

## 08.2 - Phone Number Converter

Many companies use telephone numbers like 555-GET-FOOD so that the number is easier for customers to remember. On a standard telephone, the alphabetic letters are mapped to numbers as shown in Table 1a.

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

(a)

| Input        | Output       |
|--------------|--------------|
| 555-Flo-wers | 555-356-9377 |
| 555-GET-FOOD | 555-438-3663 |
| 555-New-Cars | 555-639-2277 |

(b)

Table 1: Keypad letter mapping (a) and test data (b) for Exercise 08.2.

Write a new function named `convert_number` that takes a phone number string such as “555-GET-FOOD” as its only argument and returns the telephone number with any alphabetic characters that appeared in the original translated into their numeric equivalent. For example, if the argument is “555-GET-FOOD”, the function should return “555-438-3663”. Make sure the function can handle input with both upper and lower case characters.

In your main function, collect a phone number from the user, use your `convert_number` function to convert it to its numeric equivalent, and then print the converted result. Test your program with the test data in Table 1b.

Finally format your program to match the sample run shown below. Your output should match the sample output, character for character, including all white space and punctuation. User input in the sample has been highlighted in **Pappy's Purple** to distinguish it from the program's output, but your user input does not need to be colored. Save your program as `phone_number_converter_login.py`, where `login` is your Purdue login. Then submit it along with a screenshot showing **all 3** test cases.

### Terminal

```
$ python phone_number_converter_login.py
Enter a telephone number: 555-New-Cars
The phone number is 555-639-2277
```