Riley Snowe

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Southern New Hampshire University

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ePortfolio

The first artifact comes from my CS 405 Secure Coding class regarding SQL injection. The assignment was from our second week in the class where we had to write code that prevented SQL injection. The category this artifact falls under can vary depending on the use, but we will look at the design aspect. The skills that were acquired from this assignment has helped develop a mindset of securing the code as it is planned and developed compared to waiting last minute. Preparing ahead creates a problem-solving mindset and thinking outside the box. In terms of an enhancement plan, the code created can be more efficient and have a broader detection ability for SQL injection. Below is the pseudocode related to the assignment being referenced too:

Declare variables

If user input matches injection referenced numbers

Remove code by replacing with “;”, return results

If user input matches injection referenced words

Remove code by replacing with “;”, return results

If error from user query

Display error message, return false

Return true

The second artifact comes from the same CS 405 class regarding exceptions. The assignment was from the fourth week in the class where we had to write code that handled different types of exceptions, including unknown exceptions. The category this artifact falls under would be algorithms. The skills acquired from this assignment has helped create a more logical thinking regarding what can cause exceptions, helped to further create a problem-solving mindset, and further develop debugging skills. An enhancement plan for the code in the assignment could further define any exceptions and better name them. Below is the pseudocode related to the assignment being referenced too:

Catch custom exception created in custom method

Display “Exception Message: ” and what the exception was

Catch the standard exception being caused

Display “Exception Message: ” and what the exception was

Catch any uncaught exceptions

Display “Unexpected exception caught!”

The third artifact comes from my CS 340 class from our fourth week where we created a python file that tied into our MongoDB database. The artifact falls under the category of databases. In the assignment we had to create a python file that loaded the database information, created a method for creating information based on the user, and read information that is in the database. The skills created from this assignment is that of understanding the relationship of databases to user interfaced and search parameters. The assignment also developed my database skills and command line skills as I did not have any prior experience to these subjects before this class. Regarding an enhancement plan, I would further the code to secure any search parameters used by the user, catch any exceptions that were not specifically caught already, and further the usability of the program. Below is the pseudocode related to the assignment being referenced too:

Initialize client and database

Method for user creating data

If data to input

Insert the data into the database

Else

Display message for no data to input

Method for reading data

If data to read

Display data from database

Else

Display message for no data to read

When it comes to a code review, I will walk through what the code I have created does, I will walk through its usability to showcase what I can create, I will explain any known issues within the code as to show what I know that is not included, and I will explain the process for creating the code. Going through the different explanations of the code will showcase my skills to understand the code, know what can be improved, along with providing what can be enhanced in future revisions.

For the narratives I will explain everything mentioned in this document for the first three paragraphs. I will go through the artifacts and explain their significance, along with what can be done to further enhance the application. Demonstrating knowledge on what can and needs to be improved shows how far I think ahead in my applications.

For a self-assessment, I will go through my most memorable achievements within the computer science program, along with what has held me back and how I have moved past the roadblocks. I would go over all my strengths from my personal experience that can be used in a professional setting, as well as everything from my profession experience that can be used.