

Python

ASSIGNMENT 3

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ROLL NO:

CLASS: TYBBACA

GUIDE: PROF.LANDE R.D

ASSIGNMENT BASED ON: WORKING WITH TUPLE, SETS AND DICTIONARIES

ASSIGNMENT 3

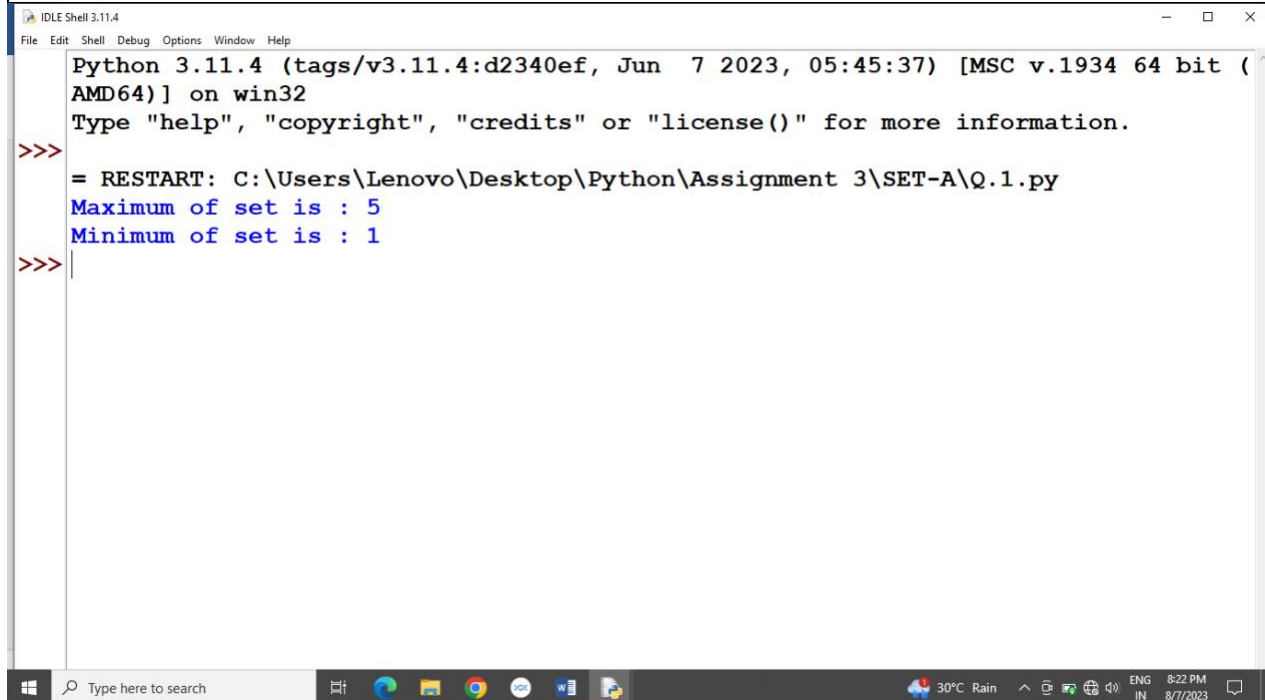
SET-A

Q.1 Write a Python program to find maximum and the minimum value in a set.

Ans:

```
s={1,2,3,4,5}  
print("Maximum of set is :",max(s))  
print("Minimum of set is :",min(s))
```

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 3\SET-A\Q.1.py  
Maximum of set is : 5  
Minimum of set is : 1  
>>>
```

ASSIGNMENT 3

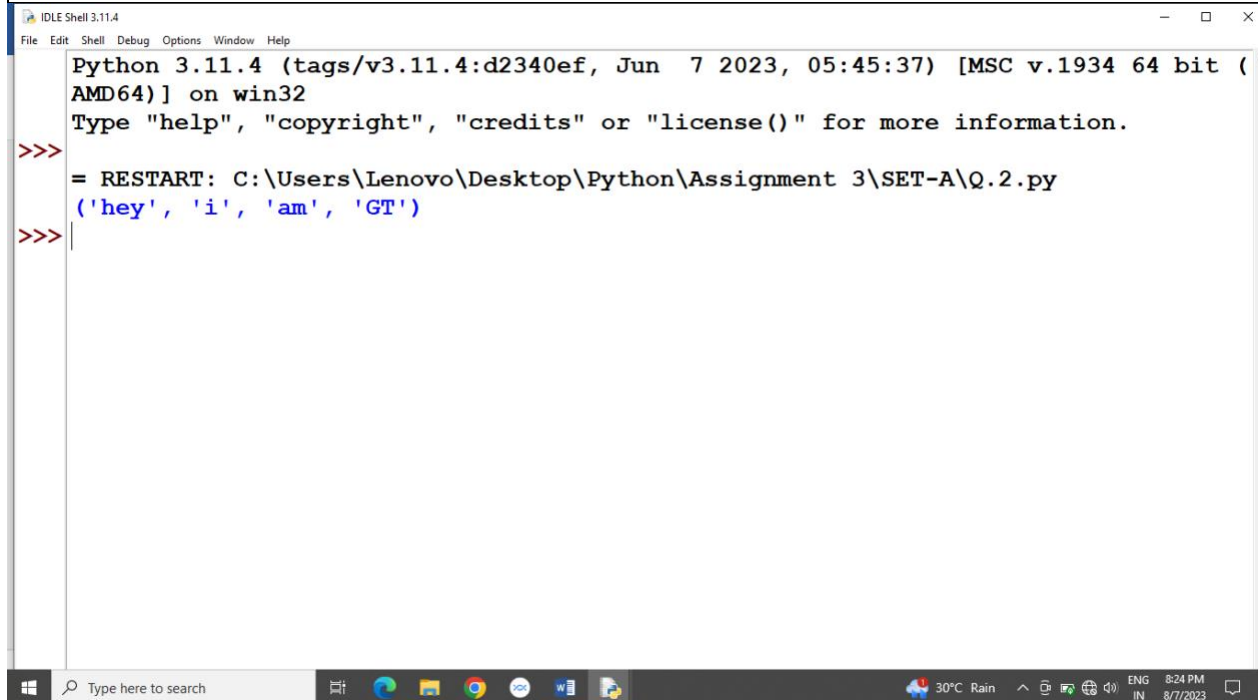
SET-A

Q.2 Write a Python program to add an item in a tuple.

Ans:

