



## Lab 1: Chars

Exploring how to reuse methods while learning about chars.

### Exercises

- 1) Complete the method `scanString(String instructions)`. The parameter `instructions` is the user's prompt. Print it before scanning an entire line. Then return the user's input.
- 2) Complete the method `isVowel(char letter)`. This should return true if the parameter `letter` is a vowel, and false otherwise.
- 3) Complete the method `numVowels(String str)`. It should return the number of vowels in the parameter `str`. **DO NOT** rewrite the code from #2. Rather, call `isVowel()` for each letter you need to check.
- 4) Complete the method `compareVowels(String str1, String str2)`. Return 1 if `str1` has more vowels, 2 if `str2` has more vowels, and 0 if they have the same number of vowels. **DO NOT** rewrite the code from #2 or #3. Rather, call `numVowels()` for each string and compare them.
- 5) Complete the method `rot13(String str)`. A ROT13 cipher is one where each letter in the message is rotated 13 letters up. If it goes beyond z, the letter rotates to an 'a' and keeps counting. Example:  $a + 13 = n$ ,  $z + 13 = m$ ,  $x + 13 = k$ . Rotate the parameter `str` and return the coded message. Note, the parameter will be all lowercase letters.

#### Example

```
message: it's a me mario  
code:    vg'f n zr znevb
```

Continue...

