Dictionary Example

In [1]:
```
#dict.clear()
#Removes all elements of dictionary dict
dict = {'Name': 'Zara', 'Age': 7};
print("Start Len : %d" % len(dict))
dict.clear()
print("End Len : %d" % len(dict))
```

```
Start Len : 2
End Len : 0
```

In [2]:
```
#dict.items()
#Returns a list of dict's (key, value) tuple pairs
dict = {'Name': 'Zara', 'Age': 7}
print ("Value : %s" % dict.items())
```

```
Value : dict_items([('Name', 'Zara'), ('Age', 7)])
```

In [3]:
```
# dict.copy()
#Returns a copy of dictionary dict
dict1 = {'Name': 'Zara', 'Age': 7};
dict2 = dict1.copy()
print ("New Dictinary : %s" % str(dict2))
```

```
New Dictinary : {'Name': 'Zara', 'Age': 7}
```

In [6]:
```
#Python Program to Generate a Dictionary that Contains Numbers (between 1 an
n=int(input("Enter a number:"))
d={x:x*x for x in range(1,n+1)}
print(d)
```

```
Enter a number:5
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

In [7]:
```
#Python Program to Sum All the Items in a Dictionary
d={'A':100,'B':540,'C':239}
print("Total sum of values in the dictionary:")
print(sum(d.values()))
```

```
Total sum of values in the dictionary:
879
```

In [8]:
```
#Python Program to Remove the Given Key from a Dictionary
d = {'a':1,'b':2,'c':3,'d':4}
print("Initial dictionary")
print(d)
key=input("Enter the key to delete(a-d):")
if key in d:
    del d[key]
else:
    print("Key not found!")
    exit(0)
print("Updated dictionary")
print(d)
```

```
Initial dictionary
{'a': 1, 'b': 2, 'c': 3, 'd': 4}
Enter the key to delete(a-d):a-d
Key not found!
Updated dictionary
{'a': 1, 'b': 2, 'c': 3, 'd': 4}
```

In [5]:
```
#Python Program to add name and mark as key->value pair in a Dictionary and
n=int(input("Enter no of records"))
d={}
for i in range(1,n+1):
    name= input("Enter name %d"%(i))
    mark=int(input("Enter mark %d"%(i)))
    d[name]=mark
print (d)
```

```
Enter no of records2
Enter name 1Nachi
Enter mark 199
Enter name 2Pranav
Enter mark 2100
{'Nachi': 99, 'Pranav': 100}
```

In [6]:
```
# Keys and Values example
d={}
print (" The dictionary elements are")
for i in range(1,21):
    d[i]=i**2
print (d)
# To print key and values
print (" Key==> Value are")
for (k,v) in d.items():
    print(k,"==>",v)
# To print key only
print ("\nTo print key only")
for k in d.keys():
    print(k, end=" ")
#To print value only
print ("\nTo print values only")
for v in d.values():
    print(v, end=" ")
```

```
 The dictionary elements are
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100, 11: 121,
12: 144, 13: 169, 14: 196, 15: 225, 16: 256, 17: 289, 18: 324, 19: 361, 20: 40
0}
 Key==> Value are
1 ==> 1
2 ==> 4
3 ==> 9
4 ==> 16
5 ==> 25
6 ==> 36
7 ==> 49
8 ==> 64
9 ==> 81
10 ==> 100
11 ==> 121
12 ==> 144
13 ==> 169
14 ==> 196
15 ==> 225
16 ==> 256
17 ==> 289
18 ==> 324
19 ==> 361
20 ==> 400

To print key only
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
To print values only
1 4 9 16 25 36 49 64 81 100 121 144 169 196 225 256 289 324 361 400
```

In [8]:
```
#Python program to convert 2 digit number into words
d={0:'',1:'one',2:'two',3:'three',4:'four',5:'five',6:'six',7:'seven',8:'eig
10:'ten',11:'eleven',12:'twelve',13:'thirteen',14:'fourteen',15:'fifteen',16
17:'seventeen',18:'eightteen',19:'nineteen',20:'twenty',30:'thirty',40:'four
60:'sixty',70:'seventy',80:'eighty',90:'ninty'}
num=int(input("Enter the integer between 1 to 99:"))
if (num<=20):
    print(d[num])
if(num>20 and num<100):
    if num%10==0:
        print(d[num])
    else:
        print(d[num//10*10]+" "+d[num%10])
```

