

Online on Pointers

Section: A1+A2

Time: 50 minutes

Problem: Reverse All the Vowels of the Given String

Write a C program that takes a string `s` as input and rearranges its vowels. The program should:

1. Extract all the vowels from the string and reverse their order.
2. Replace the vowels in the original string with the reversed vowels, while keeping the consonants in their original positions. Print this string.
3. If the resultant string starts with a vowel, move the vowel to the rightmost position by shifting all the other elements to the left by one position. Print this string. You need to perform this operation only once.

Use **pointer arithmetic** and **dynamic memory allocation** to solve the problem. No array indexing allowed!

Sample I/O:

| Input | Output |
|-------------|--------------------------|
| hello | holle |
| programming | prigrammong |
| education | odicatuen dicatueno |
| accentuate | eccantueta ccantuetae |