

## Lab 10 – Multiple arrays

Due: 11:59 PM Friday, November 4<sup>th</sup>

The purpose of this lab is to practice reading files that store more complicated data and to practice using multiple arrays.

Start by downloading the data file provided on Blackboard (CS\_courses.txt). This data file is 120 lines long. Each set of 3 lines represents data for one course in the format:

```
course_ID
professor
num_students_enrolled
```

There are 40 courses in total.

### Your task is this:

1. Read this data into 3 arrays (one for each type of data) such that all the data for the first course in the data file can be found at index 0 of each array, the second course's data at index 1 in each array, and so on.
  - a. Create a constant variable for the size of the arrays.
  - b. Make sure the data type for each array matches the kind of data you are storing in it.
  - c. Remember that if you want to read in a whole line that includes spaces, you should use `getline()` instead of the `>>` operator.
    - i. Remember that there are issues using `getline()` after the `>>` operator because the `>>` operator leaves the `'\n'` on the input stream. You can ignore newlines like:

```
while(stream_name.peek() == '\n'){
    stream_name.ignore();
}
```
2. Generate an output file "report" that includes:
  - a. The average class size.
  - b. The data for the course(s) with the most students enrolled. Make sure that the output includes the course ID, professor and number of students in a clearly readable format.
  - c. The data for the course(s) with the fewest students enrolled. Make sure that the output includes the course ID, professor and number of students in a clearly readable format.

I have provided an EXAMPLE output file. Your output does not have to look exactly like mine, but it should be at least as readable.

Turn in your source code and output file on Blackboard.