Python

ASSIGNMENT 2

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ROLL NO:
CLASS: TYBBACA
GUIDE: PROF.LANDE R.D
ASSIGNMENT BASED ON: WORKING WITH STRING AND LIST

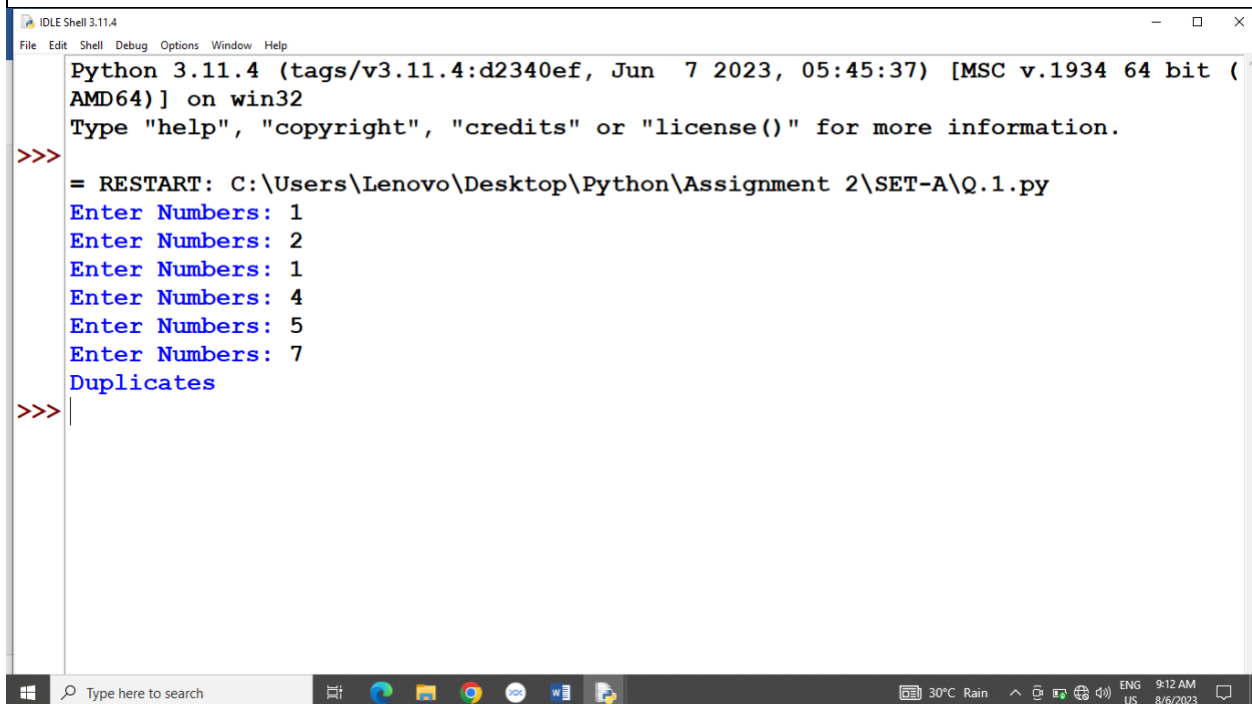| ASSIGNMENT 2 |
|---|
| SET-A |

Q.1 Write a python script which accepts 5 integer values and prints "DUPLICATES" if any of the values entered are duplicates otherwise it prints "ALL UNIQUE". Example: Let 5 integers are (32, 45, 90, 45, 6) then output "DUPLICATES" to be printed.

