National Centre for Atmospheric Science
NATURAL ENVIRONMENT RESEARCH COUNCIL

Centre for Environmental Data Archival
SCIENCE AND TECHNOLOGY FACILITIES COUNCIL
NATURAL ENVIRONMENT RESEARCH COUNCIL

Dictionaries

Extracted from material by:

Use a *dictionary*

An unordered collection of key/value pairs

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No restrictions on values

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- Unique

- Not stored in any particular order

No restrictions on values

- Don't have to be immutable or unique

Create a dictionary by putting key:value pairs in {}

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```
>>> birthdays = {'Newton' : 1642, 'Darwin' : 1809}
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>>> print birthdays['Newton']
1642
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Retrieve values by putting key in []

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>>> print birthdays['Newton']
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Just like using a phonebook or dictionary

Add another value by assigning to it

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```
>>> birthdays['Turing'] = 1612     # that's not right
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Overwrite value by assigning to it as well

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Overwrite value by assigning to it as well

```
>>> birthdays['Turing'] = 1912
>>> print birthdays
{'Turing' : 1912, 'Newton' : 1642, 'Darwin' : 1809}
```

Note: entries are *not* in any particular order

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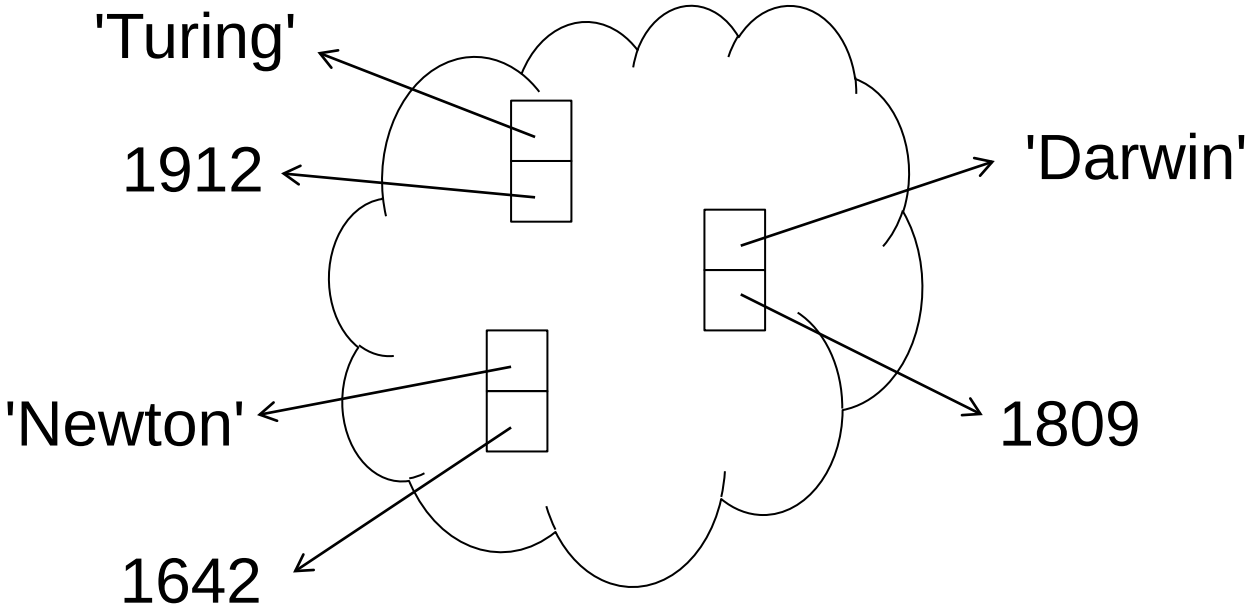

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KeyError: 'Nightingale'

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Test whether key is present using in

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KeyError: 'Nightingale'
```

Test whether key is present using in

```
>>> 'Nightingale' in birthdays
False
>>> 'Darwin' in birthdays
True
```

Use for to loop over keys

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Unlike lists, where for loops over values

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Unlike lists, where for loops over values

```
>>> for name in birthdays:
...   print name, birthdays[name]
```

Turing 1912

Newton 1642

Darwin 1809