# CS 499 Module One Assignment Template

Complete this template by replacing the bracketed text with the relevant information.

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 here at SNHU for two and a half years now. Started off in January of 2023.**

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

**From the program the concept of AI training and models is one of the most important concepts I’ve learned. My second concet that was important to me was learning about the development pipeline and the various stages of it. Finally, I learned that I liked working on documentation and commenting and using that to explain different parts of programs.**

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

**I think I would like to demonstrate that I can articulate my thoughts from code into written language as well as show case some of the aspects of designing well thought out and efficient programming.**

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

**I don’t really have any career plans at the moment so I hope I can come back to this question at a later date and actually have some idea as to what I even want to do.**

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

**I’m not targeting any specilzation at the moment, my electives were from previous college and don’t really have much weight to them any more.**

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.

**For this enhancement I will be picking the contactlist/contact project from CS320.**

Note: Your artifact may be work from the following courses:

* IT 145: Foundation in Application Development
* CS 250: Software Development Lifecycle
* CS 260: Data Structures and Algorithms
* IT 315: Object Oriented Analysis and Design
* CS 320: Software Testing, Automation, and Quality Assurance
* CS 330: Computational Graphics and Visualization
* CS 340: Advanced Programming Concepts
* CS 350: Emerging Systems Architectures and Technologies
* CS 360: Mobile Architecture and Programming
* IT 365: Operating Environments
* IT 380: Cybersecurity and Information Assurance
* CS 405: Secure Coding
* CS 410: Reverse Software engineering
* IT 340: Network and Telecommunication Management
* IT 380: Cybersecurity and Information Assurance
  + 1. **Describe** a practical, well-illustrated **plan** for enhancement in alignment with the category, including a pseudocode or flowchart that illustrates the planned enhancement.

**For this enhancement plan I want to change the java programs into C++ programs. This way I can demonstrate how I can design and engineer a program/problem into multiple programming languages and showcase their differences as well as their similiarites.**

For this category of enhancement, consider improving a piece of software, transferring a project into a different language, reverse engineering a piece of software for a different operating system, or expanding a project’s complexity. These are just recommendations. Consider being creative and proposing an alternative enhancement to your instructor.

Think about what additions to include to complete the enhancement criteria in this category. Since one example option is to port to a new language, that is the kind of scale that is expected. This does not mean you need to port to a new language but instead have an equivalent scale of enhancement. Underlying expectations of any enhancement include fixing errors, debugging, and cleaning up comments, but these are not enhancements themselves.

* + 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.

**I want to demonstrate my ability to change from one programming language to another, and to showcase that I can use similar skills in C++ and not just java.**

* + - 1. Select one or more of the course outcomes below that your enhancement will align with.

**For this plan I will be aligning with outcome one and two. One because I’m adding a more diverse audience by changing the program into another language. As for two by changing the language I hope to show a new context to the problem and how I can apply a similar solution in a new language.**

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.

For this category I will be picking the second project from the IT145 The RescueAnimal project.

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

**For this project, I will add new features for the array lists such as sorting by breed or name. As well as increase the number of animals acceptable for the program to enchance it’s usability and complexity. I want to also add in new variables for the pets such as diseases/sickness as well as other useful criteria. I will add new animals such as cats and birds. This way the program can be more complex and add some real life possibilities for it’s use. Besides sorting I would like to try and use the arraylists to showcase some skills with sorting and keeping the program efficient.**

For this category of enhancement, consider improving the efficiency of a project or expanding the complexity of the use of data structures and algorithms for your artifact. These are just recommendations. Consider being creative and proposing an alternative enhancement to your instructor. Note: You only need to choose one type of enhancement per category.

Think about what additions to include to complete the enhancement criteria in this category. Since one example option is to port to a new language, that is the kind of scale that is expected. Perhaps you might increase the efficiency and time complexity of an algorithm in an application and detail the logic of the increased time complexity. Remember, you do not need to port to a new language but instead have an equivalent scale of enhancement. Underlying expectations of any enhancement include fixing errors, debugging, and cleaning up comments, but these are not enhancements themselves.

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.

**This program will demonstrate my ability to work with sorting methods as well as applying new knowledge to older programs. I will show that I can increase the complexity and usability of a program without adding useless features that might just be added for the sake of being added.**

* 1. Select one or more of the course outcomes listed under Category One that your enhancement will align with.

**For the course outcomes listed these enhancements will apply to two, three, and four. Seeing as increasing the pet variety will help it work better in a possible industry setting. Keeping the program efficient will help to demonstrate design choice, and finally the changes will apply to a set of goals within the industry by enhancing the features of the program.**

* 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.

**I will be choosing the project from CS340 for this section.**

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

**This section really is my weakest as I don’t have a very concrete plan for this. The only thing I could think of was trying to learn and add data mining to this to find trends within the animal data and maybe their locations. I’m kind of lost here on this one so any further input would be much appreciated.**

For this category of enhancement, consider adding more advanced concepts of MySQL, incorporating data mining, creating a MongoDB interface with HTML/JavaScript, or building a full stack with a different programming language for your artifact. These are just recommendations; consider being creative and proposing an alternative enhancement to your instructor. Note: You only need to choose one type of enhancement per category.

Think about what additions to include to complete the enhancement criteria in this category. Since one example option is to port to a new language, that is the kind of scale that is expected. Perhaps you might increase the efficiency and time complexity of an algorithm in an application and detail the logic of the increased time complexity. Remember, you do not need to port to a new language but instead have an equivalent scale of enhancement. Underlying expectations of any enhancement include fixing errors, debugging, and cleaning up comments, but these are not enhancements themselves.

* + 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.

**I want to showcase my ability to learn new skills and apply them to old projects to showcase my ability to learn and adapt programs as needed.**

* + - 1. Select one or more of the course outcomes listed under Category One that your enhancement will align with.

This aligns with third and fourth of the course outcomes. The third because I’m adding in new features that can add some useful insight to the program. The fourth because I’m showcasing new skills that I will learn and utilize in the future.

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

From the code review I would like to show that I can understand my written code and explain in detail what I would like to change or enhance to someone without confusing them or prattling on over my words. It’s important since I don’t talk too much to be able to engage with this assignment and not mumble or keep my voice too low.

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

From the narratives I plan to demonstrate explain my rough journey through the program as well as showcase my thoughts on the changes I made to my programs. I want to be able to show not only the enhancements I made but also to explain why I wanted to make these changes and what they showed I can be capable of.

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

From the self-assessment I would like to see how far I’ve come, and what I can be capable of from these enhancements. I would like to show not to anyone else, but to myself that I can at least do what I believe I’m capable of. I want the self-assessment to end on a good note, seeing as things have been going terribly wrong lately I hope by the time this comes around I can be in a better head space and not lose hope on this again.