

# Lab 12

## Vowel Counter and Sorter

### Objective:

Write a program that takes a phrase and then counts the number of vowels (case does not matter) in the phrase. It then should display all of the vowels in sorted ascending order according to their count. Only consider {AEIOU} as the vowels.

### Hint:

It may be a good idea to keep track and sort two arrays:

1. Has the vowels in alphabetic order
2. Has the number of said vowels

Whenever one would swap then it swaps the values in both arrays.

### Example Dialog:

```
Welcome to the vowel counter and sorter!
Enter a phrase!
aaaaaeeeeiiioou
The vowels and their count
u 1
o 2
i 3
e 4
a 5
```

### Another Example

```
Welcome to the vowel counter and sorter!
Enter a phrase!
Facetious is the only word in English that contains all vowels in
order!
The vowels and their count
u 1
a 4
e 5
i 6
o 6
```

### Yet another Example

```
Welcome to the vowel counter and sorter!
Enter a phrase!
I have a pen, I have an apple. Uh! Apple Pen I have a pen, I have
pineapple. Uh! Pineapple Pen Apple pen... Pineapple pen... uh! Pen
Pineapple Apple Pen! Pen Pineapple Apple Pen
The vowels and their count
o 0
u 3
i 9
a 17
e 29
```

### Lab Questions:

1. Draw a flow chart for the solution and include it in the proposed solution section.
2. How can the algorithm be changed to sort in descending order rather than ascending order?

### Finally:

Upload the .java file to the dropbox