Ans:

```
a=list()
for i in range(6):
    a.append(int(input("Enter Numbers: ")))
if len(set(a))!=len(a):
    print("Duplicates")
else:
    print("Uniques")
```
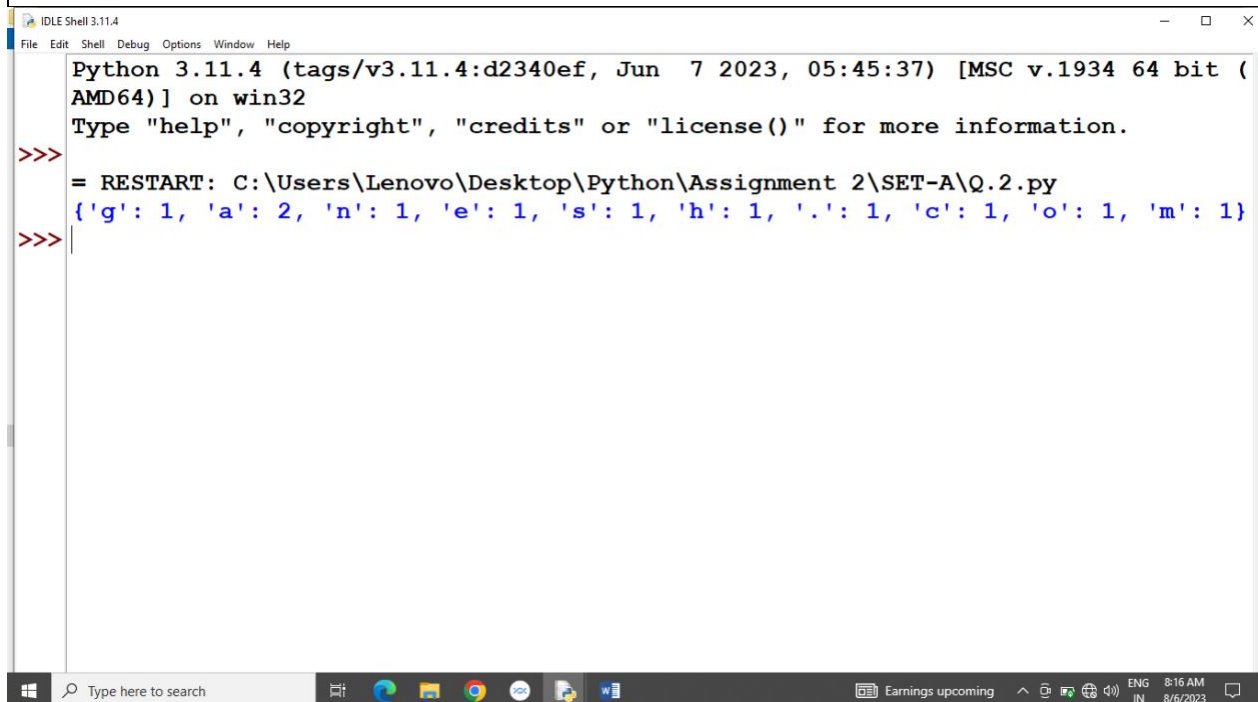
Output:

ASSIGNMENT 2
SET-A

Q.2 Write a python script to count the number of characters (character frequency) in a string. Sample String : google.com'. Expected Result : {'o': 3, 'g': 2, '.': 1, 'e': 1, 'l': 1, 'm': 1, 'c': 1}

Ans:
```
str1="ganesha.com"
dict={}
for n in str1:
        keys=dict.keys()
        if n in keys:
                dict[n]+=1
        else:
                dict[n]=1
print(dict)
```

Output:


```
Python 3.11.4 (tags/v3.11.4:d2340ef, Jun  7 2023, 05:45:37) [MSC v.1934 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\Lenovo\Desktop\Python\Assignment 2\SET-A\Q.2.py
{'g': 1, 'a': 2, 'n': 1, 'e': 1, 's': 1, 'h': 1, '.': 1, 'c': 1, 'o': 1, 'm': 1}
>>>
```
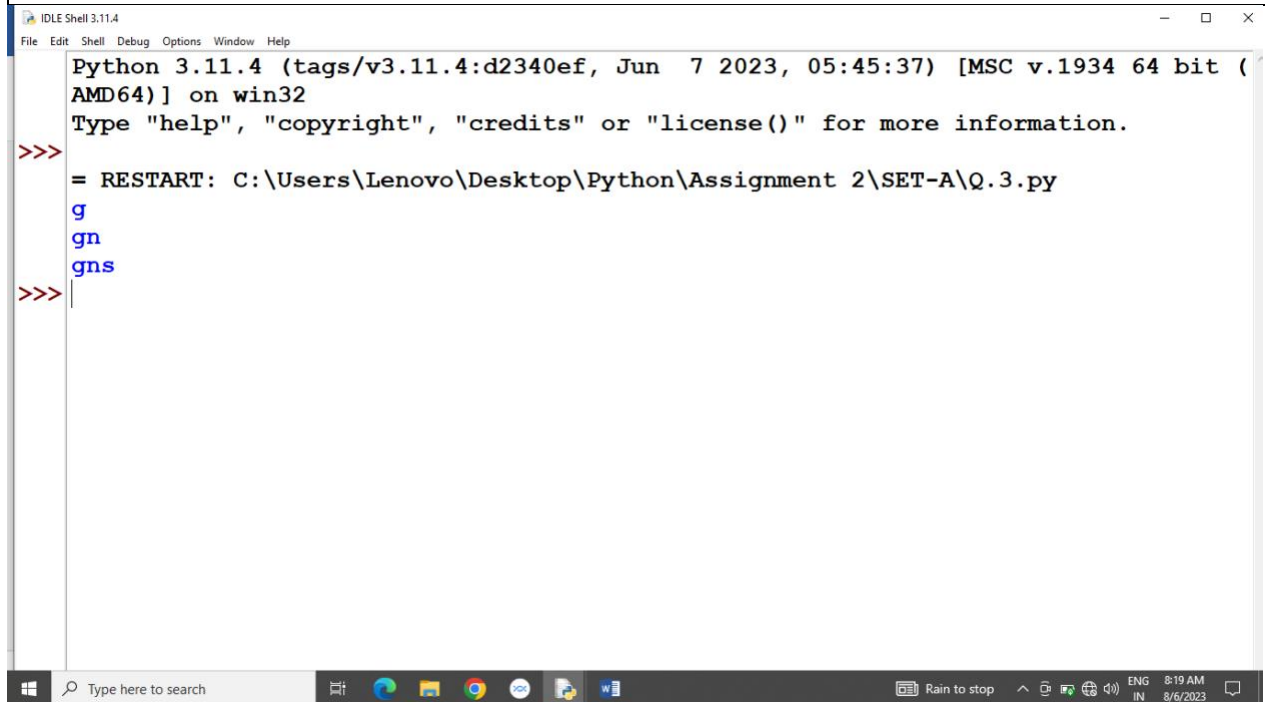
ASSIGNMENT 2
SET-A

