Required

Alphabetic Telephone Number Translator:

Many companies use telephone numbers like 555-GET-FOOD so the number is easier for their customers to remember. On a standard telephone, the alphabetic letters are mapped to numbers in the following fashion:

- A, B, and C = 2
- D, E, and F = 3
- G, H, and I = 4
- J, K, and L = 5
- M, N, and O = 6
- P, Q, R, and S = 7
- T, U, and V = 8
- W, X, Y, and Z = 9

Write a program that asks the user to enter a 10-character telephone number in the format XXXXXX-XXXX. The application should display the telephone number with any alphabetic characters that appeared in the original translated to their numeric equivalent. For example, if the user enters 555-GET-FOOD, the application should display 555-438-3663.

```
Enter the telephone number in the format XXX-XXX-XXXX: 431-buy-food
The phone number is 431-289-3663
```

Pig Latin

Write a program that accepts a sentence as input and converts each word to "Pig Latin." In one version, to convert a word to Pig Latin, you remove the first letter and place that letter at the end of the word. Then, you append the string "ay" to the word. Here is an example:

English: I SLEPT MOST OF THE NIGHT

Pig Latin: IAY LEPTSAY OSTMAY FOAY HETAY IGHTNAY

Optional

Character Analysis

If you have downloaded the source code you will find a file named text.txt in the Chapter 08 folder. Write a program that reads the file's contents and determines the following: The number of uppercase letters in the file The number of lowercase letters in the file The number of digits in the file The number of whitespace characters in the file.

```
Uppercase letters: 29
Lowercase letters: 1228
Digits: 30
Spaces: 260
```

Word Separator

Write a program that accepts as input a sentence in which all of the words are run together, but the first character of each word is uppercase. Convert the sentence to a string in which the words are separated by spaces, and only the first word starts with an uppercase letter. For example the string "StopAndSmellTheRoses." would be converted to "Stop and smell the roses."