

dict



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Agenda

- **dict**
- **How to create dict object**
- **Accessing dict elements**
- **How to edit dict element**
- **Built-in Methods**
- **Operators on dict**
- **dict object methods**
- **dict Comprehension**

dict

- **dict is a class**
- **dict is mutable**
- **dict is not hashable**
- **dict is iterable**
- **dict is not a sequence**
- **Dict cannot have duplicate keys (Not Data Value)**
- **Indexing is not applicable to dict object**
- **Slicing operator is not applicable dict elements are pair of key - value and data – value**
- **One dict element is { Key : Data }**

How to create dict object

- All dict objects are **Key-value & Data-value**

▪ **D = {} → Empty dict object**

▪ **RollNo**

▪ **101**

▪ **102**

▪ **103**

▪ **Student Name**

▪ **TasiNCoder**

▪ **Rahul**

▪ **Raja**

▪ **D1 = {101 : 'Tasin', 102 : 'Rahul', 103 : 'Raja' } → dict object**

▪ **D2 = dict(a = 10, b = 20)**

Key-value

Data-value

- **Dict can store heterogeneous Key-value & Data-value**

Accessing dict elements

1. **print(dict_object)**
2. **Key-value → print(d1[101], d1[102], d1[103])**
3. **Loops**
 - **for _key in d1:**
 - print(_key) # print only keys**
 - print(d1[_key]) # print only values**
 - print(_key, d1[_key]) # print keys & values**

How to edit dict element

- **Editing dict element means you want to change Data-value of the element and not the Key-value**
 - **dict_object[key] = New Data**

How to add new element in the dict object

- **dict_object[New key-value] = Data-value**

Built-in Methods

- 1. len()** → returns length of specified iterable
- 2. min()** → returns min value element
- 3. max()** → returns max value element
- 4. sum()** → returns sum of elements
- 5. sorted()** → returns a sorted list of elements

Operators on dict

- **Concatenation operator**
 - **dict (+, -) dict → Not Supported**
- **Repetition operator**
 - **dict * 5 → Not Supported**
- **Comparison operator**
 - **dict (>, <, >=, <=) dict → Not Supported**
 - **dict (==, !=) dict → Supported**
- **Two dict objects are equal if their items are equal,
Elements can be stored in any order.**

dict object methods

- **item()**
- **keys()**
- **values()**
- **pop(Key)**
- **popitem()**
- **clear()**

dict Comprehension

- **$D1 = \{\text{Key-exp} : \text{Data-exp for } v \text{ in object}\}$**