

2. Esercizi Python

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Exercise 1 - Mimic

Write a Python module that takes as input a filename (from command line) and starts to print random phrases by mimicking the behavior of the provided file.

To mimic the behavior you need to build a dict with the words as keys, and each value is a list of the words following the key word found in the file.

Use the **random** module to select a starting key randomly and the following word (which is also randomly chosen from the value list).

Then only select the following word randomly from the value list, using the previously chosen value as key.

Exercise 1 - Mimic example

"Hello there my friend, hello is my new favourite word. Hello there!"

```
{
  'favourite': ['word'],
  'friend': ['hello'],
  'hello': ['there', 'is', 'there'],
  'is': ['my'],
  'my': ['friend', 'new'],
  'new': ['favourite'],
  'there': ['my'],
  'word': ['hello']
}
```

Possible output:

favourite word hello there my new favourite word hello there my ...

Exercise 2 - Ocean treasure

Write a simple interactive Python game which scope is to find a hidden treasure in the Ocean.

The ocean is represented by a $20 * 20$ matrix. The user inserts a pair of coordinates (x, y) that represents a particular ocean tile. The output is either the treasure or the distance from the treasure.

The game ends when the user finds the treasures and prints the total number of attempts.

Exercise 2 - Ocean treasure example (5x5)

2	1	1	1	2
2	1	T	1	2
2	1	1	1	2
2	2	2	2	2
3	3	3	3	3