**CS 340 CRUD Python Module – README**

## About the Project/Project Title

*This project is for a MongoDB CRUD Python module I made for CS 340. The goal was to connect to a MongoDB database and build two basic functions that can insert data (Create) and pull data (Read) from the collection. The database is called AAC, and it stores animal records from the Austin Animal Center.*

## Motivation

*I made this CRUD module to get practice connecting Python to MongoDB. It’s one thing to use the database from the terminal, but doing it with Python code is something we’ll need to actually build applications. This project lets me use my own class to insert and read data from the “animals” collection so I can later expand it to more features like updating and deleting records, and possibly linking it with a UI.*

## Getting Started

*So before coding, I had to make sure MongoDB was set up right. I used the mongoimport tool to upload the data from the CSV file: aac\_shelter\_outcomes.csv. That file was already in the /usr/local/datasets/ folder in Apporto. Here's what I did:*

* *Created a user named aacuser and gave it access to the AAC database.*
* *Made sure the port number (mine was 31393) and credentials worked with authentication.*
* *Tested the database by connecting with mongosh and doing use AAC, then db.animals.findOne() — just to make sure the data was there and the user had access.*

*Once the data was loaded and I could connect to it, I moved on to writing the actual Python code.*

## Installation

*Here are the essential tools I used:*

** ***MongoDB*** *(already installed on Apporto)*

***PyMongo*** *for connecting to the MongoDB database from Python  
To install it:  
pip install pymongo*

***Python 3*** *(already included)*

***Jupyter Notebook*** *for testing the module interactively*

## Usage

*Once I finished writing the Python module, I tested it in Jupyter Notebook. I created a class called AnimalShelter, and inside it, I added the create() and read() functions.*

### Code Example

*Look at the attached pics at the end of the file.*

### Tests

*To test everything, I just used a Jupyter Notebook file. I:*

1. *Imported the module.*
2. *Instantiated the class.*
3. *Used .create() to add a test animal.*
4. *Used .read() to filter and pull records from the database.*

*I added screenshots of this process to the Word document as required.*

### Screenshots

*Look at the attached pics at the end of the file.*

## Contact

Your name: Abdulrahman Al-Nachar

A screenshot of a computer program

AI-generated content may be incorrect.A screenshot of a computer program

AI-generated content may be incorrect.