```
t1=("hey","i","am")
t2=("GT",)
t3=t1+t2
print(t3)
```

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 3\SET-A\Q.2.py
>>> ('hey', 'i', 'am', 'GT')
>>>
```

ASSIGNMENT 3

SET-A

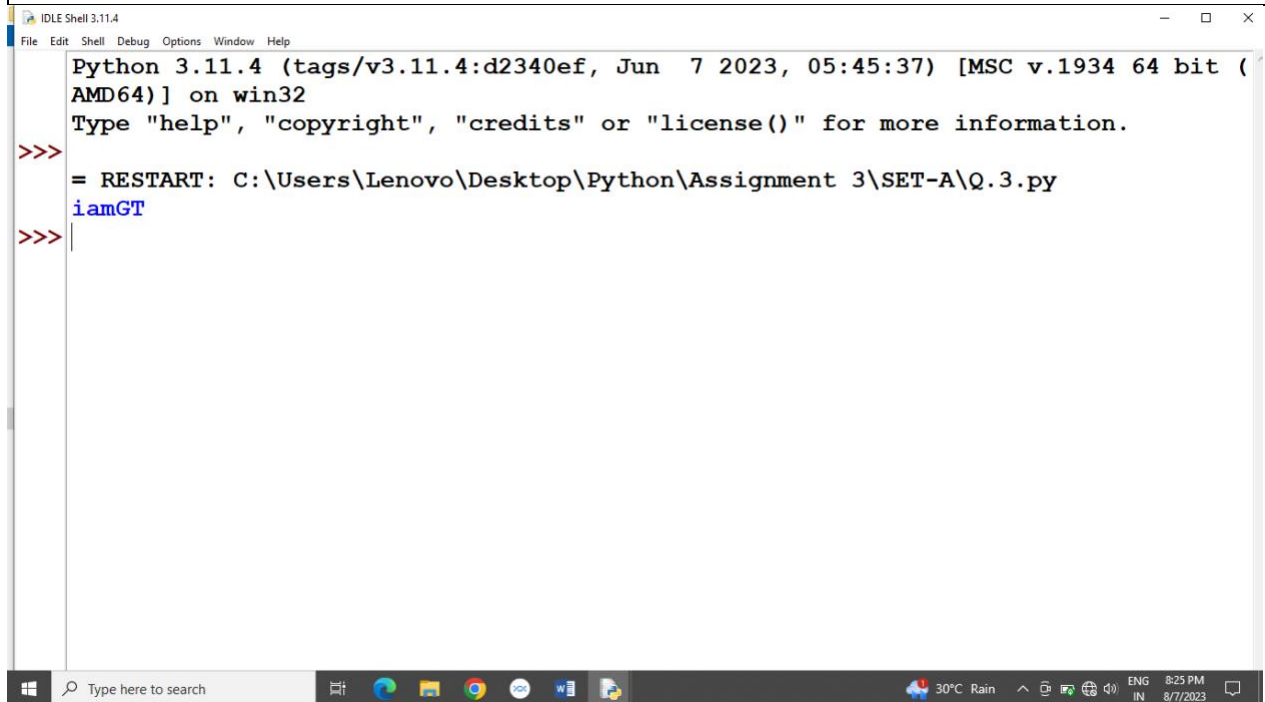
Q.3 Write a Python program to convert a tuple to a string

Ans:

```
def tupletostring(tuple):  
    str=""  
    for value in tuple:  
        str=str+value  
    return str
```

```
str=('i','am','GT')  
print(tupletostring(str))
```

