EECS 293
Software Craftsmanship
2016 Fall Semester

Programming Assignment 1

Due at the beginning of your discussion session on

September 5-9, 2016

Reading

Read Chapters 1, 2, 3, and 4 in Code Complete.

Programming

In this assignment, you will write a method that finds the longest common prefix in two lists:

```
static <T>
List<T> longestPrefix(List<T> a,
                      List<T> b,
                      Comparator<? super T> cmp)
```

A *prefix* of a list is a list containing the first entry (or entries) of the list. A common prefix is a prefix that is common to both lists. The method is supposed to return the common prefix of maximum length. Here are some examples:

a	B	Longest common prefix
1, 2, 4	1, 2, 3	1, 2
1, 2	2, 1	Empty list
1, 2	1, 2, 3, 4	1, 2
1, 2, 3, 4	1, 2, 4	1, 2

To make the assignment more exciting:

- If your CWRU student id is an even number, then your code should use `Iterators`.

- If your CWRU student id is an odd number, then your code can use recursion but cannot use any type of loop (`while`, `do`, `for`, for-each, `Iterator`, `ListIterator`, `Streams`, etc.)

Write a program that reads two strings and prints out their longest common prefix. Create your own input data and run your program on it.

Blackboard Resource

The Course Document page contains links to some of the Java features that are helpful for this assignment, such as collections and streams.

Submission

Bring a copy to your discussion session to display on a projector. Additionally, submit an electronic copy of your program to blackboard.

Notes

If you are in a non-Java section, it is your responsibility to adapt these specifications to your programming language.

Grading Guidelines

The first assignment is required but not graded.