**CSE 212 – Programming with Data Structures**

**W05 Prove – Response Document**

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| **Date:** | October 13 2023 |
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**Question 1: From Part 1, how did you answer the interview question for the Set Operations problem (should be no more than 30 seconds if spoken aloud)?**

**To find the intersection, I would loop through one set and check if each element is in the other set, if so, I would add it to an intersection set, since checking if an item is in a set is an O(1) operation. To find the union I would loop through both sets and add each element to a union set, since python won’t raise an error when you try to add something to a set that already contains it.**

**Question 2: From Part 2, how did you answer the interview question for the Find Pairs problem (should be no more than 30 seconds if spoken aloud)?**

**I would loop through the list and add each word to a set, and check if its reverse is already in the set. If so, I would print pair as a string. This way we can check for pairs without exceeding O(n) time by using the using the O(1) in operation for sets.**

Remember: You need to submit the following code files in addition to this document:

* 05-prove\_set\_operations.py
* 05-prove\_find\_pairs.py