# CS 499 Module One Assignment Kaleb Ward

1. **Self-Introduction:** Address all of the following questions to introduce yourself.
   1. How long have you been in the Computer Science program?

I have been in the computer science program part time for 3 years and have enjoyed every part of it, there have been several programming assignments that have been difficult but every moment within this program has been a learning experience and has helped me improve my overall computer skills.

* 1. What have you learned while in the program? List three of the most important concepts or skills you have learned.

There are various skills we have learned throughout the computer science program and several are more important than others but the top three most important concepts or skills I have learned within this program is learning to diagnose and debug program or issues and the correct and most efficient way of doing so, researching various problems to find the most efficient and effective way to resolve the issue, and using resources at my disposal whether it be youtube, learning resources, or other resources that I may come across to help broaden my skills and help future projects. The various skills I have learned throughout this course is essential to help me in future endeavors.

* 1. Discuss the specific skills you aim to demonstrate through your enhancements to reach each of the course outcomes.

The enhancements I will develop onto existing applications will be more efficient and effective code while also demonstrating the best possible way to perform the addition or resolve the issue at hand. The enhancements I will introduce will be a more user friendly approach or adding quality of life additions to applications that are needed. Providing a more effective and efficient user experience will allow for future users to have a better experience while also enhancing an existing application. The outcoems within the course will help me better understand how to add enhancements or add onto an existing application within parameters provided.

* 1. How do the specific skills you will demonstrate align with your career plans related to your degree?

I am currently working as an IT analyst for a healthcare organization and I have used the skills I have learned throughout this degree such as programming, I have developed powershell scripts for various applications such as forcing chrome extensions enabled and locking volume level at a certain level for various users that kept turning on or muting the audio for alerts. The various skills learned throughout this course are essential to various careers that I may work within. I want to work for cybersecurity in the future so the cybersecurity and various foundation courses I have taken throughout this degree will be essential to learn the best ins and outs on how to complete tasks effectively and efficiently while also allowing for the proper indication of how to complete and program tasks within programs or applications.

* 1. How does this contribute to the specialization you are targeting for your career?

The specialization I am targeting within my career would be automation such as desktop engineer or cybersecurity in which everything I have learned throughout this degree will be essential, the various skills I have learned throughout this degree will allow for future stability wihle also ensuring I can develop scripts and modify scripts that are already in place. The various skills developed through this career will make for the most effective and efficient approach or at least the skills to future hone programming skills to develop more effective applications and fixes that will be needed in the future.

1. **ePortfolio Set Up:**
   1. Submit a **screen capture** of your ePortfolio GitHub Pages home page that clearly shows your URL.
      1. You already have a repository in GitHub where you uploaded projects in previous courses. Your ePortfolio will reside in GitHub but can link to work at other sites, such as Bitbucket.
   2. Use the GitHub Pages link in the Resource section for directions on:
      1. How to create your GitHub website and publish code to GitHub Pages
      2. Issues, such as adding links to other sites
   3. Paste a screenshot of your GitHub Pages home page with your URL clearly showing in the space below.

**A screenshot of a computer

AI-generated content may be incorrect.**

1. **Enhancement Plan:** 
   1. **Category One:** Software Engineering and Design
      1. **Select an** **artifact** that is **aligned with** **the** software engineering and design **category** and explain its origin. Submit a file containing the code for the artifact you choose with your enhancement plan.

CS-360 Mobile Architect and Programming

Inventory Application – Android Mobile Application

* + 1. **Describe** a practical, well-illustrated **plan** for enhancement in alignment with the category, including a pseudocode or flowchart that illustrates the planned enhancement.

There are various enhancements that I would like to make towards the Inventory Application, I want to add more user based capabilities such as adding more user capabilities such as recovering a forgotten password, customizating current user’s name and changing a current password. I want to improve the overall usability of the mobile application by editing current items such as quantity, name, and other variables within the items and making the overall layout of the application more accessible with different themes you can chose from and even customizing specific parts of the application. That will allow for various quality of life changes while also improving the overall usability of the application.

* + 1. Explain how the planned enhancement will **demonstrate** specific **skills** and align with course outcomes.
       1. Identify and describe the specific skills you will demonstrate that align with the course outcome.

The specific skills I will demonstrate throughout the enhancement of the mobile application are manageability and manipulation of the Android Studio IDE, complex and efficient programming with the Java programming language and manipulating SQLite databases to edit previous records. I will demonstrate that I can utilize various tools to create a more complex application while increasing the manageability and efficiency of the application. Editing previous code from other assignments allows for me to go back and fix previous mistakes and debug issues that I come across which is essential within programming and Computer Science. Manpulating database within a mobile application allows for the effective use of manipulating 3rd party data within an application and be used within various applications.

* + - 1. Select one or more of the course outcomes below that your enhancement will align with.
* CS-499-3: Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution while managing the trade-offs involved in design choices.
* CS-499-4: Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution while managing the trade-offs involved in design choices.