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 3\SET-A\Q.3.py  
iamGT  
>>>
```

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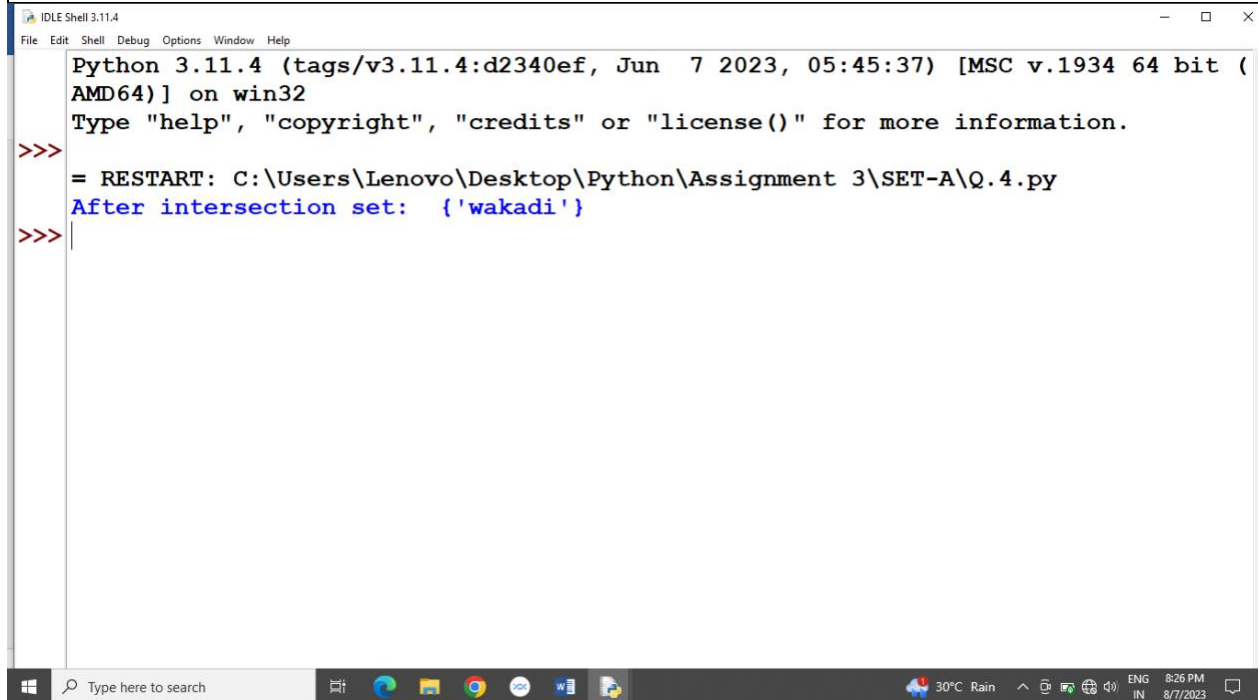
SET-A

Q.4 Write a Python program to create an intersection of sets.

Ans:

```
s1={"ganeshnagar","wakadi"}  
s2={"wakadi","rahata"}  
s3=s1&s2  
print("After intersection set: ",s3)
```

Output:



The screenshot shows a Python IDLE Shell window titled 'IDLE Shell 3.11.4'. The menu bar includes File, Edit, Shell, Debug, Options, Window, and Help. The shell displays the following text:

```
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 3\SET-A\Q.4.py  
After intersection set: {'wakadi'}  
>>>
```

The Windows taskbar at the bottom shows the search bar, taskbar icons for various applications, and system tray information including 30°C Rain, 8:26 PM, and 8/7/2023.

ASSIGNMENT 3

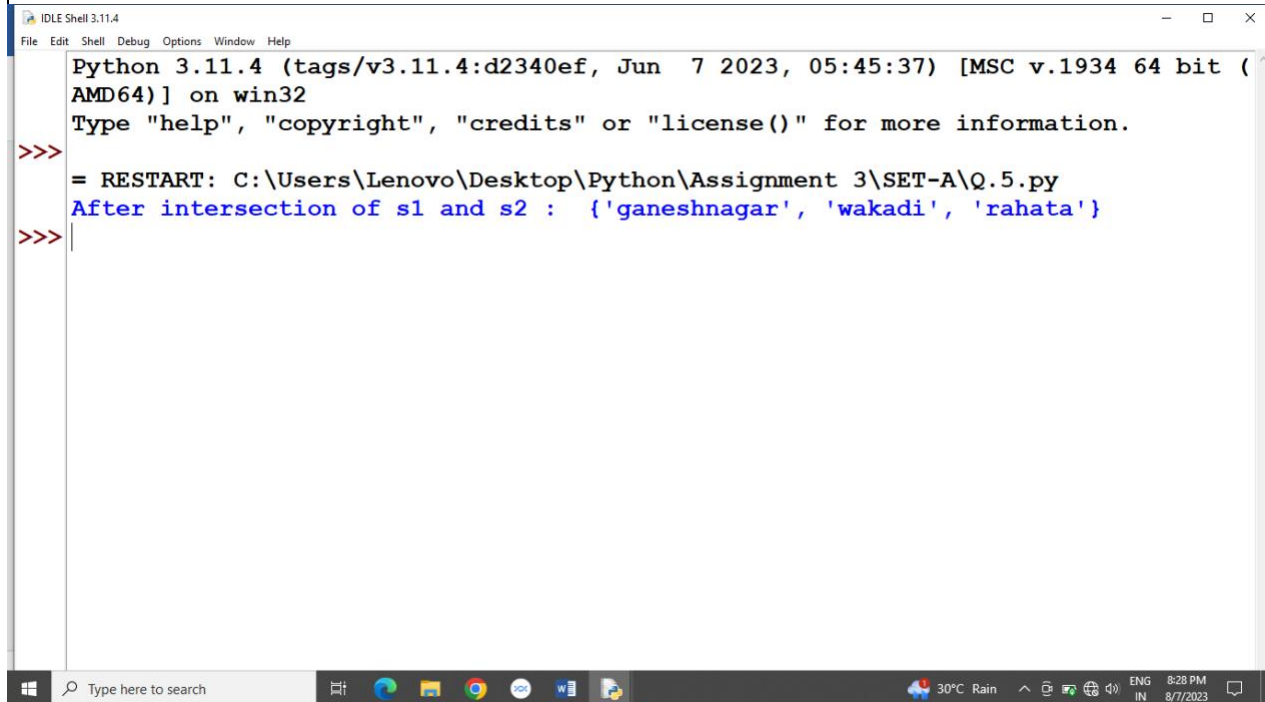
SET-A

Q.5. Write a Python program to create a union of sets.

Ans:

```
s1={"ganeshnagar","wakadi"}
s2={"wakadi","rahata"}
s3=s1|s2
print("After intersection of s1 and s2 : ",s3)
```

Output:



The screenshot shows a Python IDLE Shell window with the following content:

