In this project you implement 3 different hashing techniques – Open hashing (also known as hashing by chaining), closed hashing with linear probing (this is what Java implements in its HashMap), and closed hashing with quadratic residue search.

You are given the driver modules for all 3 implementations – you do not need to modify this code. You are given output file for each of the implementations – make sure your output matches mine.

All three implementations use the same 3 data files: Books.txt, SearchISBN.txt and DeleteISBN.txt. Make sure to place them in the appropriate folder before running your code.

You are given skeleton code for all three implementations. You need to complete the dictionary operations insert, search and delete for all 3 implementations.

- You need to write a one page report comparing the 3 different hashing techniques among themselves and comparing hashing with BST. Did the output surprise you? Did the output match with the theoretical results? Are you convinced that hash table is a good data structure that implements find, insert and delete operations? Is it better than BST? Carefully look at the comparisons made under each hashing technique.

Your discussion log should explain how much time you spent on the project, how much time you expected to spend, difficulties you faced, web sources you referenced, things you struggled with and things you learned.

This project is involved and do not underestimate the time it takes to complete it. If you are stuck, come to my office for help, post questions on Piazza. Have a study buddy to discuss the project at a high level (not actual code).

Good luck.

Due Date: Friday, December 6 midnight.