The artifacts are a sequence diagram of a college system and a class diagram of the components; and classes of a college system, along with its attributes. The sequence diagram is how staff or students would use the college software system to register for classes, and the class diagram shows the components that are needed for the college system so that it is functional and meets requirements. This artifact was created in an Object-Oriented Analysis Design class I took in 21EW4. I took this artifact paired it with the knowledge and skills that I learned from my Intro to Structured Database Environment class that I took in 20EW4.

I selected this artifact because it was one of my favorite classes that I took. I enjoyed seeing the thought and process that went into building a "blueprint" for software. I also selected this artifact because it had no code at all. This allowed me to create code for the artifact and then build and create a database. The components of the artifacts that showcase my skills and abilities are that I was able to create SQL code that produced a database from scratch. I was able to use the correct SQL code to create a database, and then I was able to create and enter data into a table within the database. I was able to maintain the database by using CRUD operations. CRUD stands for Create, Read, Update, and Delete. This allows you to create databases and tables, retrieve data, modify any data/tables, and then delete any data when needed. I was able to use my skills in database creation and the tools in MySQL Workbench to create and develop a solution and working environment for those in the Database Administration industry. Those in the Database Administration industry use their skills and knowledge to store and organize data in a software. They do database design and perform monitoring, as well as other tasks. My skills and abilities with this artifact showcase my database design and management.

The artifacts were improved because I took the diagrams, studied them, and then laid them as the foundation for my future databases and data. I then took that information from the diagrams and created two databases. Next, I took the class diagram and their classes and the attributes and created tables that matched the class diagram. After creating my databases and tables, I then filled those tables with data and did queries. I took artifacts with no code and no system, then created code for it and finally a workable and manageable database for a college system.

Yes, I was able to meet the course objectives I planned to meet with the enhancements. In addition, I was able to accomplish each goal within this enhancement. When I created this artifact, I learned the importance of taking your time and thoroughly checking your work. When creating a database, tables, and adding data, it's imperative that you enter each code/data correctly. Spelling is a significant factor in database creation and maintenance because if you misspell anything and don't notice it, there's a chance when you conduct a query search that, you will not be able to find the data you are looking for. I faced the overall challenge of carefully entering data and ensuring everything was spelled correctly before running my code.