Day 15 Highlights

1. Reminders
   1. zyBooks Chapter 6 due next Monday at midnight
   2. Project Three posted and due a week from this Friday
2. C program consists of one or more functions
   1. Must have a function **main**
   2. Until now, that is the only function we have ever written
      1. Have used others (scanf, printf, strlen, round)
   3. C program always starts execution by calling function **main**
   4. Functions are good – allow us to build more modular code
3. Write a function to calculate the distance between two points
   1. Signature **double dist(int, int, int, int);**
   2. Function  
      **double dist(int P1x, int P1y, int P2x, int P2y) {}**
   3. Explain that all parameters are pass-by-value and what happens when a function is called/invoked
   4. Explain that a function returns one or zero values
4. The basic rules for generating
   1. Function signature **return-type name( formal parameters );**
      1. Return type can be void. Example – function to print
      2. Can have no formal parameters **( )** or **( void )**
   2. Function definition **return-type name ( params) { stmt(s); }**
5. Explain positioning of functions within a program
6. Write a program that uses a function to return:
   1. The number of vowels in a string
   2. The largest value in an array of integers
   3. The sum (integer) or average (double) of an array of integers