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Milestone 4 Narrative

The artifact is Java code for a pet-grooming business to intake new animals for their business. The artifact’s code includes a pet class that stores variables such as pet type, pet name, pet age, dog space, cat space, day stay and amount due. It also includes methods for checking the pet in, checking the pet out, and updating the pet. Additionally, the pet grooming business had a maximum capacity for thirty dogs and twelve cats as well as an additional grooming fee if a dog stayed three or more days.

I included this artifact in my e-Portfolio to showcase my growth as a software developer during my time at SNHU. This artifact demonstrates my knowledge and skills from the beginning of my time, and my enhancements showcase the new skills and knowledge I’ve gained since then. It highlights not only my knowledge of both Java and Python programming languages but also my knowledge and skills with databases. I chose MongoDB for my database as I’ve used it in previous courses as well as PyMongo for implementing MongoDB in a python environment. The artifact did not originally include a database so data stored for the pet grooming business would be lost whenever the program was terminated. I had to create a database, ensure the proper data was stored, the proper data is retrieved when functions are called, and that the data is safe and secure. I implemented authentication and authorization so that the data stored within my database is secured. By implementing a database that did not originally exist within the artifact and implementing a database that securely stores data I was able to showcase all my skills and knowledge I’ve gained during my time in the computer science program.  
 In module one, I had planned on the enhancements in the database category to align with the course outcomes to develop a security mindset and demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computer practices for the purpose of implementing computer solutions. My other enhancements in the software engineering category briefly touched on these outcomes by including input sanitation and validation, but with my authorization and authentication methods for the database complete my goals of aligning with the course outcome of developing with a security mindset. Additionally, the implementation of database aligns with the other course outcome by allowing the pet grooming business to save their data somewhere secure rather than losing the data every time the program is terminated.  
 During my process of enhancing and modifying the artifact, I had to touch base with how to not only properly set up a database with MongoDB in Python through PyMongo, but also how to properly set up authorized roles and authenticating users for the database. This process wasn’t particularly difficult to refresh myself as there are plenty of resources such as W3 schools for Python and the Mongo documentation on their website. The only challenge I faced was I accidentally created a user under admin instead of the pet\_grooming database that I created so when I was testing my code I ran into an unauthenticated user error. I was able to quickly recognize my mistakes and correct them. Of the three categories for enhancement, the database category was one I felt most comfortable making my enhancements thanks to my previous courses at SNHU. I still have a lot to learn regarding more complex applications of database, and I am eager to learn more and expand my skills with databases.