

In [1]: # Exercise 1:

```
datalist = [1452, 11.23, 1+2j, True, "UIC", (0,-1), [5,12], {"class": 496, "section":  
for i in datalist:  
    print("The datatype of " + str(i) + "is" + str(type(i)))
```

The datatype of 1452 is <class 'int'>
The datatype of 11.23 is <class 'float'>
The datatype of (1+2j) is <class 'complex'>
The datatype of True is <class 'bool'>
The datatype of UIC is <class 'str'>
The datatype of (0, -1) is <class 'tuple'>
The datatype of [5, 12] is <class 'list'>
The datatype of {'class': 496, 'section': 'A'} is <class 'dict'>

In [2]: # Exercise 2:

```
dict1 = {}  
sentence = input("Enter the sentence: ")  
for i in sentence:  
    if i == ' ':  
        continue  
    if i in dict1:  
        dict1[i] += 1  
    else:  
        dict1[i] = 1  
print(dict1)
```

Enter the sentence: the world is beautiful!
{ 't': 2, 'h': 1, 'e': 2, ' ': 4, 'w': 1, 'o': 1, 'r': 1, 'l': 2, 'd': 1, 'i': 2, 's':
1, 'b': 1, 'a': 1, 'u': 2, 'f': 1, '!': 1 }

In []: