

CSE221 Programming Assignment 1

Due: 9/15 at 4:00pm

Instruction: zip your source code as assignment1_yourStudentID.zip and submit it via Blackboard. Please make sure your code is runnable, otherwise you will get no point since we cannot debug your code for grading.

1. A common punishment for school children is to write out the same sentence multiple times. Write a C++ stand-alone program that will write out the following sentence one hundred times: “I will always use object-oriented design.” Your program should number each of the sentences and it should “accidentally” make eight different random-looking typos at various points in the listing, so that it looks like a human typed it all by hand (30 points).
2. Design a class **Line** that implements a line, which is represented by the formula $y = ax + b$. Your class should store a and b as **double** member variables. Write a member function **intersect**(ℓ) that returns the x coordinate at which this line intersects line ℓ . If the two lines are parallel, then your function should throw an exception **Parallel**. Write a C++ program that creates a number of **Line** objects and tests each pair for intersection. Your program should print an appropriate error message for parallel lines (30 points).
3. Write a C++ program that inputs a list of words separated by whitespace, and outputs how many times each word appears in the list. You need not worry about efficiency at this point, however, as this topic is something that will be addressed later in this course (40 points).