

CS 3733 Operating Systems — Spring 2009 Assignment 4

Name _____

Consecutively number the pages and fill in the table of contents below.

Description	page number	
getWordCount source	_____	
wordCount source	_____	
wordCountChild source	_____	
additional source	_____	
Part 1 test output	_____	check if you think it is correct: <input type="checkbox"/>
Part 2 test output	_____	check if you think it is correct: <input type="checkbox"/>

Did you answer the questions on the back of this sheet? _____

If you think everything you did is correct, check here: ☐

Otherwise, give a brief description of what is working and what progress was made on the part that is not working:

- 1) In `wordCountChild` did you use the `wait` system call? Explain why or why not.
- 2) In your program the child sends information back to the parent through a pipe. How is this formatted? How does the parent know when the information from one child stops and another starts? How does it know when it has received all data from the children?
- 3) In your program, each child needs to write two pieces of information to the pipe, the word count and information about which file it corresponds to. How many writes to the pipe does each child process do? What would happen if this were done with two separate calls to `write`?
- 4) Which program (Part 1 or Part 2) would be faster on a single CPU system? Explain. How would the answer change on a dual core CPU?