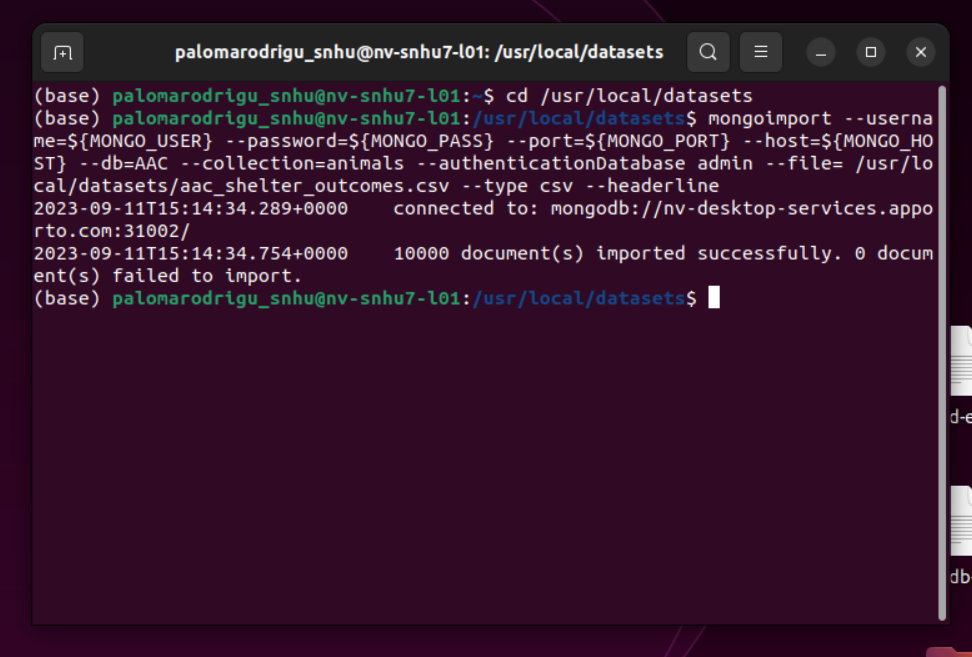
## Create or “C” can help with adding new documents into a collection. This will add new data or information into a database, like a new animal. Read or “R” will retrieve data from the database you need and “read” specific documents that meet certain criteria. Update or “U” will allow changes to be made to the data in the database. We can update one or more fields within a document or replace the entire document if needed. Finally, there is Delete or “D” , this will remove documents or data from the database. This can allow managing data and removing anything that may not be relevant or outdated.

### **Code Example**

* A demonstration of the module’s functional operations, including:

1. Screenshots of the MongoDB import execution.

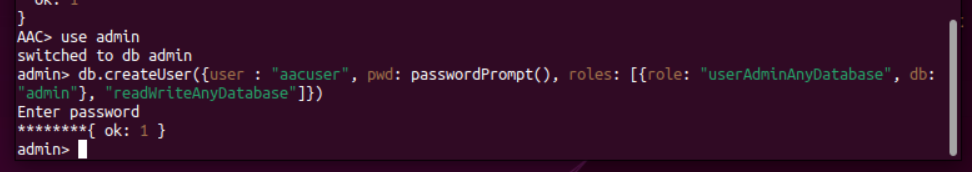
Import command and execution



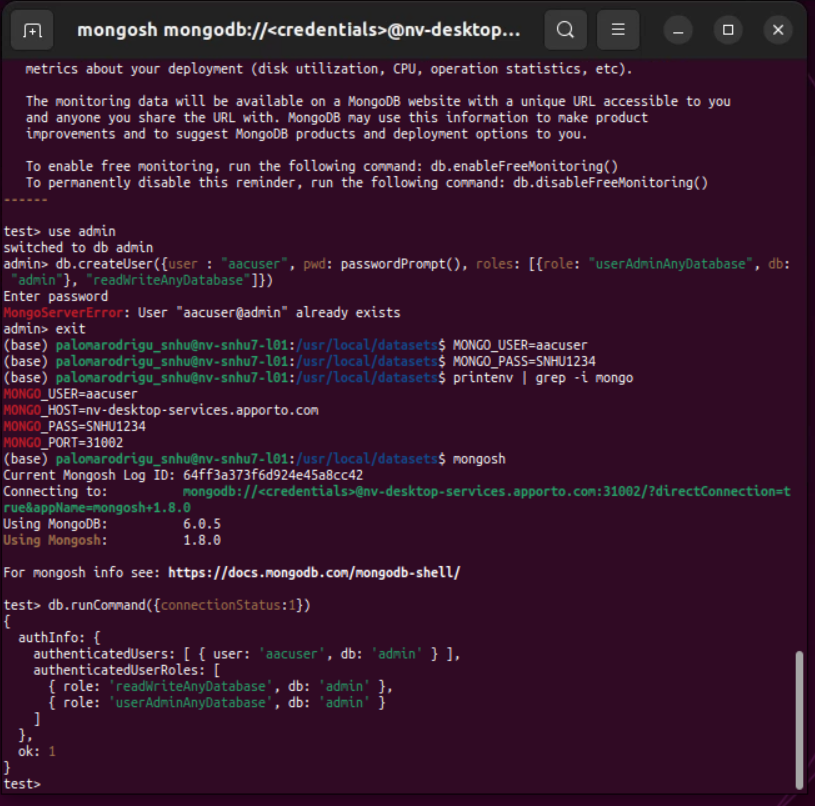
1. Screenshots of the user authentication execution.

