

Code for Teachers

A practical approach to programming

Chapter 3-3: Dictionaries

Basic Concepts

- Whereas lists are *indexed*, dictionaries are *key-value pairs*
- If you know the key, you can immediately look up the value
- Why dictionaries instead of lists?



- Consider a deck of cards
- If unshuffled, you can predict the location of a card
- But if not, you'd have to search through each card until you found the one you wanted
- Now imagine the deck is millions of cards
- A dictionary allows you to cut exactly to the card you want

Syntax Overview

```
users = {  
    "taggart" : "mypassword",  
    "anotheruser" : "letmein",  
    "admin" : "password1"  
}
```

Dictionary Methods

- `dict[k] = value` → inserts value at key `k`
- `del dict[k]` → removes the value attached to key `k`
- `k in dict` → returns `True` if the key `k` is in the dictionary, `False` otherwise
- `dict.keys()` → returns a list of all the keys in `dict`
- `dict.values()` → returns a list of all the values in `dict`



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