Ceng-310 Homework-9

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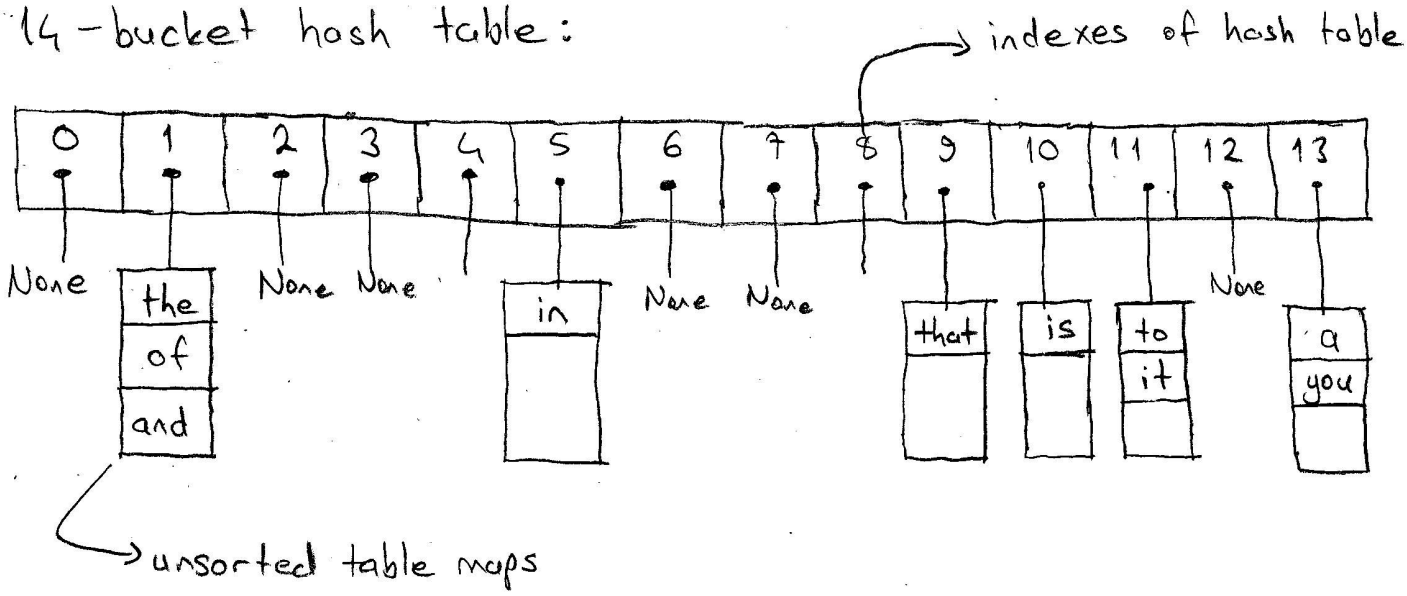
Task-1

(k, v) ⟶ key, value

the	⇒	114801 % 14 = 1	(1, the)
of	⇒	3543 % 14 = 1	(1, of)
to	⇒	3707 % 14 = 11	(11, to)
and	⇒	96727 % 14 = 1	(1, and)
a	⇒	97 % 14 = 13	(13, a)
in	⇒	3365 % 14 = 5	(5, in)
is	⇒	3370 % 14 = 10	(10, is)
it	⇒	3371 % 14 = 11	(11, it)
you	⇒	119839 % 14 = 13	(13, you)
that	⇒	3558823 % 14 = 9	(9, that)

14-bucket hash table:



Task-2

0	1	2	3	4	5	6	7	8	9	10	11	12	13
you	the	of	and		in				that	is	to	it	a

By linear probing $f(i) = i$,

hashtable[hash(word) + i mod 14] in the $(i+1)^{st}$ trial

for the	hashtable[1 + i]	i = 0	⇒	hashtable[1]
of	[1 + i]	i = 1	⇒	[2]
to	[11 + i]	i = 0	⇒	[11]
and	[1 + i]	i = 2	⇒	[3]
a	[13 + i]	i = 0	⇒	[13]
in	[5 + i]	i = 0	⇒	[5]
is	[10 + i]	i = 0	⇒	[10]
it	[11 + i]	i = 1	⇒	[12]
you	[13 + i]	i = 1	⇒	[0] (mod 14)
that	[9 + i]	i = 0	⇒	[9]

Others are None.