The artifact I chose was the authentication system project from IT145 in August 2018. I included this artifact to show skills of creating separate modules and including the module in another source code module. I also wanted to showcase skills of opening and closing files and reading data from the files. I also wanted to showcase knowledge of using MDS algorithm for hashing. I improved the artifact by converting the code to Python. This demonstrates the ability to understand advanced concepts in one language and then use this knowledge to reproduce the code logic and results in another language.

The course objectives I planned to meet are: Employ strategies for building collaborative environments that enable diverse audiences to support organizational decision making in the field of computer science; Design, develop, and deliver professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts; Demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals. The artifact enhancement meets these objectives.

The process of enhancing the artifact provided away for me to improve my programming skills. Trying to mimic functionality of my java code in python made me focus on syntax of the languages and what libraries are needed. The challenges I faced were first, figuring out how to use functions from an external module without interpreter giving me error for too many arguments when I did not explicitly provide more than what the function called for. Secondly, figuring out how to convert the code of the getRole function to python.