MAT 101 — Introduction to Computer Programming (C++)

Handout #13, March 22, 2005

Today's tasks:

1. Arrays in Functions p182
2. Functions (always include the size) (p186) (see scale on p 191)
3. Functions may write to arrays (see inputData on p189)
4. Even if the size is global, pass it anyway! (p194)
5. Partially filled arrays p194 (include number used) (see fillArray p196)
6. Sequential Search (find an element in the array) (see search p199)
7. Homework Due Tuesday March 29: (hw6, hw6.cpp)
   Write a program that reads integers input by the user. You may assume that there are fewer than 50 unique entries in the final array. The first number input by the user is the number of elements input. The following numbers include numbers to be placed in the array. The output is to be a two-column list. The first column is a list of the distinct array elements; the second column is the count of the number of occurrences of each element. If the user inputs the following:
   16 -12 3 -12 4 1 1 -12 1 -1 1 2 3 4 2 3 -12
   the output (although format may be slightly different) should be:

N	Count
-12	4
3	3
4	2
1	4
-1	1
2	2

   Hint: Maintain two arrays (distinct numbers and count). Use a search (p199) to determine uniqueness and to decide whether to add a new element (and increase number used) or just increase count for this particular unique number.