

Lab 3 Double Hashing Clarification

In Double hashing

`hash(key)` calculates $(key \gg 8) | ((key \& 0xff) \ll 16)$

`hashIndex(key)` calculates `hash(key)%table_.size()`

`tableSize` is (in our case constant 191)

`doubleFactor` is (in our case constant 181)

`hash2(key)` calculates `doubleFactor_-(hash(key); % doubleFactor_)`

`f(i,key)` is `i*hash2(key)`

in `lookup(key)` `startIndex = hashIndex(key)`

`index= startIndex;`

`i=0;`

loop

`if table[index] is empty`

`return index`

`else if on position table[index] is key, return index`

`if not all above : collision; use double hashing`

`++i; ++collisions;`

`index=(f(i, key)+startIndex)%table_.size();`

`if (index == startIndex)`

`return table_.size()+1`

end_loop