Q.3 Write a Python program to remove the characters which have odd index values of a given string

Ans:
str='ganesh'
res=""
for i in range(len(str)):
    if i%2==0:
        res=res+str[i]
        print(res)

Output:

```
IDLE Shell 3.11.4                                                    —  □  ×
File  Edit  Shell  Debug  Options  Window  Help
    Python 3.11.4 (tags/v3.11.4:d2340ef, Jun  7 2023, 05:45:37) [MSC v.1934 64 bit (
    AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    = RESTART: C:\Users\Lenovo\Desktop\Python\Assignment 2\SET-A\Q.3.py
    g
    gn
    gns
>>>
```
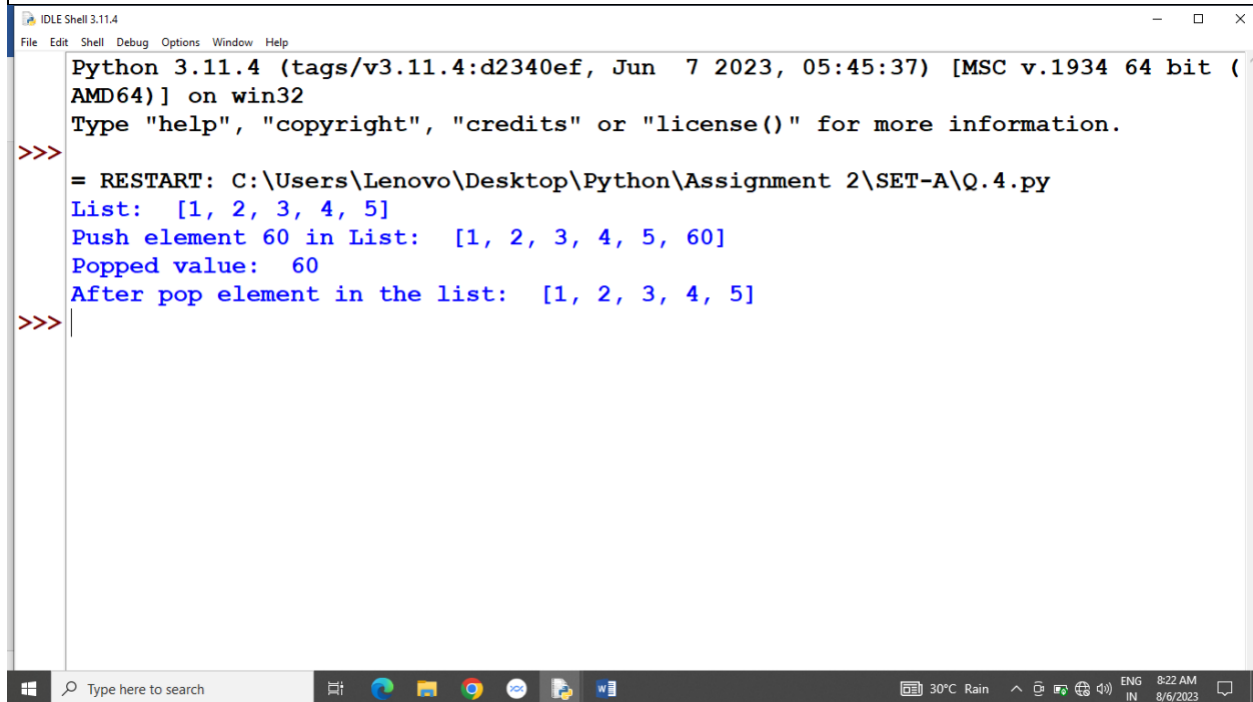
ASSIGNMENT 2
SET-A

