PYTHON ASSIGNMENT 1

Q -1. Write a program in Python to delete first element from a list and an element at a given index. Example-delete list[9]

PROGRAM-

main.py

```
"""Q -1. Write a program in Python to delete first element from a list and an element at a given index.
Example-delete list[9]"""

print("enter list values:")
l1 = list(map(int,input().split()))
print("original list-" + str(l1) )
l1.remove(l1[0])
print("after deleting first element-" + str(l1))
print("enter index to del element")
n = int(input())
if( n <= len(l1)):
    l1.remove(l1[n])
    print("list after removing element at index "+str(n)+ " "+ str(l1))
else:
    print("Index out of list range")
```

input

```
enter list values:
1 2 3 4
original list-[1, 2, 3, 4]
after deleting first element-[2, 3, 4]
enter index to del element
2
list after removing element at index 2 [2, 3]


...Program finished with exit code 0
Press ENTER to exit console.
```

main.py

```
"""Q-2. Write a program to accept three numbers from the user and insert it at the end of given
Tuple T1.T1 = (23, 32, 4, 5, 2, 12, 23, 7, 9, 10, 23)."""

a,b,c = list(map(int,input().split()))
T1 = (23, 32, 4, 5, 2, 12, 23, 7, 9, 10, 23)
T2 = (a,b,c)
T3 = T1+T2
print(T3)
```

input

```
1 2 3
(23, 32, 4, 5, 2, 12, 23, 7, 9, 10, 23, 1, 2, 3)


...Program finished with exit code 0
Press ENTER to exit console.
```

main.py

```
"""Q-3. Write a Python script to sort (ascending and descending) a dictionary by :i)value.ii)key"""
D1 = {1:"e",2:"d",3:"c",0:"a"}
print("values of dictionary sorted in ascending as:")
for j in sorted(D1.values()):
    print(j,end="  ")
print()
print("keys of dictionary sorted in ascending as:")
for i in sorted(D1.keys()) :
    print(i, end = " ")
print()
print("values of dictionary sorted in descending as:")
for j in sorted(D1.values(),reverse = True):
    print(j,end="  ")
print()
print("keys of dictionary sorted in descending as:")
for i in sorted(D1.keys(),reverse= True) :
    print(i, end = " ")
```

input

```
values of dictionary sorted in ascending as:
a  c  d  e
keys of dictionary sorted in ascending as:
0 1 2 3
values of dictionary sorted in descending as:
e  d  c  a
keys of dictionary sorted in descending as:
3 2 1 0
```

main.py

```python
"""Q-4. Write a Python script to print a dictionary where the keys are first 10 even numbers
and the values are square of keys."""

keys = []
for i in range(1, 22):
    if(i%2==0):
        keys.append(i)
values = []
for i in range(len(keys)):
    values.append(keys[i]*keys[i])
res = dict(zip(keys, values))
print(res)

```

input

```
{2: 4, 4: 16, 6: 36, 8: 64, 10: 100, 12: 144, 14: 196, 16: 256, 18: 324, 20: 400}


...Program finished with exit code 0
Press ENTER to exit console.
```

```python
"""Q-5.Write a program to find the sum of the digits of a number accepted from user."""

n = input()
n = str(n)
c=0
for i in n:
    c = c+ int(i)
print(c)

```

input

```
551
11
```

```python
"""Q-6. Write a Python function to construct the following pattern, using a nested for loop."""
for i in range(0, 5):
    for j in range(0, i + 1):
        print("* ", end="")
    print()
for i in range(6, 0, -1):
    for j in range(1, i - 1):
        print("*", end=' ')
    print(" ")

```

input

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

main.py

```
"""
Q-7.    Write a program to form a string from given list of indexes of a character list.
Example1 :char_list = ['e','h','l','o','l']pos_list = [1,0,2,4,3] outpout = 'hello'
Example2:char_list = ['e','h','l','o','l']if post_list = [0,2]then output= 'eI' """

char_list = list(map(str,input().split()))
post_list = list(map(int,input().split()))
for i in post_list:
    print(char_list[i],end="")
```

input

```
e h l o l
1 0 2 4 3
hello

...Program finished with exit code 0
Press ENTER to exit console.
```

main.py

```
"""Q-8. Write a program to read first 10   and last 10 characters from a file named data.txt """

file = open("data.txt","r")
first_ten_lines = file.read(10)
print("first ten files:" + first_ten_lines)

print("last ten files:")
for line in (file.readlines() [-10:]):
        print(line, end ='')
```

Q-9. Write a program to convert these json files to a csv file. Content of the files is given below. Create a single csv that should contain data from the json

files.

file1.json{"ID":{"0":90,"1":56,"2":34,"3":96,"4":45},"Name":{"0":"Akash","1":"Chalsea","2":"Divya","3":"Sajal","4":"Shubham"},"Marks":{"0":81,"1":87,"2":100,"3":89,"4":78},"Grade":{"0":"B","1":"B","2":"A","3":"B","4":"C"}}

file2.json{"ID":{"0":23,"1":43,"2":12,"3":13,"4":67,"5":89},"Name":{"0":"Ram","1":"Deep","2":"Yash","3":"Aman","4":"Arjun","5":"Aditya"},"Marks":{"0":89,"1":97,"2":45,"3":78,"4":56,"5":76},"Grade":{"0":"B","1":"A","2":"F","3":"C","4":"E","5":"C"}}

PROGRAM-

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```
"""Q-9.Write a program to convert these json files to a csv file.
Content of the files is given below. Create a single csv that should contain data from the json files.
file1.json{"ID":{"0":90,"1":56,"2":34,"3":96,"4":45},"Name":{"0":"Akash","1":"Chalsea","2":"Divya","3":"Sajal"
"Marks":{"0":81,"1":87,"2":100,"3":89,"4":78},"Grade":{"0":"B","1":"B","2":"A","3":"B","4":"C"}}
file 2.json
{"ID":{"0":23,"1":43,"2":12,"3":13,"4":67,"5":89},"Name":{"0":"Ram","1":"Deep","2":"Yash","3":"Aman","4":"Arju
"Marks":{"0":89,"1":97,"2":45,"3":78,"4":56,"5":76},
"Grade":{"0":"B","1":"A","2":"F","3":"C","4":"E","5":"C"}}"""

import pandas as pd
df1 = pd.read_json (r'C:\Users\pa.puja\documents\json_file_1.json')
csv1 = df.to_csv(r'C:\Users\pa.puja\documents\csv_file_1.csv')

df2 = pd.read_json (r'C:\Users\pa.puja\documents\json_file_2.json')
csv2 = df.to_csv(r'C:\Users\pa.puja\documents\csv_file_2.csv')


final_df = pd.concat(map(pd.read_csv, ['csv1.csv', 'csv2.csv']))
print(final_df)
```

Q-10. Write a program to create a dictionary of the frequency of characters from a string.example: string -"I am a tree"output: { "i": 1, "a": 2, "m": 1, "t": 1, "r": 1, "e": 2 }

main.py

```
"""Q-10. Write a program to create a dictionary of the frequency of characters from a string.
example: string -"I am a tree"output: { "i": 1, "a": 2, "m": 1, "t": 1, "r": 1, "e": 2 }"""

n = input()
n= n.replace(" ","")
D1 = {}

for i in n:
    if i in D1:
        D1[i] += 1
    else:
        D1[i] = 1

print ("Count of all characters in- " +n+" -is : "+ str(D1))
```

input

```
iam a tree
Count of all characters in- iamatree -is : {'i': 1, 'a': 2, 'm': 1, 't': 1, 'r': 1, 'e': 2}
```