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[-;0p qw# Dictionary : collection of different elements in key value pairs enclosed in {} separated by comma.

It is a mutable object.

# key -- value pair -- both numbers and string are used for key as well as value

# library == books -- code

student --(id,name,marks,city)

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d1 = {'id':101,'name':"Rohan",'marks':75,'city':"pune"}

print("The dictionary is:\n",d1)

print("-----------------"\*5)

d1 = {1:"Nashik",2:"Pune",3:"Khalapur"}

print("The Dict is : ",d1)

print("Adding the dictionary elements:")

D1 ['Nsk'] = 103

d1['Aug'] = 105

d1['Pun'] = 108

print("The updated Dict is :\n",d1)

print("-----------------"\*5)

print("\nAccessing the elements in dictionary:")

print("d1[1] :",d1[1])

print("d1[3] :",d1[3])

print("-----------------"\*5)

d1[4]= "Aurangabad"

print("The updated Dict is: ",d1)

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print("Creating empty dictionary:")

d2 ={} # empty dict

print("The empty dictionary is:",d2)

print("-----------------"\*5)

print("Adding elements to the dictionary:")

d2[0]=101

d2[1]=102

print("The dictionary is:\n",d2)

print("-----------------"\*5)

print("Accessing dict elements using get().")

a = d2.get(1)

print("d2.get(1) :",a)

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dict1 = {'1':10,2:20,3:30} # key : value

print("The Dict is :\n",dict1)

print(type(dict1))

print("--------------------"\*5)

dict1[5] = 'one'

print("The Updated Dict is :\n",dict1)

print("--------------------"\*5)

dict1[2.2] = 'one'

print("The Updated Dict is :\n",dict1)

print("--------------------"\*5)

dict1[2.2] = 'Five'

print("The Updated Dict is :\n",dict1)

print("--------------------"\*5)

print("Accessing dict elements using get()")

print("dict1[2] :",dict1[2])

print("dict1.get(3) :",dict1.get(3))

print("dict1.get(5) :",dict1.get(5))

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dict1 = {1:10,2:20,3:30} # key : value

print("The Dict is :\n",dict1)

print(type(dict1))

print("--------------------"\*5)

print("Removing element using pop() ")

print("dict1.pop(1) :",dict1.pop(1)) # returns the value in the o/p and deletes the element

print("The updated dict is:\n",dict1)

print("--------------------"\*5)

dict1[1.5] = 45

dict1[7] = 90

print("The updated dict is:\n",dict1)

print("--------------------"\*5)

print("Removing element using popitem()")

print("dict1.popitem() :",dict1.popitem()) # returns the key:value pair in the o/p

print("The updated dict is:\n",dict1)

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# Creating a dictionary with the for loop

squares = {a: a\*a for a in range(1,6)}

print(squares)

squares = {a: a\*a for a in range(1,11) if a%2 ==1}

print(squares)

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#Iterate a Dictionary

emp = {'name':'Laxman','id':1010,'Age':34,'salary':80000}

for x in emp: # print the keys only

print(x)

print('\*\*\*\*'\*10)

for x in emp: # print the values

print(emp[x])

print('\*\*\*\*'\*10)

for x in emp.values(): # print the values

print(x)

print('\*\*\*\*'\*10)

for x in emp.items(): # print the keys and values

print(x)

print('\*\*\*\*'\*10)

for x,y in emp.items(): # print the keys and values

print(x,' is the ',y)

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set1 = frozenset({3,2,5}) # hashable object

print("The set is:\n",set1)

print(type(set1))

print("---------------"\*5)

d1 = {set1:'frozenset',2:'Python'}

print("The dictionary is:\n",d1)

print(type(d1))

print("---------------"\*5)

list1 = [1,2,3] # unhashable object

print("The list is: ",list1)

print("---------------"\*5)

# d1 = {list1:'List',2:'Python'}

# print("The dictionary is:\n",d1)

# print(type(d1))

#hashable : = which has a unique id or value has value

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# Find the length of Dictionary

# print the Dictionary in sorted manner

# Check weather the value is present in Dictionary-create- print-print-values

# convert a tuple in Dictionary

# create a Dictionary student with student details.

# add elements to Student Dictionary

# delete one element from Student Dictionary

# return a element with key 101 from student Dictionary

# print only the keys from Dictionary student

# print only the values from Dictionary Student

# create a dict Employee with ename as key and salary as value.

# print the Employee dict

# delete the Employee with salary -10000