

Laboratory 3

Objective

Be familiar with the concepts related to Python dictionaries, lists and files.

Problem 1

Download the file called morse.txt and save it in some location on disk. This file contains the translation of the latin alphabet to Morse code. Then, write a Python program that reads a message from the `stdin` (keyboard) and translates it to Morse code. The translated message will be displayed at `stdout` (screen).

Problem 2

Make a function that will create a dictionary having keys in the interval $[1, 30]$ and values the square of the key. Then, print the key-value pairs at `stdout`.

```
{1: 1, 2:4, ...}
```

Problem 3

Make a program that will do the following:

- a) read a word from the input console
- b) Creates all anagrams of that word
- c) Compare all anagrams created at the previous step with the words contained in the file `dictionary.txt`, attached to this laboratory (see on the website). If the word exists in that dictionary, it means that the word is meaningful and display it.

Important notes:

In order to create the permutations needed in building the anagrams, use the following import:

```
from itertools import permutations
```

Then call that function as follows:

```
result = permutations(word)
```

`result` is an iterator containing a series of tuples with the result of permutations which can be stepped like:

```
for crt_elem in result:  
    do_something()
```

