

## DAILY DSA | DAY-5 | FUNDAMENTAL DATA STRUCTURES– Practise| -GOPALKRISHNA A

In Day-4, we went through data structures like dictionaries, sets, tuples, and Lists. We will put those concepts into practice.

### Practice problem (Level: Easy ):

1. Let's create a Python program for a book management portal. Each book in the portal is represented as a dictionary with the following attributes: title, author, genre, and availability status. The library wants to keep track of its collection of books using dictionaries.

Write a Python program that performs the following operations:

- Initialize an empty dictionary called a **book\_portal** to store book information.
  - Implement a function **add\_book** that takes the book title, author, genre, and availability status as arguments and adds a new book entry to the library dictionary.
  - Implement a function **remove\_book** that takes the book title as an argument and removes the book entry from the library dictionary.
  - Implement a function **search\_book** that takes the book title as an argument and returns the book's details (title, author, genre, and availability status) if it exists in the library, or a message indicating that the book is not found.
  - Implement a function **list\_books** that lists all the books in the library with their titles and availability status.
2. Find the most common words in a long string of text. Write a function **common\_words(text)** that returns an array containing words with their frequencies, sorted from the most common to least common

Note: the solution should ignore punctuation and capitalization

Example: Given the string

`text = "This is a sample text. This text contains some sample words."`

The function `common_words(text)` should return:

```
[('sample', 2), ('text', 2), ('This', 1), ('is', 1), ('a', 1), ('contains', 1), ('some', 1), ('words.', 1)]
```

Practice problems:

Lists: <https://www.geeksforgeeks.org/python-list-exercise/>

Dictionaries: <https://www.geeksforgeeks.org/python-dictionary/>

Tuples: <https://www.geeksforgeeks.org/python-tuples/>

Sets: <https://www.geeksforgeeks.org/python-set-exercise/>