```
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 3\SET-A\Q.5.py
After intersection of s1 and s2 : {'ganeshnagar', 'wakadi', 'rahata'}
>>>
```

The window title is "IDLE Shell 3.11.4". The taskbar at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right indicates a temperature of 30°C, rain, and the date/time as 8:28 PM on 8/7/2023.

ASSIGNMENT 3

SET-A

Q.6 Write a Python script to check if a given key already exists in a dictionary.

Ans:

```
d={"ganesh",2:"prashant",3:"sarthak",4:"priya"}
```

```
key=4
```

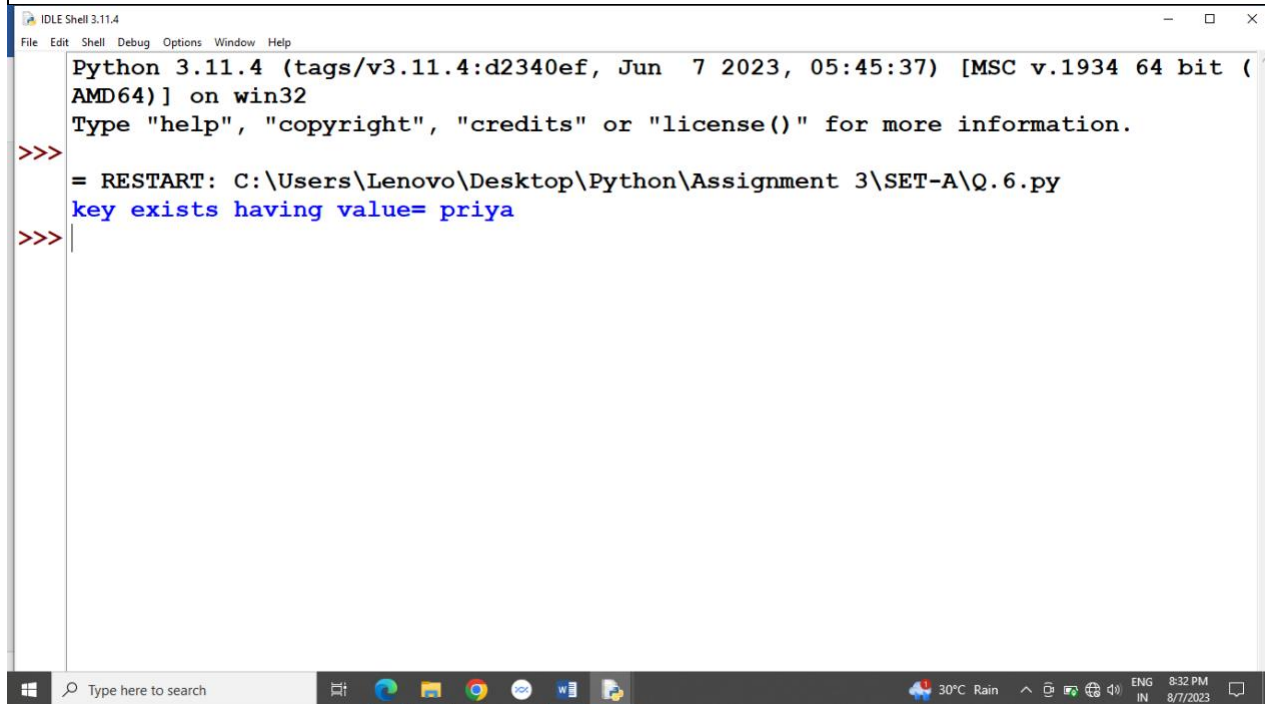
```
if key in d.keys():
```

```
    print(f"key exists having value= {d[key]}")
```

```
else:
```

```
    print("key not exist")
```

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 3\SET-A\Q.6.py
key exists having value= priya
>>>
```

ASSIGNMENT 3

SET-A

Q.7 Write a Python script to sort (ascending and descending) a dictionary by value.

Ans:

```
d={1:"ganesh",2:"prashant",3:"sarthak",4:"priya"}
```

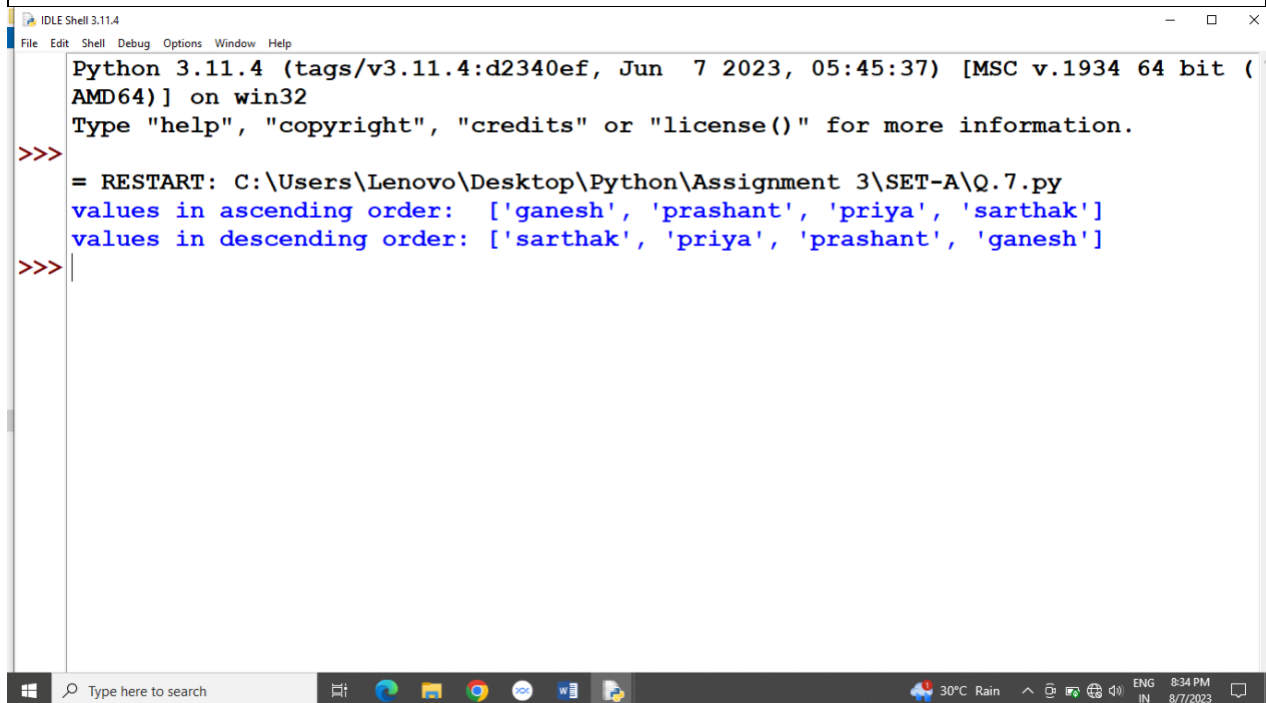
```
ascending=sorted(d.values())
```

```
reverse=sorted(d.values(),reverse=True)
```

```
print("values in ascending order: ",ascending)
```

```
print("values in descending order:",reverse)
```

