* Briefly describe the artifact. What is it? When was it created?
  + This artifact is a final project I created for my CS300 (Data Structures) course at SNHU. It was published to GitHub on December 16, 2023, and demonstrates the insertion and retrieval of data from a HashTable. The project showcases foundational skills in data structures, such as efficient data storage and lookup, which are essential for software development.
* Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How was the artifact improved?
  + I included this artifact in my ePortfolio because it effectively demonstrates my skills in Software Design and Engineering, Algorithms and Data Structures, and Databases. The artifact allowed me to showcase my ability to implement and test a Red-Black Tree data structure, focusing on compliance with its core properties. For example, I designed test cases to verify that the root node is black and that no red node has a red child. Additionally, this artifact reflects my passion for data structures and highlights my problem-solving and debugging skills when working with complex algorithms.
* Did you meet the course outcomes you planned to meet with this enhancement in Module One? Do you have any updates to your outcome-coverage plans?
  + I have successfully met these two outcomes:
    - 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.
    - 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.
  + At this time, I have no updates to my outcome-coverage plans, as the current enhancement aligns well with the intended learning goals.
* Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?
  + The process of enhancing this artifact was both challenging and rewarding. Here are the key challenges and lessons learned:
    - Modularizing Code: Initially, I implemented the Red-Black Tree in the Main.cpp file. When moving it to a separate file, I encountered issues with dependencies and had to revisit how header files (.hpp) work. This experience reinforced my understanding of modular programming and file organization.
    - Testing Frameworks: When creating static tests, I struggled with deciding where to place the test files. Initially, I created a separate .cpp and .hpp file within the same project, but I couldn't access test case functions. After researching, I learned how to structure a testing project within the same solution, a skill I will carry forward to future projects.
    - Function Implementation: In the static test file, I faced difficulties with implementing the colorToString function due to its location in the Main.cpp file. Moving it to RedBlackTree.cpp resolved the issue, emphasizing the importance of proper function placement within the relevant scope.
  + These challenges deepened my technical knowledge, particularly in file organization, modular programming, and test-driven development.