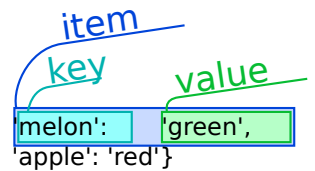


Dictionaries



Creating dictionaries

- * `{'a': 1, 2: 3}` Dictionary with given values `colors = {'melon': 'green', 'apple': 'red'}`
- * `dict([('a', 1), ('b', 2)])` Dictionary from list of items (tuples key-value) `colors = dict([('pear': 'green')], apple='red')`
- * `dict(a=1, b=2)` Items from named arguments

Basic operations

- `d[key]` Select value by key `color = colors['apple']`
- `d.get(k)` Select; None if value missing `color = colors.get('apple')`
- `d.get(k, h)` Select; h if value missing `color = colors.get('apple', 'red')`
- `d.pop(k)` Returns value, removes item `color = colors.pop('apple')`
- `d.popitem()` Returns a item as tuple (key, val) and removes it `fruit, color = colors.popitem()`

Setting values

- `d[key] = h` Adds/Sets value `colors['lime'] = 'green'`
- `del d[key]` Removes item `del colors['lime']`
- `d.update(d2)` Update with another dict `colors.update(more_colors)`
- `d.setdefault(k, v)` Adds item if not exists already `colors.setdefault('lime', 'green')`

Iteration

- for k in d: Iterates over keys
- `d.keys()` Dictionary keys
- `d.values()` Dictionary values
- `d.items()` Tuples (key, value)

```
for fruit, color in colors.items():
    print('{}: {}'.format(fruit, color))
```

Other

- `len(d)` Number of items
- if d: Is dict not empty:

```
while colors:
    fruit, color = colors.popitem()
    print('{}: {}'.format(fruit, color))
```

- * `d.copy()` Dictionary clone
- `d.clear()` Empties dictionary

JSON

import json

- * `json.loads(s)` Loads dictionary from string
- `json.dumps(d)` Writes dictionary to a string

`json.dumps(d, indent=2, ensure_ascii=False)`

More readable output, 2 space indent and doesn't encode UTF-8

Details are in documentation: <https://docs.python.org/3/library/stdtypes.html#mapping-types-dict>

* Operations marked with this will create a new dictionary