

LAB03

FIT-HCMUS

Given the file `text.txt`

Exercise 1

Write a function to read the file and print all its contents to the screen.

Exercise 2

Write a function to read the first `n` lines of the file and print them to the screen.

Exercise 3

Write a function to read the last `n` lines of the file and print them to the screen.

Exercise 4

Write a function to search for the longest strings in the file.

Exercise 5

Write a function to search for the shortest strings in the file.

Exercise 6

Write a function to count the number of lines in the file.

Exercise 7

Write a function to count the occurrences of each word in the file.

Exercise 8

Write a function to return the words that appear the most in the file.

Exercise 9

Write a function to return the words that appear the least in the file.

Exercise 10

Write a function to count the words that end with a given letter k.

Exercise 11

Write a function to count the occurrences of each letter in the file.

Exercise 12

Given n and k, write a function to return the words that appear between n and k times in the file.

Exercise 13

Write a function to copy the lines from n to k of the file "text.txt" and paste them into a new file. Name the new file "output.txt".

Exercise 14

Write a function that returns the words that most frequently appear immediately before a given word in a text file.

Description:

- The function should take two inputs: a text file and a target word.
- It will analyze the file to find which word most often comes directly before the target word.
- If multiple words occur with the same frequency, return all of them.

Example:

Document in text file: *The cat sat on the mat. The cat jumped over the mat. The dog sat beside the cat.*

Target Word: Cat

Output: ["the"] (the word "the" precedes "cat" most often)

Exercise 15

Write a function to return the lines that contain a given word. If none is found, return None.

Exercise 16

Write a function to replace a word or a string in the file with another word or string.

Exercise 17

Write a function to insert any content into the file at a given line number n.

Exercise 18

Write a function to delete the nth line of the file.

Exercise 19

Write a function to write the elements of an array into the file. Name the file "output2.txt".

Exercise 20

Write a function that converts all the numbers in a text file into their corresponding word form.