**Lab 8**

1. Create 2 lists of random numbers up to 100 numbers in each. You can seed with srand(time(0)), then use rand() %100 for this.
2. Write an insertion sort routine, use it to sort each list
3. Write a routine that will combine and sort the two lists into a new 200 element array.
4. What is this function called? Where have you seen it before?
5. Write a routine to check if a random number exists in the array. Your routine should work in O(log(N)) time.

Submit all code in a word document or a standard ascii text file.