

Q1:

Recommended Time 20 min

Write a program that reads a text file and returns the longest sentence in it, along with its length and word count.

Input:

The text file contains the following content:

```
"In a world where technology has taken over, it's easy to forget  
the beauty of nature. Trees sway in the wind, leaves rustle and  
birds chirp, all in harmony. We must remember to appreciate the  
simple things in life and take a step back from our screens."
```

Output:

```
The longest sentence is: "We must remember to appreciate the  
simple things in life and take a step back from our screens."
```

Length: 81

Word count: 15

Q2:

Recommended Time 15 min

Write a program to read multiple files and copy the contents of each file to a new file. The new file should have the contents of each file in the order in which the files were read.

Input:

File 1:

`"file1.txt" with contents "Hello World"`

File 2:

`"file2.txt" with contents "Hello Again"`

File 3:

`"file3.txt" with contents "Goodbye"`

Output:

New file:

`"merged_files.txt" with contents:`

`"Hello World Hello Again Goodbye"`

Q3:

Recommended Time 15 min

Write a program to read multiple files and find the common words in all the files. The program should print the number of common words and the words themselves.

Input:

File 1: "Hello World, how are you today? This is a sample input for the program to find common words in multiple files."

File 2: "Hello again, it's a beautiful day today. This is a sample input to test the program's capability."

File 3: "The weather is good today and it's sunny. This is another sample input for testing."

Output:

Number of common words: 6

Common words: "Hello", "today", "is", "a", "input", "for"

Q4:

Recommended Time 15 min

Write a program to read a file and find all palindromic words in the file. The program should print the number of palindromic words and the words themselves.

Input:

Madam, in Eden, I'm Adam.

A man, a plan, a canal, Panama!

Able was I ere I saw Elba.

Never odd or even.

Output:

Number of palindromic words: 5

Words: 'Madam', 'Adam', 'A man, a plan, a canal, Panama!', 'Able was I ere I saw Elba', 'Never odd or even'

Q5:

Recommended Time 20 min

Write a program to read a file and write the contents to a new file, replacing all numbers with their corresponding English words. For example, 1 should be replaced with "one," 2 should be replaced with "two," and so on.

Input:

File "numbers.txt" with the following content:

"I have 5 dogs and 1 cat."

Output:

File "words.txt" with the following content:

"I have five dogs and one cat."

Q6:

Recommended Time 15 min

Write a program to read a file and find all the sentences in the file that have the same length. The program should print the number of sentences with the same length and the sentences themselves.

Input:

The quick brown fox jumps over the lazy dog.

It is raining cats and dogs.

I love coding in Python.

Output:

2 sentences have length 28

The quick brown fox jumps over the lazy dog.

It is raining cats and dogs.

1 sentence has length 23

I love coding in Python.

Q7:

Recommended Time 10 min

Write a program to read a file and write the contents to a new file, but include only lines that contain a specific word.

Input:

file1.txt:

Hello, how are you today?

I am good, thanks.

What's up with you?

I am doing well, how about you?

Output:

Enter the word to search: good

file2.txt:

I am good, thanks.

I am doing well, how about you?