Common Examples - dict

Let us see some common examples while creating `dict` in Python. If you are familiar with JSON, `dict` is similar to JSON.

- A dict can have key value pairs where key is of any type and value is of any type.
- However, typically we use attribute names as keys for `dict`. They are typically of type `str`.
- The value can be of simple types such as `int`, `float`, `str` etc or it can be object of some custom type.
- The value can also be of type `list` or nested `dict`.
- An individual might have multiple phone numbers and hence we can define it as `list`.
- An individual address might have street, city, state and zip and hence we can define it as nested `dict`.
- Let us see some examples.

```
# All attribute names are of type str and values are of type int, str or float
d = {'id': 1, 'first_name': 'Scott', 'last_name': 'Tiger', 'amount': 1000.0}
```

```
for key in d.keys():
    print(f'type of attribute name {key} is {type(key)}')
```

```
type of attribute name id is <class 'str'>
type of attribute name first_name is <class 'str'>
type of attribute name last_name is <class 'str'>
type of attribute name amount is <class 'str'>
```

```
for value in d.values():
    print(f'type of value {value} is {type(value)}')
```

```
type of value 1 is <class 'int'>
type of value Scott is <class 'str'>
type of value Tiger is <class 'str'>
type of value 1000.0 is <class 'float'>
```

```
d.update([('phone_numbers', [1234567890, 2345679180])])
```

```
d
```

```
{'id': 1,
 'first_name': 'Scott',
 'last_name': 'Tiger',
 'amount': 1000.0,
 'phone_numbers': [1234567890, 2345679180]}
```

```
for value in d.values():
    print(f'type of value {value} is {type(value)}')
```

```
type of value 1 is <class 'int'>
type of value Scott is <class 'str'>
type of value Tiger is <class 'str'>
type of value 1000.0 is <class 'float'>
type of value [1234567890, 2345679180] is <class 'list'>
```

```
d['address'] = {'street': '1234 ABC Towers', 'city': 'Round Rock', 'state': 'Texas', 'zip':
78664}
```

```
d
```

```
{'id': 1,
 'first_name': 'Scott',
 'last_name': 'Tiger',
 'amount': 1000.0,
 'phone_numbers': [1234567890, 2345679180],
 'address': {'street': '1234 ABC Towers',
  'city': 'Round Rock',
  'state': 'Texas',
  'zip': 78664}}
```

```
d['address']
```

```
{'street': '1234 ABC Towers',
 'city': 'Round Rock',
 'state': 'Texas',
 'zip': 78664}
```

```
type(d['address'])
```

```
dict
```

```
for value in d.values():
    print(f'type of value {value} is {type(value)}')
```

```
type of value 1 is <class 'int'>
type of value Scott is <class 'str'>
type of value Tiger is <class 'str'>
type of value 1000.0 is <class 'float'>
type of value [1234567890, 2345679180] is <class 'list'>
type of value {'street': '1234 ABC Towers', 'city': 'Round Rock', 'state': 'Texas', 'zip':
78664} is <class 'dict'>
```

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