Output:



The screenshot shows a Python IDLE Shell window with the following content:

```
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 3\SET-A\Q.7.py
values in ascending order: ['ganesh', 'prashant', 'priya', 'sarthak']
values in descending order: ['sarthak', 'priya', 'prashant', 'ganesh']
>>>
```

The taskbar at the bottom shows the system clock as 8:34 PM on 8/7/2023, with a weather widget indicating 30°C Rain.

ASSIGNMENT 3

SET-B

Q.1 Write a Python program to create set difference and a symmetric difference

Ans:

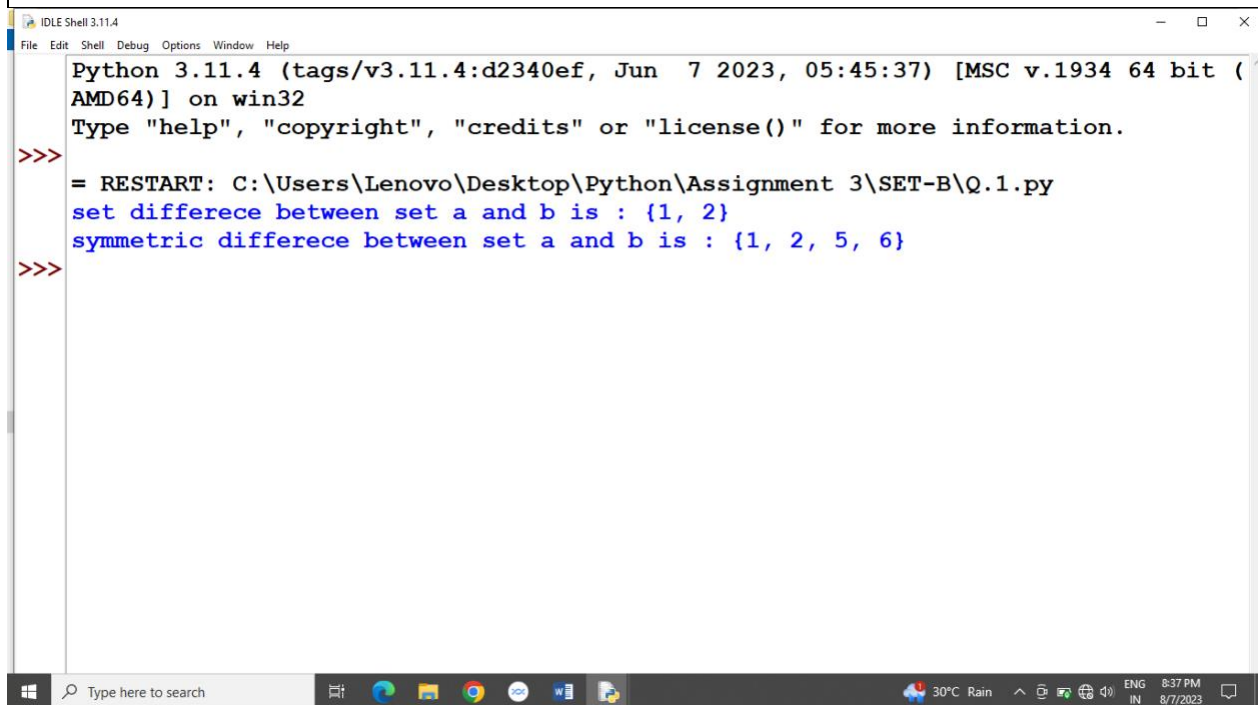
```
a={1,2,3,4}
```

```
b={3,4,5,6}
```

```
print("set difference between set a and b is :",a.difference(b))
```

```
print("symmetric difference between set a and b is :",a.symmetric_difference(b))
```

