Python Dictionaries

**Print the "brand" value of the dictionary:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
print(thisdict["brand"])

**Duplicate values will overwrite existing values:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964,  
  "year": 2020  
}  
print(thisdict)

**A. Access Dictionary Items**

**Get the value of the "model" key:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
x = thisdict["model"]

**Note:** x = thisdict.get("model")

**Get a list of the keys:**

x = thisdict.keys()

**Add a new item to the original dictionary, and see that the keys list gets updated as well:**

car = {  
"brand": "Ford",  
"model": "Mustang",  
"year": 1964  
}  
  
x = car.keys()  
  
print(x) #before the change  
  
car["color"] = "white"  
  
print(x) #after the change

**Get a list of the values:**

x = thisdict.values()

**Make a change in the original dictionary, and see that the values list gets updated as well:**

car = {  
"brand": "Ford",  
"model": "Mustang",  
"year": 1964  
}  
  
x = car.values()  
  
print(x) #before the change  
  
car["year"] = 2020  
  
print(x) #after the change

**Get a list of the key:value pairs**

x = thisdict.items()

**Make a change in the original dictionary, and see that the items list gets updated as well:**

car = {  
"brand": "Ford",  
"model": "Mustang",  
"year": 1964  
}  
  
x = car.items()  
  
print(x) #before the change  
  
car["year"] = 2020  
  
print(x) #after the change

**B. Change Dictionary Items**

**Update the "year" of the car by using the update() method:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
thisdict.update({"year": 2020})

**C. Remove Dictionary Items**

**The pop() method removes the item with the specified key name:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
thisdict.pop("model")  
print(thisdict)

**The popitem() method removes the last inserted item (in versions before 3.7, a** random item is removed instead):

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
thisdict.popitem()  
print(thisdict)

**The del keyword removes the item with the specified key name:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
del thisdict["model"]  
print(thisdict)

**The clear() method empties the dictionary:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
thisdict.clear()  
print(thisdict)

**Loop through both *keys* and *values*, by using the items() method:**

for x, y in thisdict.items():  
  print(x, y)

**Make a copy of a dictionary with the dict() function:**

thisdict = {  
  "brand": "Ford",  
  "model": "Mustang",  
  "year": 1964  
}  
mydict = dict(thisdict)  
print(mydict)

**D. Nested Dictionaries**

**Create three dictionaries, then create one dictionary that will contain the other three dictionaries:**

child1 = {  
  "name" : "Emil",  
  "year" : 2004  
}  
child2 = {  
  "name" : "Tobias",  
  "year" : 2007  
}  
child3 = {  
  "name" : "Linus",  
  "year" : 2011  
}  
  
myfamily = {  
  "child1" : child1,  
  "child2" : child2,  
  "child3" : child3  
}

**Print the name of child 2:**

print(myfamily["child2"]["name"])

**Loop through the keys and values of all nested dictionaries:**

for x, obj in myfamily.items():  
  print(x)  
  
  for y in obj:  
    print(y + ':', obj[y])