```
Enter the integer between 1 to 99:85
eighty five
```

In [9]:
```
#How to sort a dictionary by values in Python
d = {"Pierre": 42, "Anne": 33, "Zoe": 24}

#Use the sorted function and operator module
import operator
sorted_d = sorted(d.items(), key=operator.itemgetter(1))
print(sorted_d)
sorted_a= sorted(d.items(), key=operator.itemgetter(1),reverse=True)
print(sorted_a)
```

```
[('Zoe', 24), ('Anne', 33), ('Pierre', 42)]
[('Pierre', 42), ('Anne', 33), ('Zoe', 24)]
```

Files Example

In [13]:
```
#Python Program to count the number of lines in a text file.
fname = input("Enter file name: ")
num_lines = 0
with open(fname, 'r') as f:
    for line in f:
        num_lines += 1
print("Number of lines:")
print(num_lines)
```

```
Enter file name: Day1_Assignment1_Exercise1.ipynb
Number of lines:
87
```

In [14]:
```
#Python Program to count the number of words in a text file.
fname = input("Enter file name: ")
num_words = 0
with open(fname, 'r') as f:
    for line in f:
        words = line.split()
        num_words += len(words)
print("Number of words:")
print(num_words)
```

```
Enter file name: Day1_Assignment1_Exercise1.ipynb
Number of words:
233
```

In [17]:
```
#Python Program to count the occurrences of a word in a text file.
fname = input("Enter file name: ")
word=input("Enter word to be searched:")
k = 0
with open(fname, 'r') as f:
    for line in f:
        words = line.split()
        for i in words:
            if(i==word):
                k=k+1
print("Occurrences of the word:")
print(k)
```

```
Enter file name: Day1_Assignment1_Exercise1.ipynb
Enter word to be searched:return
Occurrences of the word:
1
```

In [22]:
```
#Python Program to copy the contents of one file into another.
with open("Day1_Assignment1_Exercise1.ipynb") as f:
    with open("out.txt", "w") as f1:
        for line in f:
            f1.write(line)
```

In [24]:
```
#Python Program to read the contents of the file in reverse order.
filename=input("Enter file name: ")
with open (filename,'r') as f:
    for line in f:
        l=line.split()
        l.reverse()
        st= " ".join(l)
        print (st)
```

```
Enter file name: Day1_Assignment1_Exercise1.ipynb
{
[ "cells":
{
"code", "cell_type":
14, "execution_count":
{}, "metadata":
[ "outputs":
{
"stdout", "name":
"stream", "output_type":
[ "text":
1000\n", amount: principal the "Enter
2\n", rate: interest the "Enter
2\n", years: in time the "Enter
1040.40\n", is amount "Compound
40.40\n" is interest "Compound
]
}
],
[ "source":
time):\n", rate, compound_interest(principle, "def
time))\n", 100), / rate + (pow((1 * principle = result "
result\n", return "
"\n",
"\n",
\"))\n", amount: principal the float(input(\"Enter = "p
\"))\n", rate: interest the float(input(\"Enter = "r
\"))\n", years: in time the float(input(\"Enter = "t
"\n",
t)\n", r, compound_interest(p, = "amount
p\n", - amount = "interest
amount)\n", % %.2f\" is amount "print(\"Compound
interest)" % %.2f\" is interest "print(\"Compound
]
},
{
"code", "cell_type":
null, "execution_count":
{}, "metadata":
[], "outputs":
[ "source":
\"))\n", celsius: in temperature float(input(\"Enter = "celsius
32\n", + 9/5) * (celsius = "fahrenheit
fahrenheit))" %(celsius, Fahrenheit' %0.2f is: Celsius "print('%.2f
]
},
```

```
{
"code", "cell_type":
null, "execution_count":
{}, "metadata":
[], "outputs":
[ "source":
\"))\n", number: first the int(input(\"Enter = "num1
\"))\n", number: second the int(input(\"Enter = "num2
greater\")" \"is num2), "print(max(num1,
]
},
{
"code", "cell_type":
null, "execution_count":
{}, "metadata":
[], "outputs":
[] "source":
}
],
{ "metadata":
{ "kernelspec":
3", "Python "display_name":
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"python3" "name":
},
{ "language_info":
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"text/x-python", "mimetype":
"python", "name":
"python", "nbconvert_exporter":
"ipython3", "pygments_lexer":
"3.8.3" "version":
}
},
4, "nbformat":
4 "nbformat_minor":
}
```


In [ ]:
```
1
```