Study of HashTables

Write/Implement a program to search a key in a hash table of size N (have sufficiently large N, such as 100K). Design a suitable hashing scheme (hash function) to insert, delete and search in the proportion of 2:1:7. Generate random keys as integers. Calculate average search time for a key. Keep the load factor as maximum 0.8. Keep evaluating this and computing average till load factor reaches 0.8. Plot the graph #keys on X-axis v/s average time for search on Y-axis. Explain the graph. Try with at least two hashing schemes. Explain your answer to your lab evaluator. If required alter the table size to get realistic/meaningful results.