In your first program:

- Create a function that will generate a list of random numbers. Be sure the numbers are in random order. The function should accept a number that represents the size of the list and return the list.
- Modify the Bubble sort, Insertion sort and Quick sort functions to perform benchmark analysis on each of these functions. You MUST use some type of counting such as comparisons and swaps AND you MUST use time. These files are located in the I:\kopp\outbox\CS 222 01\Final Project folder.
- Run the benchmark analysis on each sorting function for list sizes of 100, 1000, and 10000. Print the size and the benchmark values (time and counts).
- **Write an essay discussing your results**. Be sure to explain your results completely and thoroughly. In your conclusion, determine which, if any, of the sorting techniques are better.

In your second program:

- Use the binaryList.txt file located in the folder mentioned above. You will need to read the numbers into a list. Run a for loop 20 times searching for the 20 numbers located in the binaryLook.txt file. Write an essay that will analyze these searches using comparison.
- Use the hashList.txt file located in the folder mentioned above. Using the hash search (Folding method), move the numbers from the file to a hash list. Suggested size for the hash list is 1171. Once the list is created, use the hash function to search for 20 numbers found in the hashLook.txt file. Write an essay that will analyze these searches using comparison.

Add the following comments to the beginning of the program.

Name:	Your Name
Class and Section:	CS 222 01
Assignment:	Final Project
Due Date:	See above
Date Turned in:	
Program Description:	You write a short description of what the program will do