Q.4 Write a program to implement the concept of stack using list

Ans:
```
a=[1,2,3,4,5]
print("List: ",a)
a.append(60)
print("Push element 60 in List: ",a)
val=a.pop()
print("Popped value: ",val)
print("After pop element in the list: ",a)
```
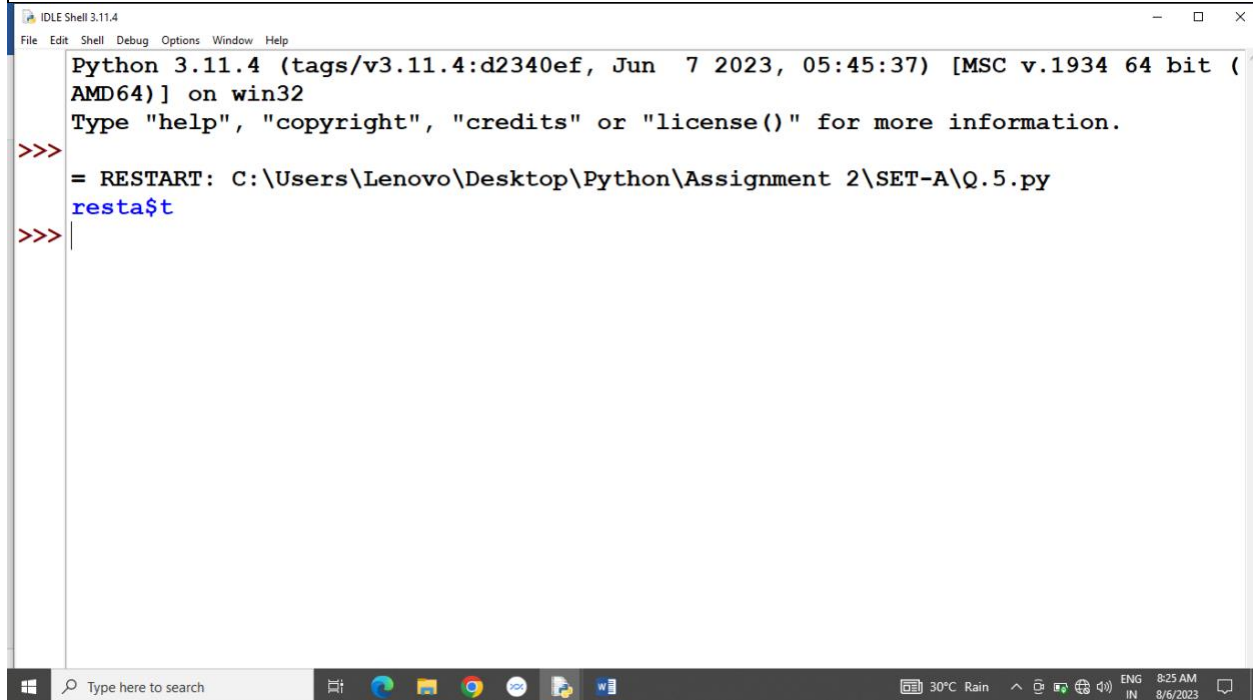
Output:

ASSIGNMENT 2
SET-A

Q.5. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '$', except the first char itself. Sample String: 'restart' Expected Result : 'resta$t'

Ans:
```python
str="restart"
str1=str[0]
str2=str.replace(str1,"$")
str2=str1+str2[1:]
print(str2)
```

Output:

