

Suffix Program

Generate new words using a suffix

Write a program that reads a sentence, fetches the 2nd word in it, and creates n new words from the letters in the second word, where n is the length of the second word. Each letter of the second word is suffixed by "otter" to create and print a new word (n such new words must be generated and printed). You may assume that each word is always separated by a single space.

Sample Input:

Welcome to the world of suffixes.
Enter a sentence: I have a class at 10am.

Output:

The second word is have.
List of new words:
hotter
aotter
votter
eotter

Algorithm

Inputs: (from user)

User provides the sentence.

Outputs: (text description of what the algorithm will output)

Program outputs the second word.
It also outputs the list of new created words from the letters of the second word.

Main Algorithm (numbered steps)

1. Print welcome message
2. Prompt the user for the sentence
3. Extract the second word from the sentence and print it
4. Generate and print new words from each letter in the second word

Step Refinements (provide a refinement for each numbered step that has multiple sub-steps)

Step 3 refinement

- 3.1 Find the first space (' ') in the sentence.
- 3.2 Store the letters after the first space in a new string until the next space is found.

This fetches the second word. Store it in a new string. Remember to insert the null character '\0' at the end of this new string.
3.3 Print the second word.

Step 4 refinement

4.1 Use a for loop to iterate through each letter in the second word (using its length)
4.2 Print the character followed by "otter"