Create User Account “aacuser” \*ADMIN ACCOUNT IS ALREADY ESTABLISHED\*

Password: SNHU1234



Login as User in Mongo Shell and Verify Connection



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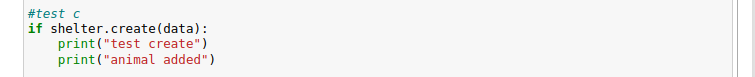
### 

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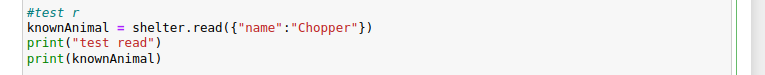
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1. Screenshots of the CRUD functionality

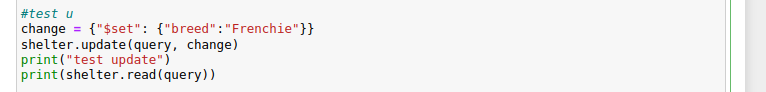
Create

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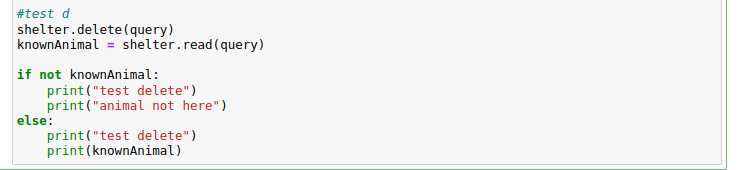
Read

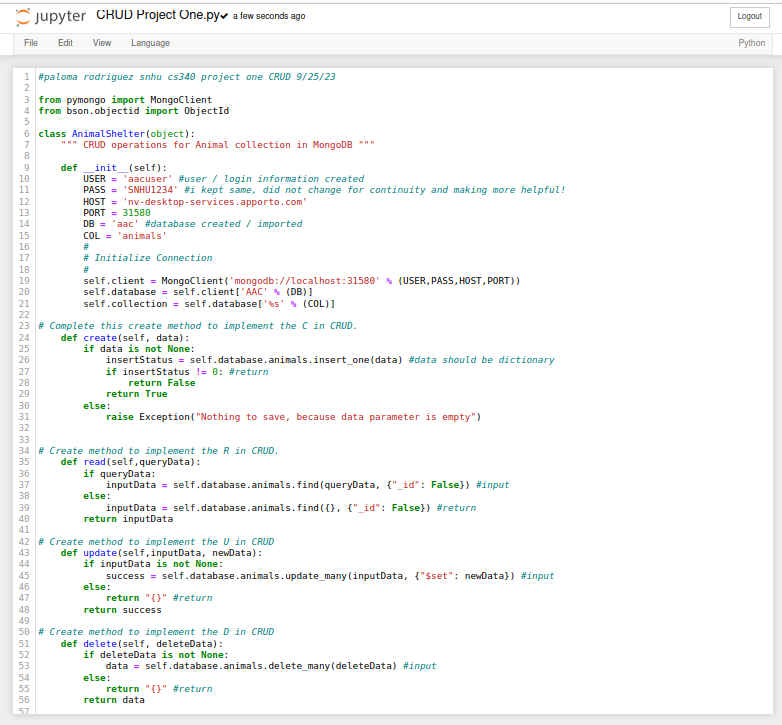
**

Update

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Delete

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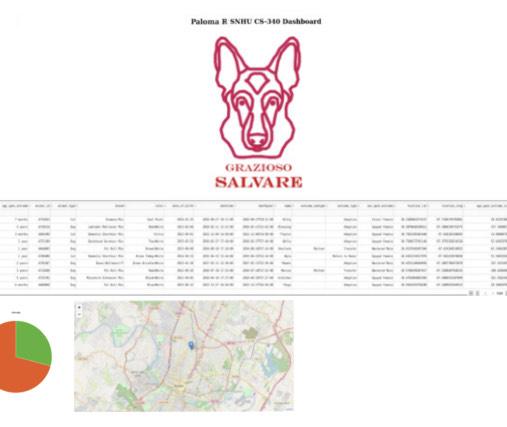
Below is a screenshot of the commented code example showcasing the CRUD python code developed for creating, reading, updating and deleting data for the project.**

Below is screenshot of the dashboard layout:





Below is screenshot of the new dashboard with image :



## **Roadmap/Features (Optional)**

It would possibly be helpful to create offline accessibility to access the database so that workers who need to access who are on the field can be helpful to Grazioso Salvare or even visual application features too like a map to locate the nearby shelters or pinpointing strays found and transported to.

Further improvement could include data validation and further security when considering the validity of the user.

## **Contact**

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