

Josh
Clements
5-9-23

Homework Hash Table linear probing and chaining

- (10 points) Fill in the HashCode Table values for size 7 and 15 arrays using **LINEAR PROBING** (Open addressing)

Name	hashCode()	hashCode()%7	hashCode()%15
Joao	2314323	4	3
Jean	2304712	4	7
Jani	2301266	2	11
John	2314539	3	9
Juan	2320088	1	8
Jon	74665	3	10
Hans	2241694	0	4

index	Name
[0]	Hans
[1]	Juan
[2]	Jani
[3]	John
[4]	Joao
[5]	Jean
[6]	Jon

$$\begin{aligned} 4+1 &= 5 \quad 5 \% 7 = 5 \checkmark \\ 3+1 &= 4 \quad 4 \% 7 = 4 \\ 4+1 &= 5 \\ 5+1 &= 6 \end{aligned}$$

index	Name
[0]	null
[1]	null
[2]	null
[3]	Joao
[4]	Hans
[5]	null
[6]	null
[7]	Jean
[8]	Juan
[9]	John
[10]	Jon
[11]	Jon
[12]	null
[13]	null
[14]	null

2. (10 points) Fill in the HashCode Table values for size 7 array using **CHAINING**. Draw every node.

Name	hashCode()	hashCode()%7
Joao	2314323	4
Jean	2304712	4
Jani	2301266	2
John	2314539	3
Juan	2320088	1
Jon	74665	3
Hans	2241694	0

index	Name
[0]	Head → Hans → null
[1]	Head → Juan → null
[2]	Head → Jani → null
[3]	Head → John → Jon → null
[4]	Head → Joao → Jean → null
[5]	Head → null
[6]	Head → null