

CSC212

Hash Table Lab

11/16/17

<http://tinyurl.com/212Lab111617>

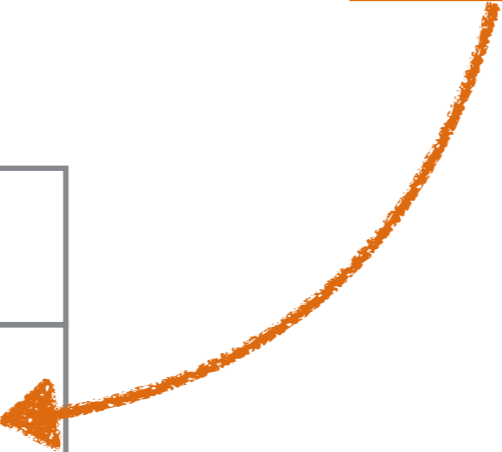
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TableRow

rows

0	null
1	null
2	null
3	null
4	null
5	null
6	null



<http://tinyurl.com/212Lab111617>

locate(key)

ROWS

0	(343,"third")
1	(258,"fifth")
2	(702,"first")
3	(149,"fourth")
4	null
5	null
6	(426,"second")

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insert(key)

(returns the distance)

ROWS

0	(343,"third")
1	(258,"fifth")
2	(702,"first")
3	(149,"fourth")
4	null
5	null
6	(426,"second")

(don't forget to increment nStored!)

lookup(key)

(returns the data)

rows

0	(343,"third")
1	(258,"fifth")
2	(702,"first")
3	(149,"fourth")
4	null
5	null
6	(426,"second")

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Experiments

```
cs231a@aurora ~/212 $ head animals
1804289383 Dog
846930886 Cat
1681692777 Mouse
1714636915 Goat
1957747793 Horse
424238335 Cow
719885386 Elephant
1649760492 Antelope
596516649 Rhinoceros
1189641421 Hippopotamus
...
```

```
cs231a@aurora ~/212 $ head food
1804289383 Apple
846930886 Pear
1681692777 Orange
1714636915 Banana
1957747793 Raspberry
424238335 Blueberry
719885386 Strawberry
1649760492 Kiwi
596516649 Grape
1189641421 Cherry
...
```

```
cs231a@aurora ~/212 $ head states
1804289383 Maine
846930886 NewHampshire
1681692777 Vermont
1714636915 Massachusetts
1957747793 Connecticut
424238335 RhodeIsland
719885386 NewYork
1649760492 NewJersey
596516649 Pennsylvania
1189641421 Delaware
...
```

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Experiments

```
cs231a@aurora ~/212 $ ls -l
```

```
animals
food
states
Table.class
Table.java
TableStats.class
TableStats.java
Table$TableRow.class
TestTable.class
TestTable.java
```

```
cs231a@aurora ~/212 $ java TableStats 101 < states
```

```
Done. Final report:
Created a table with 101 slots.
Inserted 50 elements.
Total number of displacements:  xxxx
Mean displacement:  xxxx
Maximum displacement:  xx
Mean search on lookup:  xxxxxxxxxxxx
Largest cluster:  xxxx
```

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