Problem 6: Union and Intersection
Explanation

Design Decisions:
Union function simply populates a single list with both input lists, given that the value doesn't already exist in the union list.
Intersection function traverses a list and makes sure the value isn't in the second list or in the intersection list, before adding it to the intersection list.

Time Complexity:
$O(n)$ because in both functions, I only iterate over a single list at a time.

Space Complexity:
$O(n)$ because I use a new list to store the union values and intersection values.