Quiz 1

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Q.1 Create the following lists:
first_name=["Mary","James","Peter","Yoyo"]
last_name=["Brown","White","Reed","Holt"].

In [1]:
```
#Q.1
first_name=["Mary","James","Peter","Yoyo"]
last_name=["Brown","White","Reed","Holt"]
```

(a) Create a list of pairs with the last name and then the first name in each pair. Display the list.

In [2]:
```
#Q.1.a
pairs=[0,0,0,0]
for i in range(len(pairs)):
    pairs[i] = first_name[i]+" "+last_name[i]
print(pairs)
```

```
['Mary Brown', 'James White', 'Peter Reed', 'Yoyo Holt']
```

(b) Create a dictionary by counting the number of vowels in each of the first names. The keys should be the first names and the values should be the number of vowels.

In [3]:
```
#Q.1.b
def vowelcount(list):
    #add/remove 'y' and 'Y' for "sometimes Y" switch default=on
    return sum([1 for char in ''.join(list) if char in 'aeiouyAEIOUY'])
vowelCountByName = dict.fromkeys(first_name,0)
for name in first_name:
    vowelCountByName[name] = vowelcount(name)

print(vowelCountByName)
```

```
{'Mary': 2, 'James': 2, 'Peter': 2, 'Yoyo': 4}
```

(c) for the list in (a), access the last two elements

In [4]:
```
#Q.1.c
print(pairs[2]+", "+pairs[3])
```

```
Peter Reed, Yoyo Holt
```

(d) for the list in (a), sort it in descending order of last name.

In [5]:
```
#Q.1.d
print (pairs)
pairs.sort(key=lambda ws: ws.split(" ")[1], reverse=True)
print(pairs)
```

```
['Mary Brown', 'James White', 'Peter Reed', 'Yoyo Holt']
['James White', 'Peter Reed', 'Yoyo Holt', 'Mary Brown']
```

Q.2 Create a list of 100 pairs of numbers. In each pair, the first number is a random integer between 0 and 50. The second number is also a random integer between 0 and 50. Extracts the pairs with the first number less than the second number.

In [6]:

```
#Q.2
import random
oneHundredNumberPairs=[(random.randrange(0,49), random.randrange(0,49)) for _ in range
print(oneHundredNumberPairs)
matchingPairs = [x for x in oneHundredNumberPairs if x[0] < x[1]]
print("Match!")
print(matchingPairs)
```

```
[(8, 32), (31, 7), (3, 36), (47, 13), (29, 8), (17, 26), (21, 1), (33, 31), (47, 34), (1
4, 43), (27, 29), (13, 3), (2, 39), (21, 40), (17, 8), (37, 22), (2, 42), (17, 3), (41,
23), (38, 9), (0, 24), (33, 17), (25, 39), (26, 26), (11, 7), (29, 1), (13, 46), (24, 4
4), (45, 0), (5, 13), (3, 42), (1, 31), (15, 32), (38, 37), (3, 34), (40, 26), (35, 48),
(22, 9), (27, 32), (8, 15), (40, 26), (38, 10), (42, 3), (20, 18), (39, 45), (8, 11), (4
2, 19), (40, 39), (4, 15), (43, 44), (31, 27), (44, 34), (45, 44), (34, 18), (22, 31),
(7, 37), (8, 11), (40, 13), (38, 43), (43, 18), (6, 13), (46, 3), (33, 48), (8, 31), (2,
6), (36, 0), (20, 18), (7, 15), (36, 3), (1, 44), (30, 13), (6, 38), (1, 46), (33, 41),
(37, 11), (27, 1), (44, 19), (0, 41), (31, 48), (41, 45), (9, 15), (25, 38), (0, 25), (3
4, 13), (30, 20), (3, 45), (22, 0), (24, 42), (35, 36), (23, 27), (5, 29), (35, 11), (1
0, 19), (35, 45), (19, 16), (13, 44), (46, 32), (40, 25), (46, 5), (14, 42)]
Match!
[(8, 32), (3, 36), (17, 26), (14, 43), (27, 29), (2, 39), (21, 40), (2, 42), (0, 24), (2
5, 39), (13, 46), (24, 44), (5, 13), (3, 42), (1, 31), (15, 32), (3, 34), (35, 48), (27,
32), (8, 15), (39, 45), (8, 11), (4, 15), (43, 44), (22, 31), (7, 37), (8, 11), (38, 4
3), (6, 13), (33, 48), (8, 31), (2, 6), (7, 15), (1, 44), (6, 38), (1, 46), (33, 41),
(0, 41), (31, 48), (41, 45), (9, 15), (25, 38), (0, 25), (3, 45), (24, 42), (35, 36), (2
3, 27), (5, 29), (10, 19), (35, 45), (13, 44), (14, 42)]
```