IDLE Shell 3.11.4

File Edit Shell Debug Options Window Help

```
Python 3.11.4 (tags/v3.11.4:d2340ef, Jun  7 2023, 05:45:37) [MSC v.1934 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\Lenovo\Desktop\Python\Assignment 2\SET-A\Q.5.py
resta$t
>>>
```
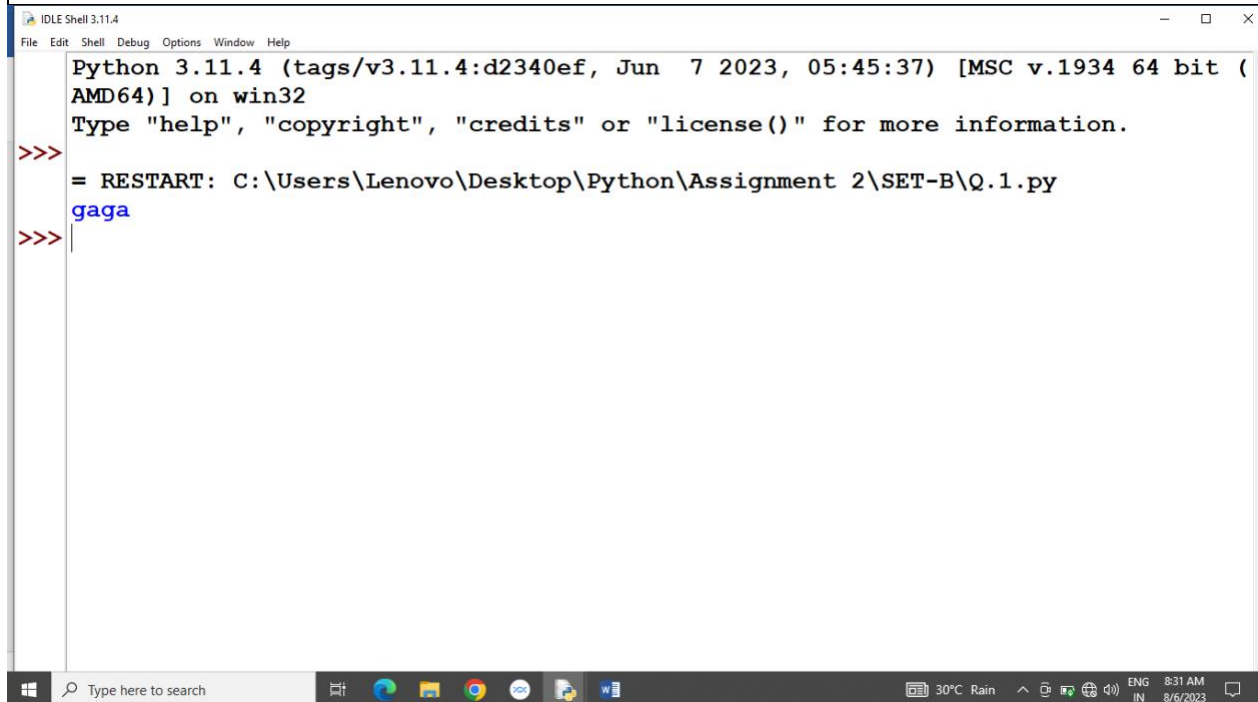
ASSIGNMENT 2
SET-B

Q.1 Write a Python program to get a string made of the first 2 and the last 2 chars from a given a string. If the string length is less than 2, return instead of the empty string. Sample String : 'General12' Expected Result : 'Ge12' Sample String : 'Ka' Expected Result : 'KaKa' Sample String : ' K' Expected Result : Empty String

Ans:
```
str="ga"
if (len(str)<=1):
        print('')
else:
   str1=str[:2]+str[-2:]
   print(str1)
```
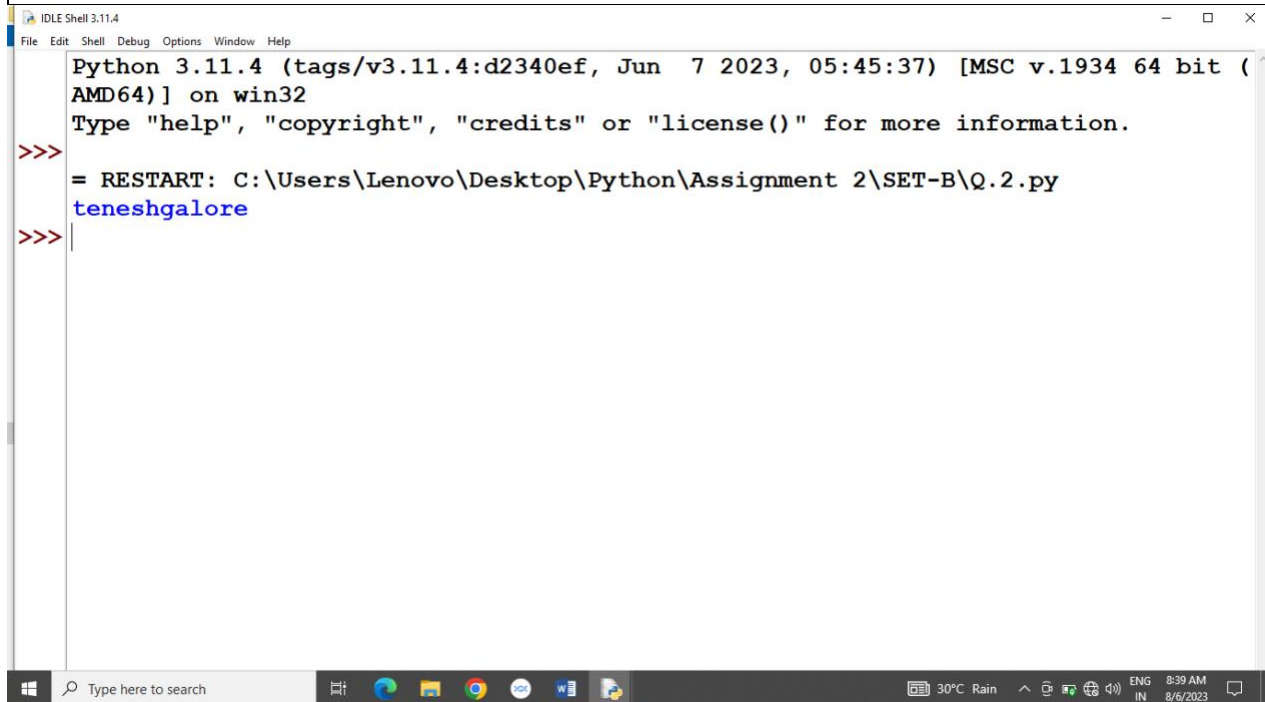
Output:

