

# CSE222 HOMEWORK 6

# REPORT

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# problem solution approach

## myMap class

buildMap() method:

1. Split string with spaces and put it to String[]
2. First for loop, iterate String[] (all words in string)
3. Second for loop, iterate all characters, control if map has key; if it has, update it. If it has not key add it
4. Set map size.

cloneMap() method:

1. Create new LinkedHaskMap
2. Iterate original map with for loop
3. Create info objects for all elements in original map and put new info objects to clone map.

## mergesort class

mergeSort() method:

1. Create new LinkedHashMap<String,info> newMap
2. Use merge() recursive method to merge sort aux ArrayList that filled in constructor with originalMap
3. Fill newMap with sorted ArrayList
4. Create new myMap newMyMap object with newMap
5. Set sorted map with newMyMap.

merge() method:

1. If right>left, stop. Mean while until aux is too small to split
2. Set mid values with right and left values
3. Call merge() with left half
4. Call merge() with right half
5. After every recursively calling ends, sort each left and right halves for each merge call.

sort() merhod:

1. Create temporary String[] with size of aux ArrayList
2. Fill temporary array with using left and right values as a points
3. Set left, right and sorting process pointers
4. First while loop processes until left pointer comes to the mid or right pointer comes to the end, compate left and right pointed key’s count values and set aux with smaller value using sorting process pointer.
5. Second while loop processes for remaining elements from the left half, put them to the aux.
6. Third while loop processes for remaining elements from the right half, put them to the aux.