Course Outcomes:

1. Employ strategies for building collaborative environments that enable diverse audiences to support organizational decision-making in the field of computer science.
2. Design, develop, and deliver professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts.
3. Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution while managing the trade-offs involved in design choices.
4. 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.
5. Develop a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources.
   1. **Category Two:** Algorithms and Data Structures
6. **Select an artifact** that is **aligned with the** algorithms and data structures **category** and explain its origin. Submit a file containing the code for the artifact you choose with your enhancement plan. You may choose work from the courses listed under Category One.

IT-145 Foundation in Application Development

Authentication and Monitor System

1. **Describe** a practical, well-illustrated **plan** for enhancement in alignment with the category, including a pseudocode or flowchart that illustrates the planned enhancement.

The enhancements I want to make within the Authentcation and Monitor system is create a UI for the monitoring system that will allow for the user to verify the activities and locations of the animals within the monitoring system. I will also want to add the functionality for a user to be able to interact with the system that allows for input from the user that then parses to the system’s output. I want to modify the application to separate the classes into their respective classes and create methods for each of the classes to be used throughout the application. Seperating the classes and creating respective classes will allow for various improvements throughout the apioplication. The methods throughout the classes should be efficient and effective when manipulating the data.

1. Explain how the planned enhancement will **demonstrate** specific **skills** and align with course outcomes.
   1. Identify and describe the specific skills you will demonstrate to align with the course outcome.

Throughout this enhanecement I will demonstrate that I have the capability to manipulate data structures and various information regarding classes, it will also demonstrate that I have the ability to program using the Java programming language to create a simple but efficient program that will utilize object-based programming and modify and manipulate variables and methods within classes. The proper and efficient code will allow for an effective and proper application that users can utilize to properly view the Zoo system we have created previously. It is a major enhancement that allows for an interactive UI while also creating better classes and specific classes to modify.

* 1. Select one or more of the course outcomes listed under Category One that your enhancement will align with.
* CS-499-1: Employ strategies for building collaborative environments that enable diverse audiences to support organizational decision-making in the field of computer science.
* CS-499-5: Develop a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources.
  1. **Category Three: Databases**
     1. **Select an artifact** that is **aligned with the** databases **category** and explain its origin. Submit a file containing the code for the artifact you choose with your enhancement plan. You may choose work from the courses listed under Category One.

CS-340 Client and Server Development

Rescue Application

* + 1. **Describe** a practical, well-illustrated **plan** for enhancement in alignment with the category, including a pseudocode or flowchart that illustrates the planned enhancement.

The enhancements I want to make within the CS-340 Rescue Application is improving and reproducing the application on my local desktop while allowing the information to be accessed. It will allow the application to be used outside of the Apporto platform and implementing various performance upgrades for the UI itself.

* + 1. Explain how the planned enhancement will **demonstrate** specific **skills** and align with course outcomes.
       1. Identify and describe the specific skills you will demonstrate that align with the course outcome.

The skills demonstrated within the enhancement will showcase the understanding of the Python language and implementing the use of pyMongo which is a Python driver and utilizing Python to demonstrate the overall understanding of Python and how it can interact with Databases while demonstrating efficiency and overall understandability of Python, PyCharm as the IDE, and database interaction.

* + - 1. Select one or more of the course outcomes listed under Category One that your enhancement will align with.
* CS-499-3: Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution while managing the trade-offs involved in design choices.
* CS-499-4: 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.

1. **ePortfolio Overall Skill Set**
   1. Accurately describe the **skill set** to be illustrated by the **ePortfolio** **overall**.
      1. Skills and outcomes planned to be illustrated in the code review

Throughout the code review I plan to demostate the ability to analyze and refine the applications I have already created while utilizing indstry standards. Utilizing industry standards will allow for code readability in future use-cases, dynamic and modular applications to be able to be added upon or edited. Creating and maintaining skills throughout a Computer Science career is essenwqntial within any workforce. Reviewing current and future artifacts will allow to build upon skills already made such as effective and efficient code, efficient use of a modular system for easier code changes in the future, and build upon current skills I have already learned. Identifying issues and resolving issues is essential throughout a code review process.

* + 1. Skills and outcomes planned to be illustrated in the narratives

Throughout the narrative process I will demonstrate professional and demonstrate current technical artifacts within a more broad computer science discipline that must be illustrated in the workforce or within a computer science career. The highlights within the narratives will be creating and integrating data structures and algorithms into an application with a real world narrative, it will allow for

* + 1. Skills and outcomes planned to be illustrated in the professional self-assessment

Throughout the self-assessment I will access if I have properly introduced the enhancements within the artifacts provided and stated and whether or not I have provided the most effective and efficient enhancements and whether or not I have a deeper understanding of the principles within Computer Science and the naratvives and code review provided. Self-Accessing will allow for self evaluation of whether or not I understand the principles and what I can work to have an even deeper understanding of data structures, databases, and algorithms, it will allow for future easability and efficiency throughout. I will need to self access the concepts and foundations that are utilized throughout this capstone and the computer science career.