Dictonary:

A person standing in front of a white board

AI-generated content may be incorrect.

Introduction:

A white paper with black text

AI-generated content may be incorrect.

#key and value pair

d1={1:"one",2:"two",3:"Three",4:"four"}

print(d1)

#{1: 'one', 2: 'two', 3: 'Three', 4: 'four'}

Accessing:

print(d1[1])

#one

Out of index:

# print(d1[5])

# #KeyError

#write

#Assign new value

d1[5]="five"

print(d1)

# {1: 'one', 2: 'two', 3: 'tres', 4: 'four', 5: 'five'}

# Traverse

for i in d1:

    print(i,d1[i])

# 1 one

# 2 two

# 3 tres

# 4 four

# 5 five

#hetro genous

d1={1:3.5,2.5:True,5+6j:"abc"}

d2={1:[10,11],2:(4,5),3:{8,9},4:{1:1,2:2}} # list, tuple,set,dict

print(d2[4])

# {1: 1, 2: 2}

d3={(1,2):"hi"}

# d4={[1,2,3]:"hi"}

# #list is mutable

d5={'abacus':'a calculator',"bachelor":"unmarried"}

d6={101:"John",102:"smith",103:"mark",104:"David"}

Dictonary Creation Methods:

# iterable paris

# zip function

# enumerate function

#iterable pairs

d1={1:"one",2:"two",3:"three",4:"four"}

d2=[(1,"one"),(2,"two"),(3,"three"),(4,"four")]

#list of tuples

dict1=dict([(1,"one"),(2,"two"),(3,"three"),(4,"four")])

print(d1)

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

#zip function

L1=[1,2,3,4]

L2=["one","two","three","four","five"] #extra entries will be removed

d2=dict(zip(L1,L2))

print(d2)

#{1: 'one', 2: 'two', 3: 'three', 4: 'four'}

# enumerate

# enumerate(L1)

L1=["one","two","three","four"]

#enumerate(L1,start=1)

d4=dict(enumerate(L1,start=1))

print(d4)

# $ python creatuon\_methods.py

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

Dictonary Comprehensions:

L1=[(1,"one"),(2,"two"),(3,"three"),(4,"four")]

# d1=dict(L1)

# print(d1)

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

d1={x:y for x,y in L1 }

print(d1)

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

L1=[1,2,3,4]

L2=["one","two","three","four"]

# d2=dict(zip(L1,L2))

# print(d2)

#{1: 'one', 2: 'two', 3: 'three', 4: 'four'}

d2={x:y for x,y in zip(L1,L2)}

print(d2)

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

L1=["one","two","three","four"]

# d3=dict(enumerate(L1,start=1))

# print(d3)

# # {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

d4={x:y for x,y in enumerate(L1,start=1)}

print(d4)

{1: 'one', 2: 'two', 3: 'three', 4: 'four'}

Loops dictonary:

A hand pointing at a white board

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

d1={4:"four",5:"five",6:"six",7:"seven"}

for i in d1:

    print(i,d1[i])

# 4 four

# 5 five

# 6 six

# 7 seven

for i in d1.keys():

    print(i,end=" ")

#4,5,6,7

for i in d1.values():

    print(i,end=" ")

# four five six seven

for i in d1.items():

    print(i,end=" ")

# (4, 'four') (5, 'five') (6, 'six') (7, 'seven')

for x,y in d1.items():

    print(x,y)

# $ python travers.py

# 4 four

# 5 five

# 6 six

# 7 seven

print(d1.get(4))

#four

print(d1[4])

#four

print(d1.get(16))

#None

print(d1[16])

# out scope value

# KeyError: 16

print(d1.get(5,"missing"))

#5

print(d1.get(16,"missing"))

#missing

#setdefault

print(d1.setdefault(5))

#key already there

#five

print(d1.setdefault(16))

#key not there

#None

print(d1)

#{4: 'four', 5: 'five', 6: 'six', 7: 'seven', 16: None}

print(d1.setdefault(17,"Undefined"))

#Undefined

#

print(d1)

#{4: 'four', 5: 'five', 6: 'six', 7: 'seven', 16: None, 17: 'Undefined'}

Dictionary methods:

A close up of words

AI-generated content may be incorrect.

#update(dictonary)

#fromkeys(sequence,default)

#copy()

#pop(key,alt\_value)

#popitem()

#clear()

d1={1:"one",2:"two",3:"three",4:"four"}

d2={5:"five"}

d1.update(d2)

print(d1)

# {1: 'one', 2: 'two', 3: 'three', 4: 'four', 5: 'five'}

From Keys:

L1=[1,2,3,4]

d2=dict.fromkeys(L1)

print(d2)

# {1: None, 2: None, 3: None, 4: None}

d3=dict.fromkeys(L1,"Unknown")

print(d3)

# {1: 'Unknown', 2: 'Unknown', 3: 'Unknown', 4: 'Unknown'}

d5=d1.copy()

print(d1)

print(d5)

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

d5[1]="Oneee"

print(d1)

# {1: 'one', 2: 'two', 3: 'three', 4: 'four'}

# shallow copy

print(d5)

#{1: 'Oneee', 2: 'two', 3: 'three', 4: 'four'}

d1={1:"one",2:"two",3:"three",4:"four"}

print(d1.pop(2))

#two

print(d1)

# {1: 'one', 3: 'three', 4: 'four'}

# d1.pop(5)

# #     d1.pop(5)

# # KeyError: 5

print(d1.pop(5,"missing"))

# missing

######  popitem()

d1={1:"one",2:"two",3:"three",4:"four"}

print(d1.popitem())

# (4, 'four')

Clear():

d1.clear()

print(d1)

# {}

del d1

print(d1)

# NameError: name 'd1' is not defined