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 3\SET-B\Q.1.py
set difference between set a and b is : {1, 2}
symmetric difference between set a and b is : {1, 2, 5, 6}
>>>
```

ASSIGNMENT 3

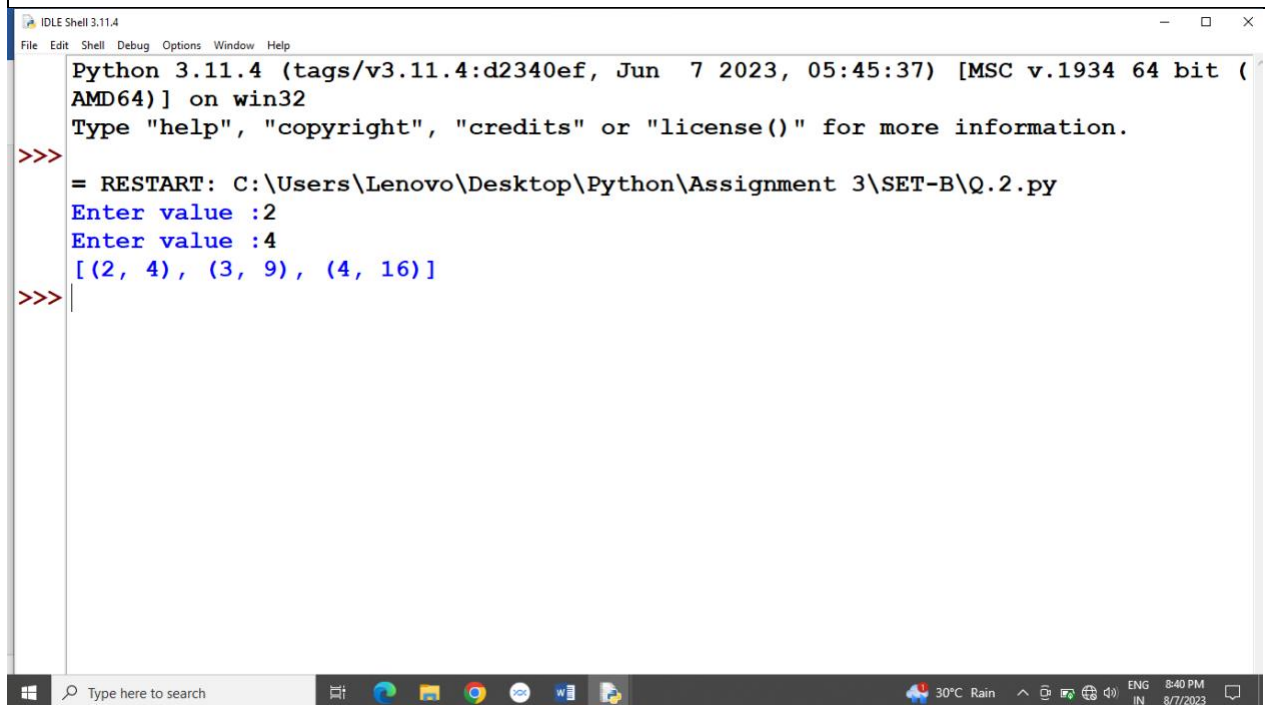
SET-B

Q.2 Write a Python program to create a list of tuples with the first element as the number and second element as the square of the number.

Ans:

```
lr=int(input("Enter value :"))
ur=int(input("Enter value :"))
a=[(x,x**2) for x in range(lr,ur+1)]
print(a)
```

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 3\SET-B\Q.2.py
Enter value :2
Enter value :4
[(2, 4), (3, 9), (4, 16)]
>>>
```

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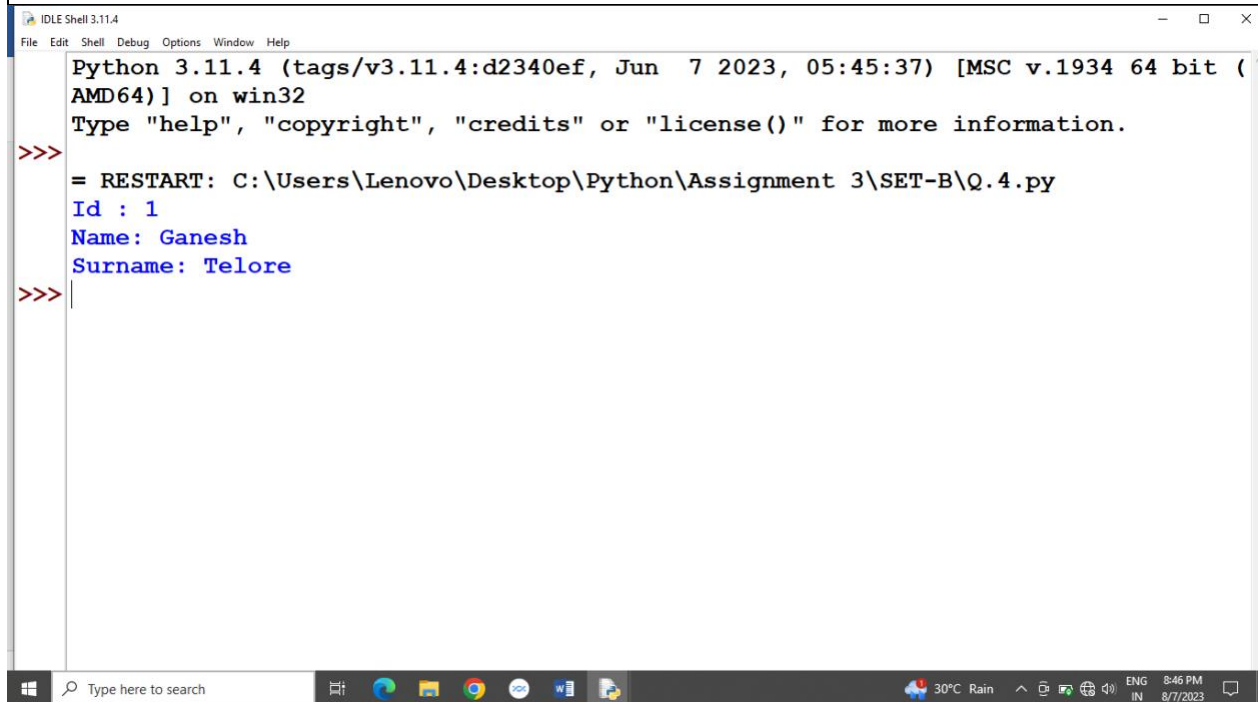
SET-B

