

1. Empty dictionary's code – `mira= { }` or `mira=dict()`
2. The value of a dictionary value with the key "foo" and the value 42 is `d: {'foo':42}`
3. The most significant distinction between a dictionary and a list is that list is a set of heterogeneous values, but dictionary has keyword and its value. Dictionaries are represented by `{}` where as listed are represented by `[]`. The Items stored in a dictionary are Unordered , while the items in a list are ordered.
4. If you try to access `spam["foo"]` if `spam` is `{'bar': 100}` , you will get a `keyError KeyError: 'foo'`.
5. If a dictionary is stored in `spam`, the difference between the expressions 'cat' in `spam` and 'cat' in `spam.keys()` is that there is no difference . The operator checks whether a value exists as a key in the dictionary or not.
6. The difference between the expressions 'cat' in `spam` and 'cat' in `spam.values()` is that 'cat' in `spam` means is the key exists or not and `spam.values()` means if cat is the value exists in this dictionary.
7. if 'color' not in `spam`:
`spam['color'] = 'black'`
 shortcut : `spam.setdefault('color', 'black')`
8. we can pretty print a dictionary using three functions

1. by using `pprint()` function of `pprint` module
 - **Note:** `pprint()` function doesnot prettify nested dictionaries
2. by using `dumps()` method of `json` module
3. by using `dumps()` method of `yaml` module

```
ndict = [
    {'Name': 'John', 'Age': '23', 'Residence': {'Country': 'USA', 'City': 'New York'}},
    {'Name': 'Jose', 'Age': '44', 'Residence': {'Country': 'Spain', 'City': 'Madrid'}},
    {'Name': 'Anne', 'Age': '29', 'Residence': {'Country': 'UK', 'City': 'England'}},
    {'Name': 'Lee', 'Age': '35', 'Residence': {'Country': 'Japan', 'City': 'Osaka'}}]
print('Printing using print() function\n', ndict)
print('-'*70)
import pprint
print('Printing using pprint() function')
pprint.pprint(ndict)
print('-'*70)
import json
dump = json.dumps(ndict, indent=4)
print('Printing using dumps() method\n', dump)
print('-'*70)
import yaml
dump = yaml.dump(ndict)
print('Printing using dump() method\n', dump)
```