

University of Illinois at Urbana-Champaign
Dept. of Electrical and Computer Engineering

ECE 220: Computer Systems & Programming

Three Part I/O Example

1

Another I/O Example: Counting Words in a File

Let's do another I/O example.

Here's the problem:

- **given a file name**,
- **count** the “**words**” in the file, and
- **print a list** of the **words** and their **counts**
- in **alphabetic order**.

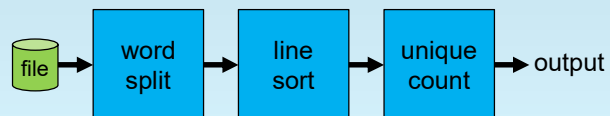
How can we approach this problem?

2

One Approach: Sequential Decomposition into Three Parts

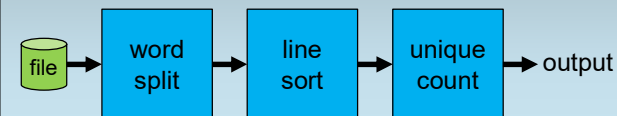
One approach: decompose sequentially

1. Break the file into words (one per line).
2. Sort the lines.
3. Count unique words (# of repeats).



3

Our Specification Has Ambiguities



Unfortunately ...
...there are some ambiguities.

What's a “word?”
Should case matter?
How many words are allowed?

4