# 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 for 2 and a half years now.**

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

**I have learned many different computer science based topics throughout the program. The three most important concepts I have learned are software design and engineering, as well as proper coding commenting.**

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

**The specific skills I aim to demonstrate through my enhancements are self-learning, attention to detail, clean and commented code as well as self-improvement.**

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

**These specific skill will align with my career plans related to my degree because they are all applicable to anything that I choose to do with my computer science to degree. My dream career would be as a video game developer but I am open to working in any computer science related field such as cyber security or programming.**

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

**This contributes to the specialization I am targeting for my career because clean and commented code as well as attention to detail are important in video game development. It will also be helpeful to show selfimprovement in the form of updating and enhancing a project that I had previously completed.**

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

Description automatically generated

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 330**

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 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.

**The specific skills that I will demonstrate that align with the course outcome from this planned enchancement is using more modern and advanced techniques to enhance my 3D objects. I will comment my code using industry best practices. This will create a collaborative environment that can easily built off of by other developers.**

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

**The course outcome that this enhancement will align with is demonstrating an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the porpose of implementing computer solutions that deliver value and accomplish industry-specific goals.**

Course Outcomes:

1. Employ strategies for building collaborative environments that enable diverse audiences to support organizational decision-making in the field of computer science.

1. 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.
2. 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
3. **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.

**CS-405**

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 amount and the variety of tests will be increased. Most of the tests given in the original positive asserts that verified something was true regarding a smple collection of entries. The plan for the enhancement is to introduce tests that tested a negative.**

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.

**The specific skills I will demonstrate is improving the complexity of the original code as well as ensuring the collection’s data structures and algorithm parameters are properly protected.**

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

**The course outcomes that my enhancement best aligns with is developing 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**

* + 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 plan for enhancement of this artifact is to increase its complexity and update its functionality. This will include count, delete, multiple, and other SQL commands.**

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.

**The specific skills that I will demonstrate is using more modern and advanced techniques to improve the complexity of my artifact.**

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

**The course outcome that this enhancement will align with is demonstrating an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the porpose 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
      2. Skills and outcomes planned to be illustrated in the narratives

**[Insert your answer here.]**

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

**[Insert your answer here.]**