ASSIGNMENT 2
SET-B
Q.2 Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string. Sample String : 'abc', 'xyz' Expected Result : 'xycabz
Ans: str1="ganesh" str2="telore" str3=str2[:2]+str1[2:] str4=str1[:2]+str2[2:] str5=str3+str4 print(str5)
Output:

```
IDLE Shell 3.11.4                                                    —  □  ×
File Edit Shell Debug Options Window Help
    Python 3.11.4 (tags/v3.11.4:d2340ef, Jun  7 2023, 05:45:37) [MSC v.1934 64 bit (
    AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    = RESTART: C:\Users\Lenovo\Desktop\Python\Assignment 2\SET-B\Q.2.py
    teneshgalore
>>>
```
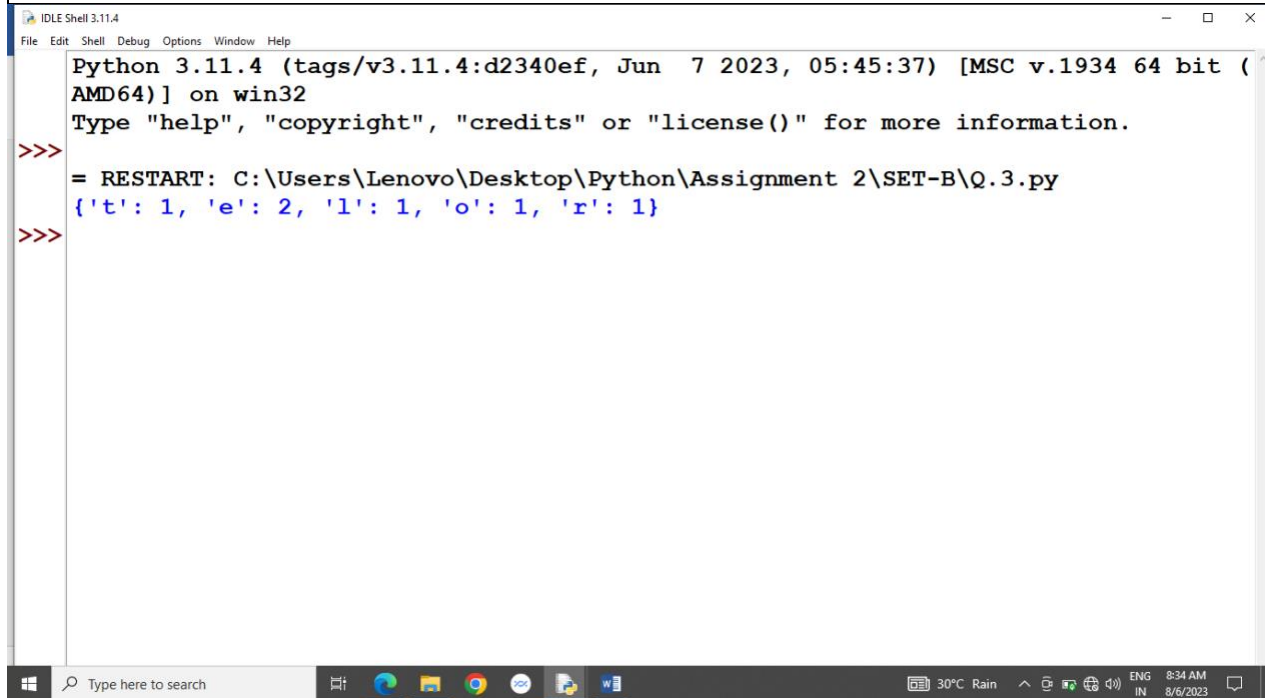
ASSIGNMENT 2
SET-B
Q.3 Write a Python program to count the occurrences of each word in a given sentence.

