

Dict datatype -

- mutable datatype : add, update, del.
- unordered datatype: index can be anything, and slicing is not supported.

Dictionary -

$a = \{\text{"key": "value"}\}$ key-value pairs.
 ↑
 variable

Ex $\Rightarrow a = \{\text{"course": "cloud camp"}\}$

print(type(a))

olp \Rightarrow class '<dict>'

- Key must be unique.

Accessing -

Ex $\Rightarrow a = \{\text{"course": "cloud camp"}\}$
 print(a["course"])

olp \Rightarrow cloud camp

Printing dictionary -

$a = \{\text{"name": ["neha", "sweety"], "gender": 'female', "mail": ['ababbagmail.com', 'bababgmail.com']}\}$

print(a)

olp $\Rightarrow \{\text{'name': ['neha', 'sweety'], 'gender': 'female', 'mail': ['ababbagmail.com', 'bababgmail.com']}\}$

Appending -

$a = \{\text{"name": ["neha", "sweety", "minnu"]}\}$

$a["name"].append("srishanth")$

print(a)

olp $\Rightarrow \{\text{'name': ['neha', 'sweety', 'minnu', 'srishanth']}\}$

Updating -

$a = \{\text{"name": ["neha"]}\}$

$a["name"][0] = \text{"sweety"}$

print(a)

olp $\Rightarrow \{\text{'name': ['sweety']}\}$

$a = \{\text{"name": ["neha", "reddy", "a"]}\}$

$a["name"][2] = \text{"addula"}$

print(a)

olp $\Rightarrow \{\text{'name': ["neha", "reddy", "addula"]}\}$

Deleting an element in a dict -

$a = \{\}$

Adding a dict to other -

$a = \{\text{"name": ["aadya", "devansh"]}\}$

$a["id"] = \{1, 2\}$

print(a)

olp $\Rightarrow \{\text{"name": ["aadya", "devansh"], "id": \{1, 2\}}\}$

Printing or accessing a value using -'get' keyword -

$a = \{\text{"name": ["Kiran", "Pavani", "sri"]}\}$

print(a.get("name"))

olp $\Rightarrow \{\text{"Kiran", "Pavani", "sri"}\}$

None olp \Rightarrow

$a = \{\text{"name": "neha"}\}$

print(a.get("name")) (print(a.get("name", -1))

olp \Rightarrow None

olp $\Rightarrow -1$

set default - create a new key value pair

```
a = {"name": ["neha", "pavani", "senu"],  
     "id": [1, 2, 3], "course": "python"}
```

```
print(a.setdefault("country", ["India",  
                                "India", "India"]))  
print(a)
```

o/p \Rightarrow {'India', 'India', 'India'}

```
{'name': ['neha', 'pavani', 'senu'], 'id':  
 [1, 2, 3], 'course': 'python', 'country':  
 'India', 'India', 'India'}
```

Problem Statement:

Create a dictionary with the squares of numbers from 1 to 10.

```
squares = dict()
```

```
for num in range(1, 11):
```

```
    squares.setdefault(num, num**2)
```

```
print(squares)
```

o/p \Rightarrow {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36,
7: 49, 8: 64, 9: 81, 10: 100}

a.keys(), a.values(), a.items():

```
a = {"x": [1, 2, 3, 4], "y": [5, 6, 7, 8]}
```

```
for ele in a: # by default a = a.key()  
    print(ele)
```

o/p \Rightarrow x
y

```
a = {"x": [1, 2, 3, 4], "y": [5, 6, 7, 8]}
```

```
for ele in a.values():  
    print(ele)
```

o/p \Rightarrow [1, 2, 3, 4]
[5, 6, 7, 8]

```
a = {"x": [1, 2, 3, 4], "y": [5, 6, 7, 8]}
```

```
for ele in a.items():  
    print(ele)
```

o/p \Rightarrow ('x', [1, 2, 3, 4])
('y', [5, 6, 7, 8])

Deleting -

- popitem

- pop

- del

- clear

- popitem() deletes the last key-value pair in a dict().

Ex - test = {"a": [1, 2, 3, 4], "b": [4, 5, 6, 7]}

```
item = test.popitem()
```

```
print(test, item)
```

o/p \Rightarrow {'a': [1, 2, 3, 4]} ('b', [4, 5, 6, 7])

- POP

Ex - test = {"a": [1, 2, 3, 4], "b": [4, 5, 6, 7]}

```
item = test.pop("a")
```

```
print(test, item)
```

o/p \Rightarrow {'b': [4, 5, 6, 7]}

Update -

```
a = {1: 1, 2: 4, 3: 9}
```

```
b = {4: 16, 5: 25}
```

```
c = a.update(b)
```

```
print(a, c)
```

o/p \Rightarrow {1: 1, 2: 4, 3: 9, 4: 16, 5: 25} None

```
a = {1: 1, 2: 4, 3: 9}
```

```
b = {4: 16, 5: 25}
```

```
c = a.update(b)
```

```
print(a, c)
```

```
a['new'] = b
```

```
print(a)
```

o/p \Rightarrow {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 'new':
{4: 16, 5: 25}}