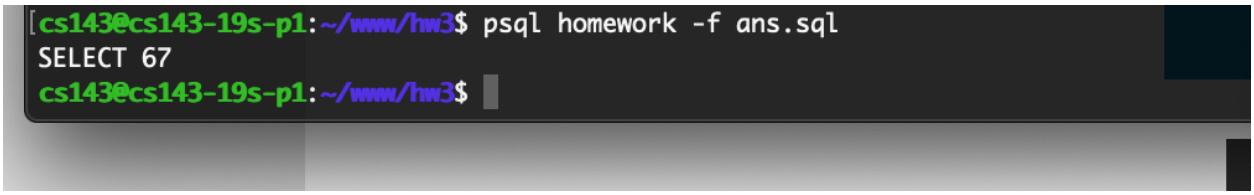
1.

—shows the number of rows in the new, widened (0 or 1) table.



—the number of columns are 46 (for each value category) + 1 for the company name = 47 columns.

2.

a. the final structure looks like this. the 50 and 55 is placed under and next to the 50. Then, the 60 and 80 are placed next to 55 and on the same level.

b. worst case: O(n1+h)

c. worst case is also O(n1+h)

d. n1 = n2

3.

a. a hash structure is not the best choice where range queries are likely because key values within the range do not occupy the buckets consecutively so all of the hash buckets would have to be read.

b. in order to create the hash table, we have to make a sep table that has the beginning addresses of each set. So we have to locate the bucket, we need to use the bucket number and then we can access the block.