**Radix/Bucket sort**

1. **Compare and contrast Radix Sort and Bucket Sort in terms of their underlying principles, efficiency, and applicability to different types of data.**
2. Discuss the concept of buckets and their role in the Bucket Sort algorithm. How does the choice of bucket size impact the sorting process?
3. Why would you use radix sort over any other sorting algorithm?
4. Sort these key-value pairs with bucket sort

S = {(1, 1), (1, 5), (2, 4), (0, 9), (0, 1), (4, 6), (8, 10), (1, 2)}

(Key, value)

1. Have students sort names with radix sort in lexographical order
2. Explain best/worst case time complexity with inputs
3. Implement Bucket Sort from scratch and analyze performance on various datasets. (DO this if you finish quickly)