

Assignment 2 CS551  
Dealing with multiple processes on Unix  
Due Monday October 17, 2016 at 11PM

A/a?

Write a C program called uniqify. Uniqify's job is to read a text file and output the unique words in the file, sorted in alphabetic order. The input is from stdin, and the output is to stdout. The output should have one word per line preceded with a count of how many times it appeared in the input.

Internally, the program would be organized into 3 types of processes. A single process reads the input parsing the lines into words, another group of process does the sorting, and a single process suppresses and counts duplicate words and writes the output. You should organize the processes so that every parent waits for its children.

You must use the system sort command (/bin/sort) with no arguments to do the actual sorting, and your program must arrange to start the processes and plumb the pipes. The number of sorting processes is a command line argument to the program, with the parser distributing the words round robin to the sorting processes.

The I/O to and from the pipes should be done using the stream functions fgets and fputs, with fdopen for attaching to the pipes, and fdclose for flushing the streams.

In this assignment words are all alphabetic and case insensitive, with the parser converting all alphabetic characters to lower case. Any non-alphabetic characters delimit words and are discarded. Any word shorter than 3 characters is discarded, any word over 40 characteres is truncated to 40. The output is the unique and sorted words preceded by a count of its multiplicity. For uniformity use %5d for the multiplicities.

↓  
tricky  
part

memo to lower