Q.3 Write a Python program to unpack a tuple in several variables

Ans:

```
t1=(1,"Ganesh","Telore")
(id,fname,lname)=t1
print("Id :",id, "\nName:",fname, "\nSurname:",lname)
```

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 3\SET-B\Q.4.py
Id : 1
Name: Ganesh
Surname: Telore
>>>
```

ASSIGNMENT 3

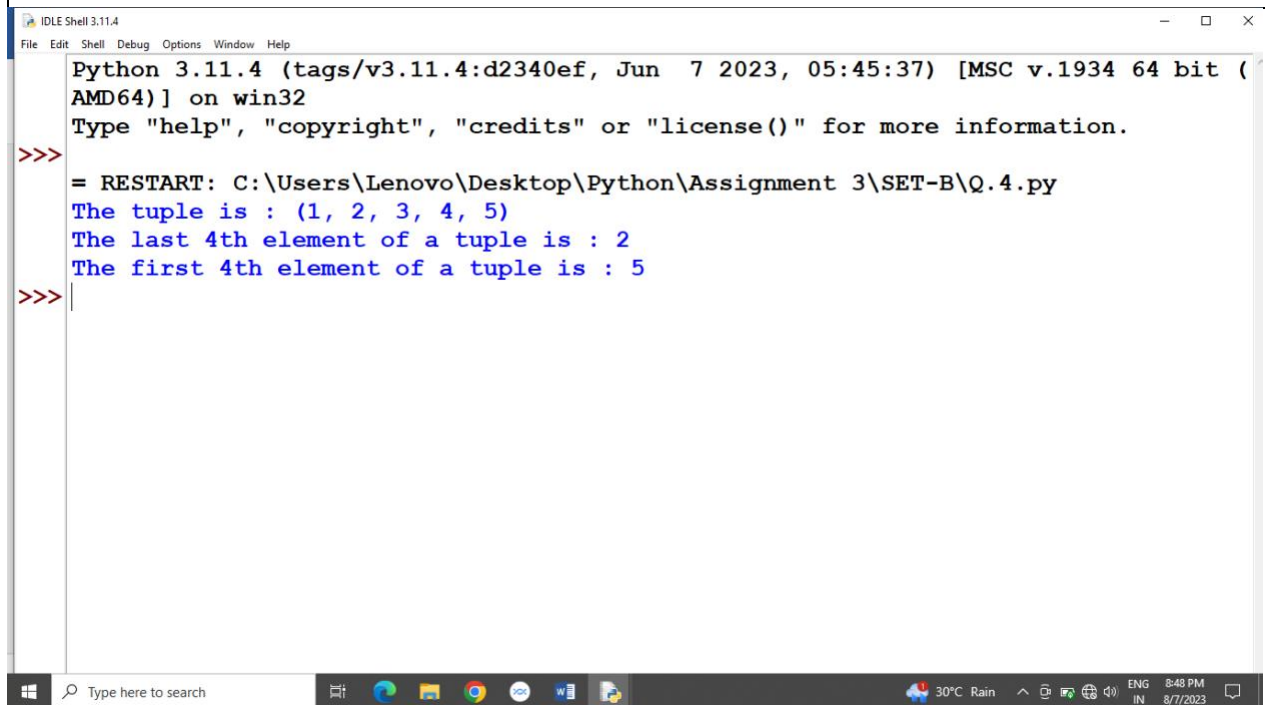
SET-B

Q.4 Write a Python program to get the 4th element from front and 4th element from last of a tuple.

Ans:

```
t1=(1,2,3,4,5)
print("The tuple is :",t1)
print("The last 4th element of a tuple is :",t1[-4])
print("The first 4th element of a tuple is :",t1[4])
```

Output:



