# CS 3210, Lab 1
# C++ Console Program

## 1. Purpose

The purpose of this lab is to write a simple console program in C++ using C++ standard library function.

## 2. Prerequisites

An operational Linux environment either native or as a virtual machine.

## 3. Assignment

Write a C++ console program that will:

- Accept a filename of an ASCII STL file via the command line
- Open and read file (recommend reading line-by-line using getline)
- Identify each facet, and print the coordinates of each of its vertices to the console, readable and formatted. The Exact formatting is up to you.
- Summarize contents
    - the number of facets in the file
    - the min and max of the x, y, and z coordinates
- No need to store vertices, etc – we will do that later

The program must be a quality, commented implementation commensurate with your programming experience. The implementation must be structured (not all code in main) as we may reuse some of this code later. It may be in single .cpp source file, or multiple source files.

See: https://en.wikipedia.org/wiki/STL_(file_format)

A sample ASCII STL file will be provided for testing your program, but I suggesting testing with other files to ensure a robust implementation.

**Information on submitting the lab can be found in the lab submission document on Blackboard.**

## 4. Due Date and Deliverable

This project is due to be submitted prior to next week's lab. You may be asked to demonstrate the program during lab in Week 2.

## 5. Checklist

- Accepts a filename via command-line arguments
- Prints each facet's vertices to console in a readable, nicely formatted fashion
- Correctly reports how many facets were present in the file
- Reports minimum and maximum value of each of the coordinates
- File is handled properly, (opened and closed properly)
- Does **not** store vertices