

SA-5

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Consider a hash table that uses an array of 13 elements. We insert the following numbers in order:

17, 24, 4, 45, 30, 38, 2, 12

1. Illustrate the final hash table from chaining.
2. Illustrate the final hash table from linear probing.

Hash Table:

Chained:

$$\hookrightarrow 17 \% 13 = 4$$

$$\hookrightarrow 38 \% 13 = 12$$

$$\hookrightarrow 24 \% 13 = 11$$

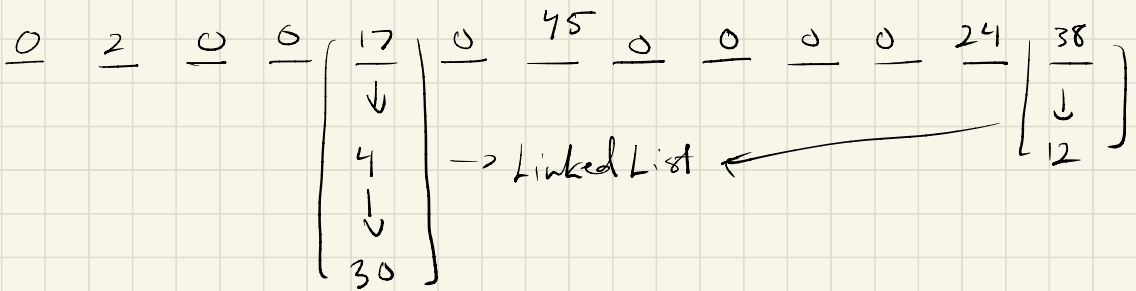
$$\hookrightarrow 2 \% 13 = 2$$

$$\hookrightarrow 4 \% 13 = 4$$

$$\hookrightarrow 12 \% 13 = 12$$

$$\hookrightarrow 45 \% 13 = 6$$

$$\hookrightarrow 30 \% 13 = 4$$



→ Note: assuming 1st array where empty indices are equal to zero by default

Linear Probing:

12	2	0	0	17	4	45	30	0	0	0	24	38
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- \hookrightarrow 17, 4, 30 all @ same index is pushed forward
 \hookrightarrow 12 pushed to first element bc no remaining spots