Python Dictionaries

- Dictionaries are used to store data values in key:value pairs.
- A dictionary is a collection which is ordered*, changeable and do not allow duplicates.
- Dictionaries are written with curly brackets, and have keys and values:

In [2]:

```
course_Contents={'1st_month':'Python','2nd_month':'Statistics','3rd_month':'Machine learning','4th_month':'Deep l
earning'}
print(course_Contents)
```

```
{'1st_month': 'Python', '2nd_month': 'Statistics', '3rd_month': 'Machine learning', '4th_month': 'De
ep learning'}
```

In [3]:

```
print(course_Contents['1st_month'])
print(course_Contents['4th_month'])
```

```
Python
Deep learning
```

In [4]:

```
# Duplicate values will overwrite existing values:
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964,
  "year": 2020
}
thisdict
```

Out[4]:

```
{'brand': 'Ford', 'model': 'Mustang', 'year': 2020}
```

In [5]:

```
#lenght
len(course_Contents)
```

Out[5]:

```
4
```

In [6]:

```
#Access Dictionary Items
print(course_Contents['1st_month'])
```

```
Python
```

In [7]:

```
# Get the value of the "model" key:
x = course_Contents.get("4th_month")
x
```

Out[7]:

```
'Deep learning'
```

In [8]:

```
# Get Keys
x = course_Contents.keys()
x
```

Out[8]:

```
dict_keys(['1st_month', '2nd_month', '3rd_month', '4th_month'])
```

In [9]:

```
# Get Values
x = course_Contents.values()
x
```

Out[9]:

```
dict_values(['Python', 'Statistics', 'Machine learning', 'Deep learning'])
```

In [10]:

```
#Change Values
course_Contents['4th_month']='DL'
course_Contents
```

Out[10]:

```
{'1st_month': 'Python',
 '2nd_month': 'Statistics',
 '3rd_month': 'Machine learning',
 '4th_month': 'DL'}
```

In [11]:

```
# Update Dictionary
course_Contents.update({'5th_months':'Project'})
course_Contents
```

Out[11]:

```
{'1st_month': 'Python',
 '2nd_month': 'Statistics',
 '3rd_month': 'Machine learning',
 '4th_month': 'DL',
 '5th_months': 'Project'}
```

In [12]:

```
# Adding Items
course_Contents['6th_months']='Entrepreneurship'
course_Contents
```

Out[12]:

```
{'1st_month': 'Python',
 '2nd_month': 'Statistics',
 '3rd_month': 'Machine learning',
 '4th_month': 'DL',
 '5th_months': 'Project',
 '6th_months': 'Entrepreneurship'}
```

In [13]:

```
# Removing Items
course_Contents.pop('6th_months')
```

Out[13]:

```
'Entrepreneurship'
```

In [14]:

```
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964,
  "year": 2020
}
del thisdict
```

In [15]:

```
#Copy dict
course_Contents1=course_Contents.copy()
```

In [16]:

```
artificial_Intelligence={

    'Machine_learnine':{
        'type1':'Supervised learning algorithms',
        'type2':'UnSupervised learning algorithms'

    },
    'Deeplearning':{
        'type1':'ANN',
        'type2':'CNN',
        'type3':'RNN',

    }
}
```

In [17]:

```
artificial_Intelligence['Machine_learnine']['type1']
```

Out[17]:

```
'Supervised learning algorithms'
```

In [18]:

```
"""to learn more on dict method visit this website
https://www.programiz.com/python-programming/methods/dictionary"""
```

Out[18]:

```
'to learn more on dict method visit this website\nhttps://www.programiz.com/python-programming/metho
ds/dictionary'
```

In [ ]:

```

```