

## **ME 701 – Development of Computer Applications In Mechanical Engineering**

### **Homework 1 – Due 9/1/2017**

#### **Problem 1 – Open-Source Software**

Think of the things you do routinely on a computer that require specific software packages. Find an open-source solution from the software repository for one of these activities and tell me about it in 100 words or less. For example, I used to do lots of audio recording when I was in high school (not *that* long ago) and used special (and pretty expensive) tools like Cakewalk Sonar. Since then, I've found an open-source package for doing multitrack recording called Ardour that doesn't have all the bells and whistles but, because I can program in C++ and the source code is available, I could, in theory, create any such whistles I need.

#### **Problem 2 – Command-Line Utilities**

1. Figure out how to display information about your CPU via the command line. This should include at least the processor speed and the number of cores. List your command(s) and the output.
2. Figure out how to list the programs that use the most amount of (1) processing and (2) memory. List your command(s) and the output.