In [1]:
```
# Create the dictionary

Dict = {"key1": 1, "key2": "2", "key3": [3, 3, 3], "key4": (4, 4, 4), ('key5'): 5, (0, 1): 6}
Dict
```

Out[1]:
```
{'key1': 1,
 'key2': '2',
 'key3': [3, 3, 3],
 'key4': (4, 4, 4),
 'key5': 5,
 (0, 1): 6}
```

In [2]:
```
# Access to the value by the key

Dict["key1"]
```

Out[2]:
```
1
```

In [3]:
```
# Access to the value by the key

Dict[(0, 1)]
```

Out[3]:
```
6
```

In [4]:
```
# Create a sample dictionary

release_year_dict = {"Thriller": "1982", "Back in Black": "1980", \
                     "The Dark Side of the Moon": "1973", "The Bodyguard": "1992", \
                     "Bat Out of Hell": "1977", "Their Greatest Hits (1971-1975)": "1976", \
                     "Saturday Night Fever": "1977", "Rumours": "1977"}
release_year_dict
```

Out[4]:
```
{'Thriller': '1982',
 'Back in Black': '1980',
 'The Dark Side of the Moon': '1973',
 'The Bodyguard': '1992',
 'Bat Out of Hell': '1977',
 'Their Greatest Hits (1971-1975)': '1976',
 'Saturday Night Fever': '1977',
 'Rumours': '1977'}
```

In [5]:
```
# Get value by keys

release_year_dict['Thriller']
```

Out[5]:
```
'1982'
```

In [6]:
```
# Get value by keys

release_year_dict['Their Greatest Hits (1971-1975)']
```

Out[6]:
```
'1976'
```

In [7]:
```
# Get all the keys in dictionary

release_year_dict.keys()
```

Out[7]:
```
dict_keys(['Thriller', 'Back in Black', 'The Dark Side of the Moon', 'The Bodyguard', 'Bat Out of Hell', 'Their Greatest Hits (1971-1975)', 'Saturday Night Fever', 'Rumours'])
```

In [8]:
```
# Get all the values in dictionary

release_year_dict.values()
```

Out[8]:
```
dict_values(['1982', '1980', '1973', '1992', '1977', '1976', '1977', '1977'])
```

In [9]:
```
# Append value with key into dictionary

release_year_dict['Graduation'] = '2007'
release_year_dict
```

Out[9]:
```
{'Thriller': '1982',
 'Back in Black': '1980',
 'The Dark Side of the Moon': '1973',
 'The Bodyguard': '1992',
 'Bat Out of Hell': '1977',
 'Their Greatest Hits (1971-1975)': '1976',
 'Saturday Night Fever': '1977',
 'Rumours': '1977',
 'Graduation': '2007'}
```

In [10]:
```
# Delete entries by key

del(release_year_dict['Thriller'])
del(release_year_dict['Graduation'])
```

```
release_year_dict
```

Out[10]:
```
{'Back in Black': '1980',
 'The Dark Side of the Moon': '1973',
 'The Bodyguard': '1992',
 'Bat Out of Hell': '1977',
 'Their Greatest Hits (1971-1975)': '1976',
 'Saturday Night Fever': '1977',
 'Rumours': '1977'}
```

In [11]:
```
# Verify the key is in the dictionary

'The Bodyguard' in release_year_dict
```

Out[11]:
```
True
```

In [12]:
```
# Question sample dictionary

soundtrack_dic = {"The Bodyguard":"1992", "Saturday Night Fever":"1977"}
soundtrack_dic
```

Out[12]:
```
{'The Bodyguard': '1992', 'Saturday Night Fever': '1977'}
```

In [13]:
```
#In the dictionary soundtrack_dic what are the keys ?
soundtrack_dic.keys()
```

Out[13]:
```
dict_keys(['The Bodyguard', 'Saturday Night Fever'])
```

In [16]:
```
#In the dictionary soundtrack_dic what are the values ?
soundtrack_dic.values()
```

Out[16]:
```
dict_values(['1992', '1977'])
```

In [18]:
```
#The Albums Back in Black, The Bodyguard and Thriller have the following music recording sales in millions 50,
sales_dict = {"The Albums Back in Black":"50", "The Bodyguard":"50", "Thriller":"65"}
sales_dict
```

Out[18]:
```
{'The Albums Back in Black': '50', 'The Bodyguard': '50', 'Thriller': '65'}
```

In [19]:
```
#Use the dictionary to find the total sales of Thriller:
sales_dict ["Thriller"]
```

Out[19]:
```
'65'
```

In [20]:
```
#Find the names of the albums from the dictionary using the method keys():
sales_dict.keys()
```

Out[20]:
```
dict_keys(['The Albums Back in Black', 'The Bodyguard', 'Thriller'])
```

In [21]:
```
#Find the sales from the dictionary using the method values():
sales_dict.values()
```

Out[21]:
```
dict_values(['50', '50', '65'])
```

In [23]:
```
# Sample Sets

album_set1 = set(["Thriller", 'AC/DC', 'Back in Black'])
album_set2 = set([ "AC/DC", "Back in Black", "The Dark Side of the Moon"])

# Print two sets

album_set1, album_set2
```

Out[23]:
```
({'AC/DC', 'Back in Black', 'Thriller'},
 {'AC/DC', 'Back in Black', 'The Dark Side of the Moon'})
```

In [26]:
```
#Find the intersections
intersection=album_set1 & album_set2
intersection
```

Out[26]:
```
{'AC/DC', 'Back in Black'}
```

In [27]:
```
# Find the difference in set1 but not set2
album_set1.difference(album_set2)
```

Out[27]:
```
{'Thriller'}
```

In [29]:
```
#The elements in album_set2 but not in album_set1 is given by:
album_set2.difference(album_set1)
```

Out[29]:
```
{'The Dark Side of the Moon'}
```

In [30]:
```
# Use intersection method to find the intersection of album_list1 and album_list2
```

```
album_set1.intersection(album_set2)
```

Out[30]:
```
{'AC/DC', 'Back in Black'}
```

In [31]:
```
# Find the union of two sets

album_set1.union(album_set2)
```

Out[31]:
```
{'AC/DC', 'Back in Black', 'The Dark Side of the Moon', 'Thriller'}
```

In [32]:
```
# Check if superset

set(album_set1).issuperset(album_set2)
```

Out[32]:
```
False
```

In [33]:
```
# Check if subset

set(album_set2).issubset(album_set1)
```

Out[33]:
```
False
```

In [39]:
```
# Check if subset

({"Back in Black", "AC/DC"}).issubset(album_set1)
```

Out[39]:
```
True
```

In [35]:
```
# Check if superset

album_set1.issuperset({"Back in Black", "AC/DC"})
```

Out[35]:
```
True
```

In [ ]:

In [45]:
```
#Write an if statement to determine if an album had a rating greater than 8. Test it using the rating for the a

rating = 8.5

if rating > 8:
  print ("This album is Amazing!")
```

```
This album is Amazing!
```

In [47]:
```
#Write an if-else statement that performs the following. If the rating is larger then eight print “this album i

rating = 8.5

if rating > 8:
     print ("This album is Amazing!")

else:
     print ("The album is ok")
```

```
This album is Amazing!
```

In [48]:
```
#Write an if statement to determine if an album came out before 1980 or in the years: 1991 or 1993. If the cond


album_year = 1979

if album_year < 1980 or album_year == 1991 or album_year == 1993:
    print("This album came out in year", album_year)
```

```
This album came out in year 1979
```

In [ ]: