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CPSC 326

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Extra Credit

Test Results

```
PS C:\Users\turne\OneDrive - Gonzaga University\CPSC326\extra-credit-NoemiTurner> ghci main.hs -e main
contains 1 [Pass]
contains 2 [Pass]
contains 3 [Pass]
contains 4 [Pass]
insert 1 [Pass]
insert 2 [Pass]
insert 3 [Pass]
insert 4 [Pass]
erase 1 [Pass]
erase 2 [Pass]
erase 3 [Pass]
erase 4 [Pass]
size 1 [Pass]
size 2 [Pass]
size 3 [Pass]
keys 1 [Pass]
keys 2 [Pass]
keys 3 [Pass]
keys 4 [Pass]
keyVals 1 [Pass]
keyVals 2 [Pass]
keyVals 3 [Pass]
groupByKey 1 [Pass]
groupByKey 2 [Pass]
keyRange 1 [Pass]
keyRange 2 [Pass]
keyRange 3 [Pass]
keyRange 4 [Pass]
keyRange 5 [Pass]
```

```
keyJoin 1 [Pass]
keyJoin 2 [Pass]
keyJoin 3 [Pass]
keyJoin 4 [Pass]
keyJoin 5 [Pass]
reduceKeyVals 1 [Pass]
reduceKeyVals 2 [Pass]
```

Issues/Challenges

The biggest challenge I faced while doing this assignment was implementing the keyJoin and reduceKeyVals functions. I kept overcomplicating things and getting type errors. I eventually realized that I was making my solutions to the problems more complicated than they needed to be. I learned that I should step back and take a break when I fill like I'm going in circles, obsessing over the problem, and not getting anywhere.

After a good night's sleep, I figured out that I just needed to utilize the groupByKey function I previously wrote and then pass the result Map k [v] into a helper function inside of keyJoin.