

Data Structures (Lab8)

1. Insert the following keys into hash table with size 10 using **separate chaining** technique
89, 18, 49, 58, 79
2. Insert the following keys into hash table with size 10 using **linear probing** as collision resolution technique
89, 18, 49, 58, 79
3. Insert the following keys into hash table with size 10 using **quadratic probing** as collision resolution technique
89, 18, 49, 58, 79
4. Insert the following keys into hash table with size 10 using **double hashing** as collision resolution technique
89, 18, 49, 58, 79
- 5.

By using $\text{hash2}(x) = 7 - x\%7$

Hashing Strings

Ex: insert "abba", "abcd", "abce", "baab" into hash table with size 309

You can use Linear probe forward by 1, inserting it at the next available slot (Optional)

$$h(s) = \left(\sum_{i=0}^{n-1} S_i * 37^i \right) \% \text{array_size}$$

$$[S_0 + S_1(37) + S_2(37)^2 + \dots]$$

0	
...	
80	
81	"abba" ←
82	
83	
84	
85	"abcd" ←
86	"abce" ←
...	
308	

0	"IKLT"
...	
80	
81	"abba"
82	"baab"
83	
84	
85	"abcd"
86	"abce"
...	
308	"KLMP"

Reference: <https://pages.cs.wisc.edu/~siff/CS367/Notes/hash.htm>