This artifact is an evolution of my inventory management application that was developed for the CS-360 Mobile Architecture & Programming course. It was created for the term from June 2021 to August 2021. The original intent of the application was to be an inventory management application for a warehouse that would allow for users to monitor a company’s inventory, add and remove inventory items, and receive notifications based on inventory item events. I have chosen to evolve this base design into a character creation/management system for a RPG game.

I chose to include this artifact in my ePortfolio because I feel that it strongly showcases my ability design and engineer an entire application. I selected this item because I feel both confident using object-oriented programming techniques when designing applications. Specifically, by applying the Model-View-ViewModel (MVVM) design pattern to the application, it will show a well-structured and thought-out design philosophy in my approach to software development. The specific components that will showcase my skills in software development is the interaction between the MVVM pattern components to create an efficient application that is well-commented and has few errors.

I have started the process of evolving the application to meet the stated outcome and functionality that I outlined in Module One of the course. This has been accomplished through creation of additional classes (Model) to support the process, Views that support the user experience (UX), and View Models to facilitate the interaction between the user and the data being presented.

The process of modifying the artifact to support the character creation process has been particularly challenging as I have had to scale back my initial intentions considerably due to the time constraint of producing the application within a limited timeframe. Specifically, the content that the application supports is much larger than I originally anticipated. As an inclusion in this artifact, I plan to display a set of UML diagrams that I have begun creating to help myself in designing the application. I feel the diagrams will further support the software design/engineering aspect as they will showcase my careful and intentional approach to the design of the application. They also showcase my ability to create a well-documented application which can be an important factor for many software projects. These diagrams include a Use Case Diagram which helped me to narrow the scope of my project, a two UML Sequence diagrams which helped me to break up the workflow into meaningful components and stages, and a UML Class Diagram to outline and understand the relationship between the classes of the application. These diagrams then are reflected in the design of the application itself and support the MVVM design pattern.