**Strings**

**1]** Count how many of each vowel (a, e, i, o, u) there are in a text string, andprint the count for each vowel with a single formatted string. Remember that vowels can be both lower and uppercase.

**2]** Below is a text with several characters enclosed in square brackets [ and ].

Scan the text and print out all characters which are between square brackets.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| text = | """And sending | | tinted postcards of places they don ' t | | | |
| realise they haven ' t | | | even | visited to | ' All at nu[m]ber 22, weather | |
| w[on]derful , our | | room | is | marked with | an | ' X ' . Wish you were here. |
| Food very greasy | | but we ' ve found a charming li[t]tle local place | | | | |
| hidden | awa[y ]in | the back streets where they serve Watney ' s Red | | | | |
| Barrel | and cheese | and | onion cris[p]s | | and | the accordionist pla[y]s |
| "Maybe | i[t ] ' s because | | I ' m a Londoner " ' and spending four days on | | | |
| the tarmac at Luton airport on a five -day package tour wit[h] | | | | | | |
| n[o]thing to eat | | but | dried Watney ' s | | sa[n]dwiches ... """ | |
|  |  |  |  |  |  |  |

**3]** Print a line of all the capital letters"A"to"Z". Below it, print a line ofthe letters that are 13 positions in the alphabet away from the letters that are above them. E.g., below the "A" you print an "N", below the "B" you print an "O", etcetera. You have to consider the alphabet to be circular, i.e., after the "Z", it loops back to the "A" again.

**4]** In the text below, count how often the word “wood” occurs (using pro-gram code, of course). Capitals and lower case letters may both be used, and you have to consider that the word “wood” should be a separate word, and not part of another word. Hint: If you did the exercises from this chapter, you already developed a function that “cleans” a text. Combining that function with the split() function more or less solves the problem for you.

text = """How much wood would a woodchuck chuck If a woodchuck could chuck wood?

He would chuck , he would , as much as he could ,

And chuck as much as a woodchuck would

If a woodchuck could chuck wood."""

**5]** Write a program that takes a string and produces a new string that con-tains the exact characters that the first string contains, but in order of their ASCII-codes. For instance, the string "Hello, world!" should be turned into " !,Hdellloorw". This is relatively easy to do with list functions, which will be introduced in a future chapter, but for now try to do it with string manipulation functions alone.

**6]** Typical autocorrect functions are the following: (1) if a word starts withtwo capitals, followed by a lower-case letter, the second capital is made lower case; (2) if a sentence contains a word that is immediately followed by the same word, the second occurrence is removed; (3) if a sentence starts with a lower-case letter, that letter is turned into a capital; (4) if a word consists entirely of capitals, except for the first letter which is lower case, then the case of the letters in the word is reversed; and (5) if the sentence contains the name of a day (in English) which does not start with a capital, the first letter is turned into a capital. Write a program that takes a sentence and makes these auto-corrections. Test it out on the string below.

sentence = "as it turned out our aRTHUR BElling was was to change every sunday we ' d hurry along to and Jam ..."

chance meeting with REverend \ our whole way of life , and \ St lOONY up the Cream BUn \