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WEEK: 2

Experiment Number:2
DATE: 11/2/2021
Aim: To solve allotted week 2(SET 13) python exercises

1. Implement a Python program to sort a list of dictionaries using Lambda.

Original list of dictionaries :

[{'make': 'Nokia', 'model': 216, 'color': 'Black'}, {'make': 'Mi Max', 'model': '2', 'color': 'Gold'},

{'make': 'Samsung', 'model': 7, 'color': 'Blue'}]

Sorting the List of dictionaries :

[{'make': 'Nokia', 'model': 216, 'color': 'Black'}, {'make': 'Samsung', 'model': 7, 'color': 'Blue'},

{'make': 'Mi Max', 'model': '2', 'color': 'Gold'}]

```
dict = [{'make': 'Nokia', 'model': 216, 'color': 'Black'}, {'make':
'Mi Max', 'model': '2', 'color': 'Gold'},
{'make': 'Samsung', 'model': 7, 'color': 'Blue'}]

print("orignal: ")
print(dict)

print("\n")

sort_dict = sorted(dict, key = lambda x: x['color'])

print("after sorting: ")
print(sort_dict)
```

2. Create a Python function that accepts a string and calculate the number of upper case letters

and lower case letters.

Sample String : 'The quick Brow Fox'

Expected Output :

No. of Upper case characters : 3

No. of Lower case Characters : 12

```
name = input("enter the sentence: ")


count_upper= 0
cout_lower=0
for i in range(len(name)):
   if(name[i] != " "):
      if(name[i].isupper()):
         count_upper += 1
      else:
         cout_lower +=1

print("No. of Upper case characters : ",count_upper)
print("No. of Lower case Characters : ",cout_lower)
```

OUTPUT:-

```
enter the sentence: The quick Brow Fox
No. of Upper case characters :  3
No. of Lower case Characters :  12
```

3. Write a Python program to move all zero digits to end of a given list of numbers.

Expected output:

Original list:

[3, 4, 0, 0, 0, 6, 2, 0, 6, 7, 6, 0, 0, 0, 9, 10, 7, 4, 4, 5, 3, 0, 0, 2, 9, 7, 1]

Move all zero digits to end of the said list of numbers:

[3, 4, 6, 2, 6, 7, 6, 9, 10, 7, 4, 4, 5, 3, 2, 9, 7, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0]

```python
def shift_zero(arr, n):
    count = 0

    for i in range(n):
        if arr[i] != 0:
            arr[count] = arr[i]
            count+=1

    while count<n:
        arr[count] = 0
        count+=1

arr = [3, 4, 0, 0, 0, 6, 2, 0, 6, 7, 6, 0, 0, 0, 9, 10, 7, 4, 4, 5,
3, 0, 0, 2, 9, 7, 1]
n = len(arr)
shift_zero(arr,n)
print(arr)
```

```
PS C:\Users\Yohenba Kshetrimayum\Desktop\APP python\week-2>  python zero.py
[3, 4, 6, 2, 6, 7, 6, 9, 10, 7, 4, 4, 5, 3, 2, 9, 7, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0]
```

4. Create a Python script to print a dictionary where the keys are numbers between 1 and 15

(both included) and the values are square of keys.

Sample Dictionary

{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}

```
a= []
b= []
for i in range(1,16):
    a.append(i)
    b.append(i*i)

c = dict(zip(a,b))

print(c)
```

```
PS C:\Users\Yohenba Kshetrimayum\Desktop\APP python\week-2> python print.py
{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}
```

5. Write a Python program to find the numbers of a given string and store them in a list, display the numbers which are bigger than the length of the list in sorted form. Use lambda function to solve the problem.

Original string: sdf 23 safs8 5 sdfsd8 sdfs 56 21sfs 20 5

Numbers in sorted form:

20 23 56

```
str = "sdf 23 safs8 5 sdfsd8 sdfs 56 21sfs 20 5"
print("Original string: ",str)
str_num=[i for i in str.split(' ')]

n = len(str_num)

numbers=sorted([int(x) for x in str_num if x.isdigit()])

print('Numbers in sorted form:')
for i in ((filter(lambda x:x>n,numbers))):
    print(i,end=' ')
```

```
PS C:\Users\Yohenba Kshetrimayum\Desktop\APP python\week-2> python string.py
Original string:  sdf 23 safs8 5 sdfsd8 sdfs 56 21sfs 20 5
Numbers in sorted form:
20 23 56
```