Dictionaries:

collection of key-value pair————{key:value}

eg:- dict1 = {"name": "kris", "age":20}

Properties

Ordered

It is an ordered collection of elements

No Duplicate Keys

doesn't contain duplicate elements.

Mutable and Heterogeneous

There elements can be changed and contain elements of different data types

Accessing Dictionary Elements

(doesn't support indexing)

variablename["keys"]

```
dict1 = {"name": "kris", "age":20}

print(dict1["age"])
```

variablename.keys()

```
dict1 = {"name": "kris", "age":20}

print(dict1.keys())
```

variablename.values()

```
dict1 = {"name": "kris", "age":20}

print(dict1.values())
```

Modifying Dictionaries

Add New Key-Value Pair

```
dict1 = {"name": "kris", "age":20}

dict1["address"] = "mohali"

dict1["id"] = 12345

print(x)
```

Remove Key-Value Pair

```
dict1 = {"name": "kris", "age":20, "address":"mohali"}

dict1.pop("age")
```

Predefined List Functions

1 Extend

Merges two lists, adding elements from one list to the end of the other.

```
x = [1,2]

y = [3,4]

x.extend(y)

print(x)
```

2 Max

Returns the largest element in a list.

```
l=[12,4,5,67,78,65,98]

print(max(l))
```

3 Min

Returns the smallest element in a list.

```
l = [12,4,5,67,78,65,98]

print(min(l))
```

4 Index

Returns the index of number.

```
l = [12,4,5,67,78,65,98]

print(l.index(67))
```

5 Reverse

Reverses the elements of a list.

```
l = [12,4,5,67,78,65,98]

l.reverse()

print(l)
```

6 Copy

Creates a copy of a list.

```
l = [12,4,5,67,78,65,98]

c = l.copy()

print(c)
```

Slicing and Sorting

1

Slicing

Extract a portion by specifying a start and end index.

```
lst = [10, 20, 30, 40, 50]
sliced = lst[1:4] #Extract elements from index 1 to 3 print(sliced)

my_string = "Hello, World!"
sliced = my_string[7:12] # Extract substring from index 7 to 11
print(sliced)
```

2

Sorting

Rearrange the elements of a list in a specific order, either ascending or descending.

```
lt = [40, 10, 30, 20, 50]
lt.sort()   (by default in ascending)
print(lt)
```

for descending

```
my_list = [40, 10, 30, 20, 50]
my_list.sort(reverse=True)
print(my_list)
```