1. What is MongoDB?
2. What are the key features of MongoDB?
3. Select two MongoDB data types and explain what they are, how they are used, and why they are important.
   * When answering question three (3), provide an example, in code, of the selected data type.

MongoDB is a document-based database system that can be run in the cloud on servers hosted on MongoDB Atlas, or on your own servers (MongoDB, 2022). MongoDB for own servers is licensed under the Server Side Public License, which is a modification of the GNU AGPL. You can see the differences in the license here: <https://webassets.mongodb.com/_com_assets/legal/SSPL-compared-to-AGPL.pdf>

The biggest difference in the two is that in the AGPL, users interacting with your program over a network have the right to view and modify the code of your program, but is muddy about local networks vs the Internet. The SSPL attempts to make this more clear, but in doing so annoyed many free software-only distributions, causing them to consider SSPL nonfree and remove the programs from their repositories (Oikonomopoulos, 2018).

Anyway, I got off track a little bit. MongoDB is an implementation of a document-based database vs a traditional relational database.

Like programming languages you’d use to interface with a database, MongoDB has data types that allows us to store data more efficiently (it takes less to store a yes or no than it does a full paragraph!) and get the data we want more easily (M, 2022).

{

"student\_name":  "Guy Student",

"student\_major":  " General Studies",

"student\_gpa":  null,

"student\_active":  false,

}

Here, the variable student\_active is a Boolean data type that perhaps could represent if the student was currently actively taking courses. I made this fake student a new one who has no GPA and assigned the student\_gpa a value of null. The NULL data type allows us to represent “nothing” instead of using a number like 0 which would imply the student has failed all their classes. We could get away with using for example a negative number to imply the student simply has no GPA but then we are storing a number which takes more space than a NULL.

# Works Cited

M, S. (2022, Oct 4). *Data Types In MongoDB | Common MongoDB Data Types* . Retrieved from simplilearn: https://www.simplilearn.com/tutorials/mongodb-tutorial/mongodb-data-types

MongoDB. (2022). *What Is MongoDB*. Retrieved from MongoDB: https://www.mongodb.com/what-is-mongodb

Oikonomopoulos, A. (2018, Dec 4). *MongoDB SSPL v1 license and the DFSG*. Retrieved from Debian Bug Tracker: https://bugs.debian.org/cgi-bin/bugreport.cgi?bug=915537#15