1. Describe your solution for the second project that added a Search button. Provide a screenshot of the search button click code that uses a complex algorithm with loops and lists. Why was a loop necessary?

**Answer**

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| My solution uses a for each number loop. The number that the loop runs too changes depending on the length of the questions list. Every time it goes through a number it checks if the index of the question has the keyword that the user entered. IF this is true it will set the index to the number that it found the keyword match and then show the question for the user. If this is false it will repeat until it has searched the entire list. |
| The loop is nesecarry because without it the code will only run once for the index that the user is currently on not all the questions. |

2. Write AP text-style pseudocode for a linear search that searches through a *list* to find an item *x*. It should display *found* if the x is equal to an item in the list.

**Answer**

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| Loop to (Length of list(question list)) {  From 1  By 1  Output number  If x = (Item list (number)) {  Print: “found”  }  } |

3. Give brief descriptions of the enhancements you added to your app for the third project, a quiz topic of your own choosing. Provide screenshots of important blocks and describe how you used them to solve certain programming problems.

**Answer**

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| One of the improvements that I made was adding a scoring system to the app. The code above will check whether the user's answer is correct or false. If the answer is wrong it will subtract a point from the user's score. If their answer is correct the app will add 1 to there score. |

4. To practice for the Create project prompt, grab a screenshot of a program code segment from your project that implements an algorithm that includes two or more algorithms within it and includes mathematical and/or logical concepts. An ideal algorithm is a procedure that you created that includes calls to other procedures that you created, where at least one of those includes math or logic (ifs or loops). Describe how each of the two algorithms within the bigger algorithm functions independently as well as in combination to form a new algorithm.

**Answer**

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| The two algorithms that are present in my code snippet are the algorithms to check if the user enters the right answer or if they entered the wrong answer. The first algorithm checks if the user's answer is equal to the correct answer for that question. If this is correct it then checks if it has already given a point for answering that question. The second algorithm checks if the answer is wrong. If that answer is wrong it subtracts a point. These two algorithms work together to  Briefly describe how each algorithm works independently, then how they work together to form a new algorithm. 4/5 |