

5.

5a)  $\Rightarrow$  Input  $\Rightarrow$

3  
1 2  
2 2  
8 7  
2  
3 3  
4 4

when key does not exist  
in data 1, the key-value  
pair is not added to it

5b): if  $k$  in data 1:

$v_1 = \text{data1}[k]$

if  $v_1 \neq v_2$ :

$\text{dupkey}[k] = [v_1, v_2]$

$\text{del data1}[k]$

else:

$\text{data1}[k] = v_2$

5c)  $\Rightarrow$

Test case 1  $\Rightarrow$

4  
1 2  
14 14  
3 8  
4 9  
2  
3 3  
4 4

Test case 2  $\Rightarrow$

4  
1 2  
2 2  
3 3  
4