

CS1117: Exercise Sheet Semester 2 Week 6

Question 1 (Files, Dictionaries, General Programming Principles):

Write a program that analyses the contents of a file (you have a file called `book.txt` in the current directory) containing a large amount of English text and outputs the word that occurs most often to a file `output.txt`. You can assume `book.txt` contains lines of text with no word split across lines and that there is at least one space separating words.

Words and their respective counts should be stored in a dictionary called `wc`.

The program should disregard the punctuation in words including full stops, commas, exclamation marks and questions marks. It should not distinguish between upper and lower case, so “cat” and “Cat” are treated as the same word however words sharing a common stem can be regarded as different words e.g. “cat” and “cats” are different, “sing”, “sings”, “singing” are different and so on.

Skeleton code has been provided for you on Canvas.

Question 2 (Selection Sort):

A property developer is currently renovating 10 properties. Data re the costs associated with renovating a particular aspect of each property are listed in a grid format. Each row represents a property and each column represents an aspect to be renovated e.g. 10 rows, 4 columns (depending on the aspects to be renovated).

	Drywall	Painting	Roof	Exterior
Property 1	1000	1300	5000	10000
Property 2	5000	2000	3567	2300
...
Property 10	3400	3400	6345	13425

Assuming each property is renovating the same aspects calculate:

- The cost per property
- The cost per renovation aspect.
- The total cost of renovating all properties.
- The property costing the most to renovate.