Ans:
 	
counts=dict()
words="telore"
for word in words:
      if word in counts:
            counts[word]+=1
      else:
            counts[word]=1
print(counts)

Output:

```
IDLE Shell 3.11.4                                                    —   □   ×
File  Edit  Shell  Debug  Options  Window  Help
    Python 3.11.4 (tags/v3.11.4:d2340ef, Jun  7 2023, 05:45:37) [MSC v.1934 64 bit (
    AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    = RESTART: C:\Users\Lenovo\Desktop\Python\Assignment 2\SET-B\Q.3.py
    {'t': 1, 'e': 2, 'l': 1, 'o': 1, 'r': 1}
>>>
```
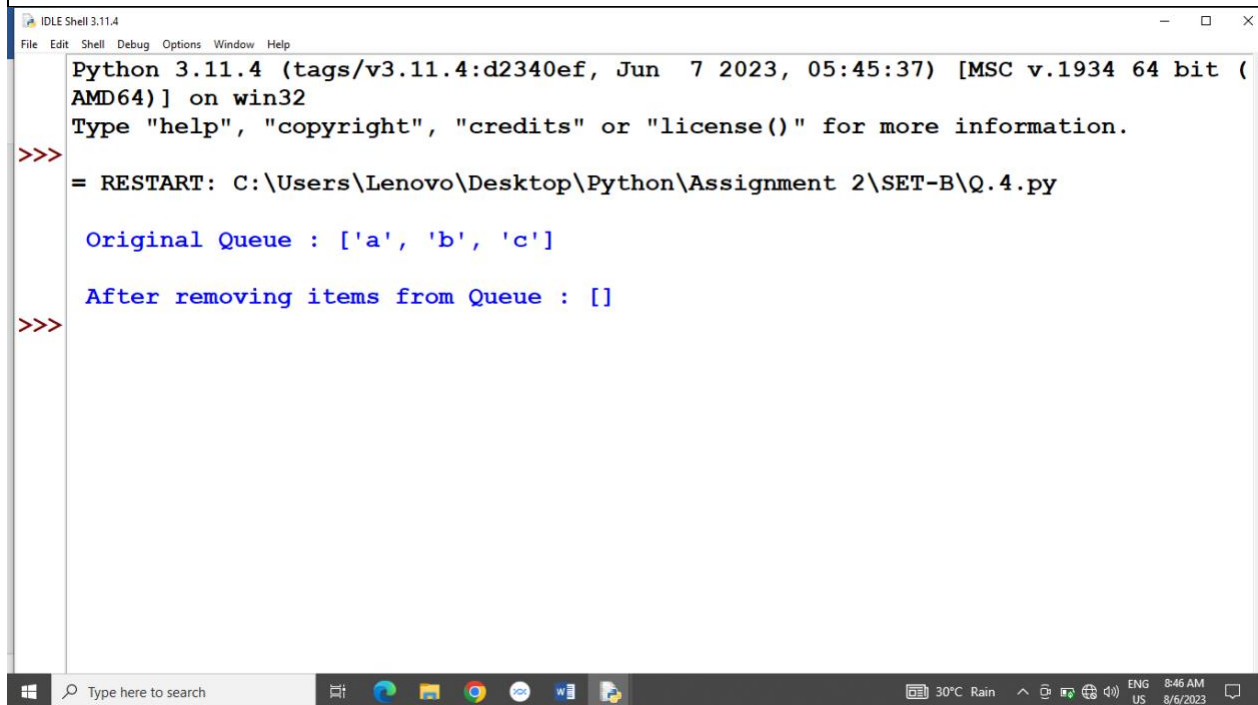
ASSIGNMENT 1
SET-B

