

## Dictionary in Python

Dictionary: A **dictionary** in Python is a built-in data type used to store **key-value pairs**.

It's similar to a real-world dictionary where a **word** (key) maps to its **meaning** (value).

- **Keys** → must be unique and immutable (like strings, numbers, or tuples).
- **Values** → can be of any data type (string, number, list, dict, etc.).
- Syntax: { key: value, key2: value2, ... }

Creating a dictionary:

```
# Dictionary with data
```

```
student = {  
    "name": "Rahul",  
    "age": 21,  
    "marks": 85  
}
```

```
print(student)
```

```
output: {'name': 'Rahul', 'age': 21, 'marks': 85}
```

```
1. my_dict = {"name": "John", "age": 25, "city": "Mumbai"}
```

```
    print(my_dict)
```

```
output: {'name': 'John', 'age': 25, 'city': 'Mumbai'}
```

```
2. my_dict = {"name": "John", "age": 25, "city": "Mumbai"}
```

```
    print(my_dict["name"])
```

```
Output: John
```

```
3. my_dict = {"name": "John", "age": 25, "city": "Mumbai"}
```

```
    my_dict["marks"] = 90
```

```
    print(my_dict)
```

```
output: {'name': 'John', 'age': 25, 'city': 'Mumbai', 'marks': 90}
```

```
4. my_dict = {"name": "John", "age": 25, "city": "Mumbai"}  
    my_dict["city"] = "Delhi"  
    print(my_dict)  
output: {'name': 'John', 'age': 25, 'city': 'Delhi', 'marks': 90}
```

```
5.my_dict = {"name": "John", "age": 25, "city": "Mumbai"}  
for key, value in my_dict.items():  
    print(key, ":", value)  
output:  
name : John  
city : Delhi  
marks : 90
```