Homework

Assignment 1

Given input {4371, 1323, 6173, 4199, 4344, 9679, 1989) and a hash function h(X) = X mod 10, show the resulting:
a. Separate chaining hash table.
b. Open addressing hash table using linear probing.
c. Open addressing hash table using quadratic probing.
d. Open addressing hash table with second hash function h2 (X) = 7-(X mod 7).

Assignment 2

Show the result of rehashing the hash tables in Assignment 1. The new hash function is new_h(X) = X mod 20.

Assignment 3

Write a C program to implement a hash table of Assignment 1 with separate chaining hash table and the basic operations:

InitializeTable

Search

Insert

Delete

After that, write a C main program to test all your functions

Hint: you can follow the C code given in the text book 1

Assignment 4 Write a C program like Assignment 3 but hash table with open addressing hash table using linear probing. In deleting operation, you can use real deletion or lazy deletion.

Assignment 5 Write a C program like Assignment 3 but hash table with open addressing hash table with second hash function. In deleting operation, lazy deletion is used.