# CS 340 README Template

## About the Project/Project Title

*The Power of Python in MongoDB: The use of CRUD commands with the mongo shell and the help of Python and its modules*

## Motivation

*The reason for the creation of this README is to show the power of Python modules when working with Mongo and how it can help database entries in a timely and efficient manner.*

## Getting Started

*Get set up with a PC that has a Linux operating system or create a VM which runs a Linux operating system. Once this is done get the listed below software installed.*

## Installation

* *MongoDB shell version v4.2.6 (currently)*
* *Python 3.6 (currently)*
* *Jupyter Notebook*

## Usage

*The first thing that needs to be done is getting the MongoDB running. You do this by getting the terminal emulator running. Once opened you can enter this command to get MongoDB running: [/usr/local/bin/mongod\_ctl start-noauth ].*

Text

Description automatically generated

*You can see the IP and port that the MongoDB shell is connecting to above (highlighted yellow). Once its running type: [ Mongo ] to enter the Database tool (Picture above). The > icon indicates the shell is running.*

*Now that the database is running, we will run the command in the below screenshot to import our aac\_shelter\_outcomes.csv file. Make sure the file is stored in /usr/local/datasets otherwise the import will fail.*



*To create an admin account follow the screenshot below. Make sure to type a password in and make sure to write it down so you don’t forget it (it shows blank in the screenshot to keep the password a secret).*



Text

Description automatically generated

*We will now make a user account with the username aacuser in the screenshot below.*

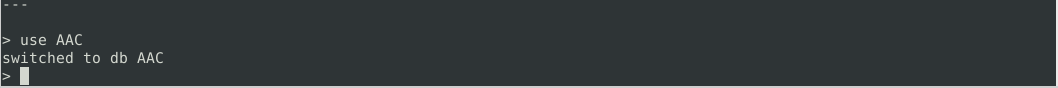
Text

Description automatically generated

*Once created you can log into the account with the command [mongo --authenticationDatabase "AAC" -u "aacuser" -p] and then enter the password (picture below). Make sure you not in the database when issuing this command.*



*At this point you can enter whatever database you are wanting to use or create, in the below screenshot you can see we are using the AAC database we imported earlier.*



*This is be the extent of the training on MongoDB as our intend for the README is to utilize Python coding to enter information into our desired database. We will now move over to Jupyter Notebooks, make sure Python is installed and functioning otherwise you will encounter issues going forward. Below is a screenshot of what you should see when opening Jupyter notebook.*

Graphical user interface, text, application, email

Description automatically generated

1. *Go to New then Text File to start the process for creating a py document. Below is a screenshot of the code used to implement Create, Read, Update and Delete in CRUD.*

A picture containing text

Description automatically generated

*When saving this document and changing the name make sure to put the .py or it won’t recognize it as a python document.*

1. *(Reference earlier screenshot) To create a Notebook document which will be adding the entered select Python 3 shown in screenshot.*

*Enter the below sample code from screenshot to access created python document (ex:AnimalShelter.py). and test the Create and Read ability.*

Text

Description automatically generated

*Once created Run the software and if created correctly it should populate the messages seen in screenshot (this has started…Generic user logged in…etc). Use the print messages from AnimalShelter.py to troubleshoot if issues are encountered.*

*If all messages shown in the above screenshot appear you can go back into MongoDB from the terminal emulator and find the entries, we have just added (screenshot of this below).*

Text

Description automatically generated with medium confidence

*Go ahead and create another Notebook document so we can test the Update function (screenshot of testing code below).*

Graphical user interface, text, application, email

Description automatically generated

*Go ahead and create another Notebook document so we can test the Update function (screenshot of testing code below).*

Graphical user interface, text, application

Description automatically generated

## Contact

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