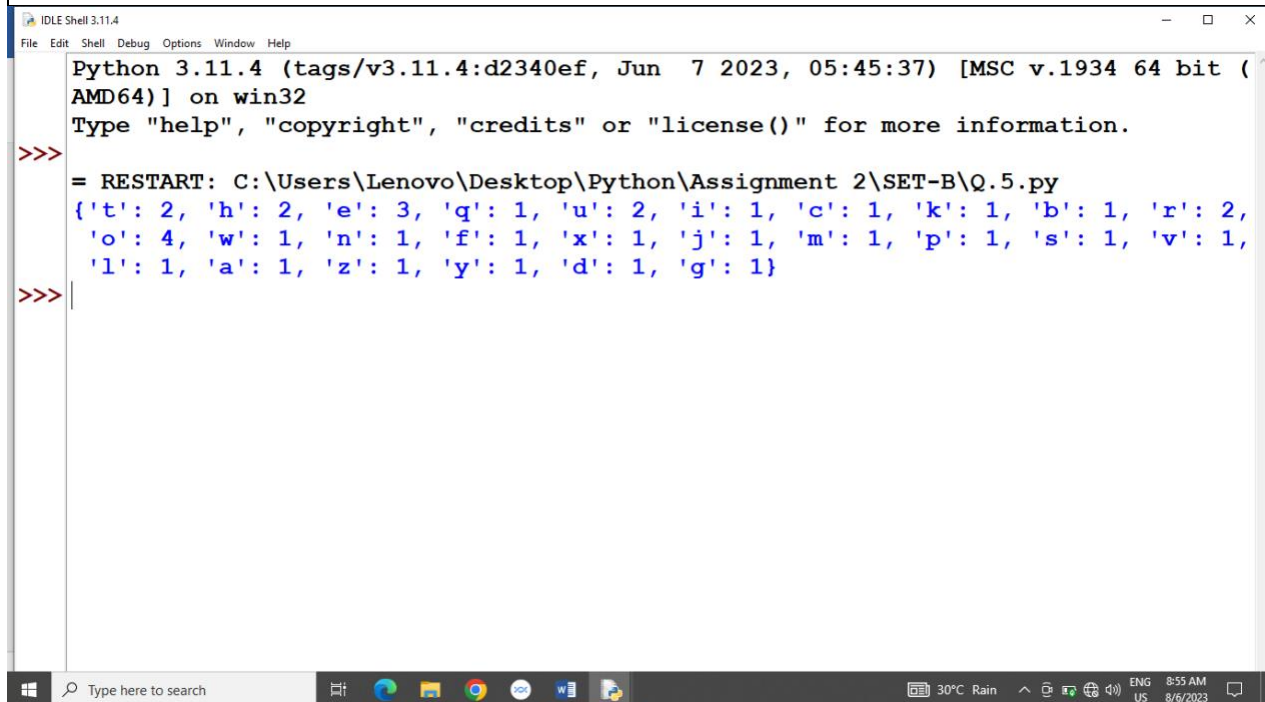| Q.4 Write a program to implement the concept of queue using list |
|---|
| **Ans:**

queue=[]
queue.append("a")
queue.append("b")
queue.append("c")
print("\n Original Queue :",queue)
queue.pop(0)
queue.pop(1)
queue.pop(0)
print("\n After removing items from Queue :",queue) |
| Output: |

ASSIGNMENT 2
SET-B

Q.5 Write a python program to count repeated characters in a string. Sample string: 'thequickbrownfoxjumpsoverthelazydog' Expected output: o 4 e 3 u 2 h 2 r 2 t 2

Ans:

```
s=" thequickbrownfoxjumpsoverthelazydog "
d={}
for ch in s:
        if ch in d:
           d[ch]=d[ch]+1
        else:
                d[ch]=1

print(d)
```

Output:

ASSIGNMENT 2
SET-C

Q.1 Write a binary search function which searches an item in a sorted list. The function should return the index of element to be searched in the list.

Ans:

```python
def binarysearch(list1,n):
        low=0
        high=len(list1)-1
        mid=0

        while low<=high:
                mid=(high+low)//2
                if list1[mid]<n:
                        low=mid+1
                elif list1[mid]>n:
                        high=mid-1
                else:
                        return mid
                        return -1

list1=[12,24,34,53,59,94]
n=34
res=binarysearch(list1,n)

if res!=-1:
        print("Element is present at the index", str(res))
else:
        print("Element is not present")
```
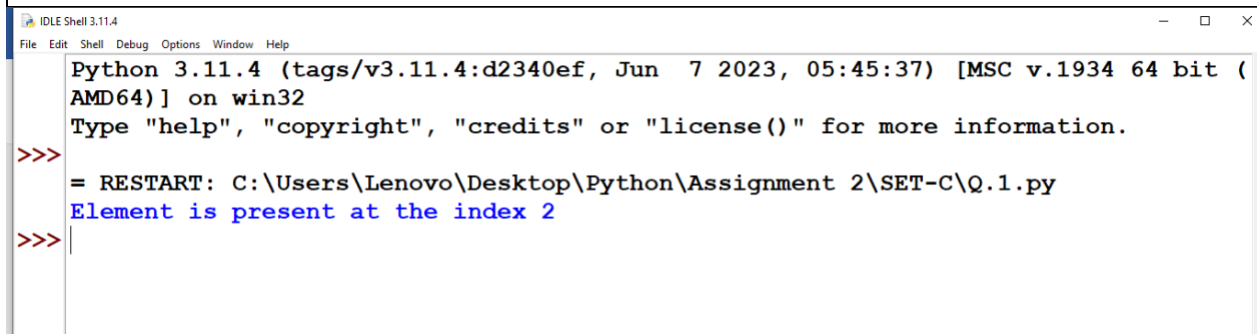
Output:


```
IDLE Shell 3.11.4                                                    —    □    ×
File  Edit  Shell  Debug  Options  Window  Help
    Python 3.11.4 (tags/v3.11.4:d2340ef, Jun  7 2023, 05:45:37) [MSC v.1934 64 bit (
    AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    = RESTART: C:\Users\Lenovo\Desktop\Python\Assignment 2\SET-C\Q.1.py
    Element is present at the index 2
>>>
```