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What are dictionaries?

Dictionaries are similar to lists in that they store data. A list has an index value assigned to each item and is ordered. A dictionary on the other hand uses "key to value pairs" instead of index values and are unordered.

This is how lists store their values using an array of index numbers starting from 0.

List = [1, 2, 3]

Has the values: "1, 2, 3"

But its index is: "0, 1, 2"

Dictionaries on the other hand use unique keys to store their values. An example would be:

myCar = {

"brand": "Ford",

"model": "Mustang",

"year": 1964

}

The code above creates a dictionary called "myCar" inside this dictionary are the following key to value pairs:

Key: Value:

Brand --> Ford

Model --> Mustang

Year --> 1964

As you can see the key "Brand" stores the value "Ford" and so on...

Advantages and disadvantages

A disadvantage to using a dictionary over a list is that lists, unlike dictionaries, can hold duplicates whilst a dictionary is limited to only one unique key. Lists are also organized unlike dictionaries, which makes them perfect for storing sequential data that should be stored in a specific order. The advantages of dictionaries over lists are that they can store vast amounts of data and still have it readily available for quick and easy access.

Both lists and dictionaries are the most important data-structures we have access to in python. Whilst one isn't better than the other, they both serve their own purpose depending on the task that you need to complete.