Solution Review: Check if Lists are Disjoint

This review provides a detailed analysis solution to the Check if Lists are Disjoint Challenge.

We'll cover the following

Solution: Use a Set

```
def is_disjoint(list1, list2):
    s = set(list1)  # Create set of list1 elements
    # iterate list 2
    for elem in list2:
        # if element in list1 then return False
        if elem in s:
            return False
    # Return True if no common element
    return True


list1 = [9, 4, 3, 1, -2, 6, 5]
list2 = [7, 10, 8]
list3 = [1, 12]
print(is_disjoint(list1, list2))
print(is_disjoint(list1, list3))

```

Nothing tricky going on here. The problem is very similar to the previous one. All we have to do is create a set for `list1` and as soon as we find value from `list2` or `list3` in the `set`, we can conclude that the two lists are not disjoint. Since the `set` uses a hash table under the hood, the complexity for checking an element to be in the `set` will be $O(1)$.

Time Complexity#

For a lookup list with m elements and a subset list with n elements, the time complexity is O(m+n).