CS-311: Data Structures & Algorithms
Lab 2: Snow Fall Database Search
(Hash Search Algorithms)
Due Date: 09/13/2020

We discussed the various methods for implementing Hash search algorithms. This exercise applies our understanding of the hashing search algorithm methods.

Problem Definition:
The file *Annual_Snow_Falls-Years3.dat* contains the annual snow fall measurements in inches recorded consecutively over a three-year period for about 6,000 municipalities, and organized by their zip codes. Implement a hash search database for storing and retrieving snow fall data for any user-specified zip code. Using the zip codes (in the second column) as the database key field, implement the search database with a maximum capacity of 17389 by using the **modulo hashing** search scheme.

Directives:
A) Create a Snow Fall class for storing snow fall record objects as specified in the input text file.

B) Query both databases for the snow fall records, and database locations of the following zip codes:
1. 97004
2. 45442
3. 86909
4. 20882

C) For each of the zip-codes queried above in A) calculate and display the average and maximum snow fall in inches.

You are permitted to work in teams. But each student has to turn in their individual reports and code. Good Luck!

Turn in the following on Black Board:
1. Your C++ source code(s).
2. The output of your program.

Grading Criteria:
1. Source code. **(60 % maximum)**
2. Correct output of your program (**40% maximum**)