```
IDLE Shell 3.11.4
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 3\SET-B\Q.4.py
The tuple is : (1, 2, 3, 4, 5)
The last 4th element of a tuple is : 2
The first 4th element of a tuple is : 5
>>>
```

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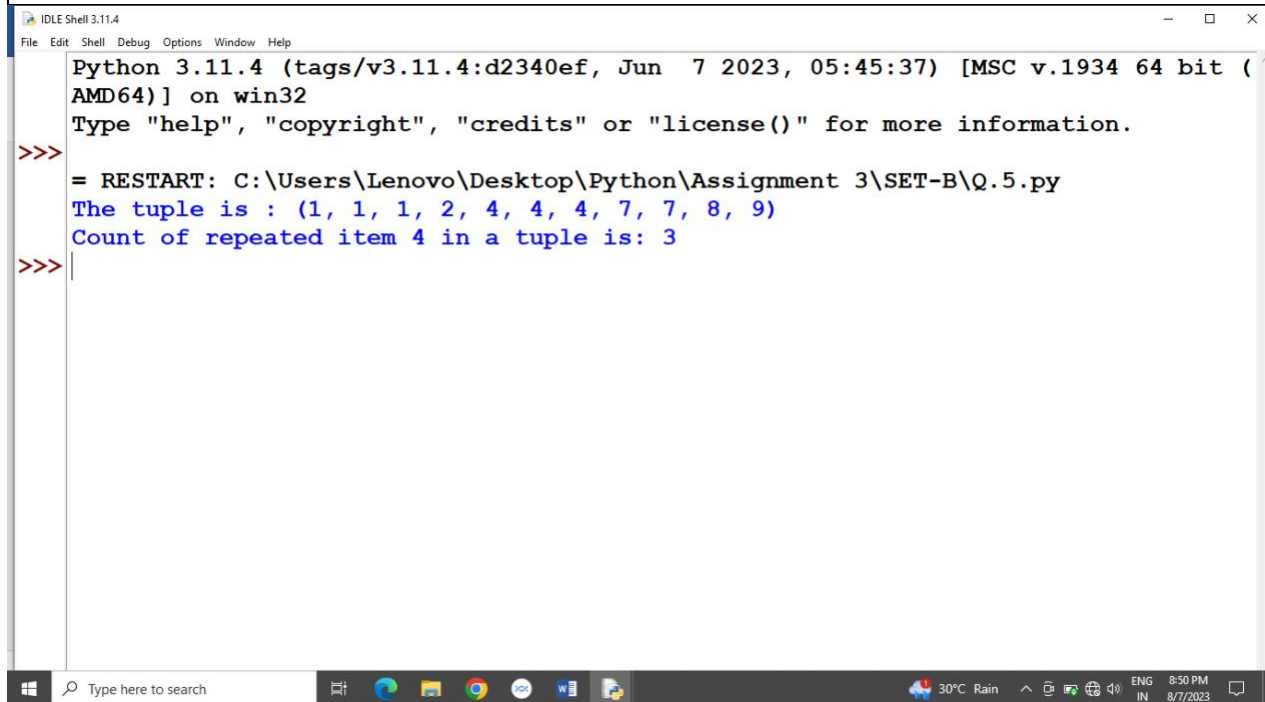
SET-B

Q.5 Write a Python program to find the repeated items of a tuple.

Ans:

```
t1=(1,1,1,2,4,4,4,7,7,8,9)
print("The tuple is :",t1)
print("Count of repeated item 4 in a tuple is:",t1.count(4))
```

Output:



```
IDLE Shell 3.11.4
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 3\SET-B\Q.5.py
The tuple is : (1, 1, 1, 2, 4, 4, 4, 7, 7, 8, 9)
Count of repeated item 4 in a tuple is: 3
>>>
```

ASSIGNMENT 3

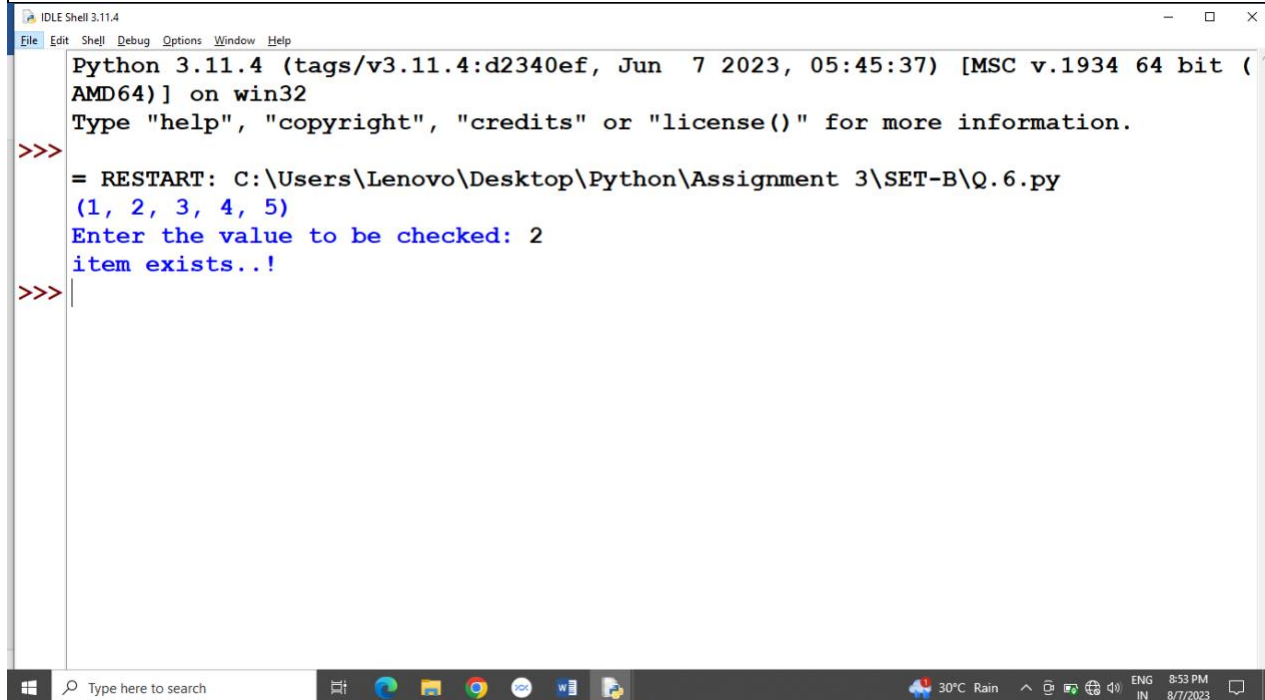
SET-B

Q.6 Write a Python program to check whether an element exists within a tuple.

Ans:

```
t1=(1,2,3,4,5)
print(t1)
val=int(input("Enter the value to be checked: "))
if val in t1:
    print("item exists..!")
else:
    print("item does not exists!!!")
```

Output:



```
IDLE Shell 3.11.4
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 3\SET-B\Q.6.py
(1, 2, 3, 4, 5)
Enter the value to be checked: 2
item exists..!
>>>
```

ASSIGNMENT 3

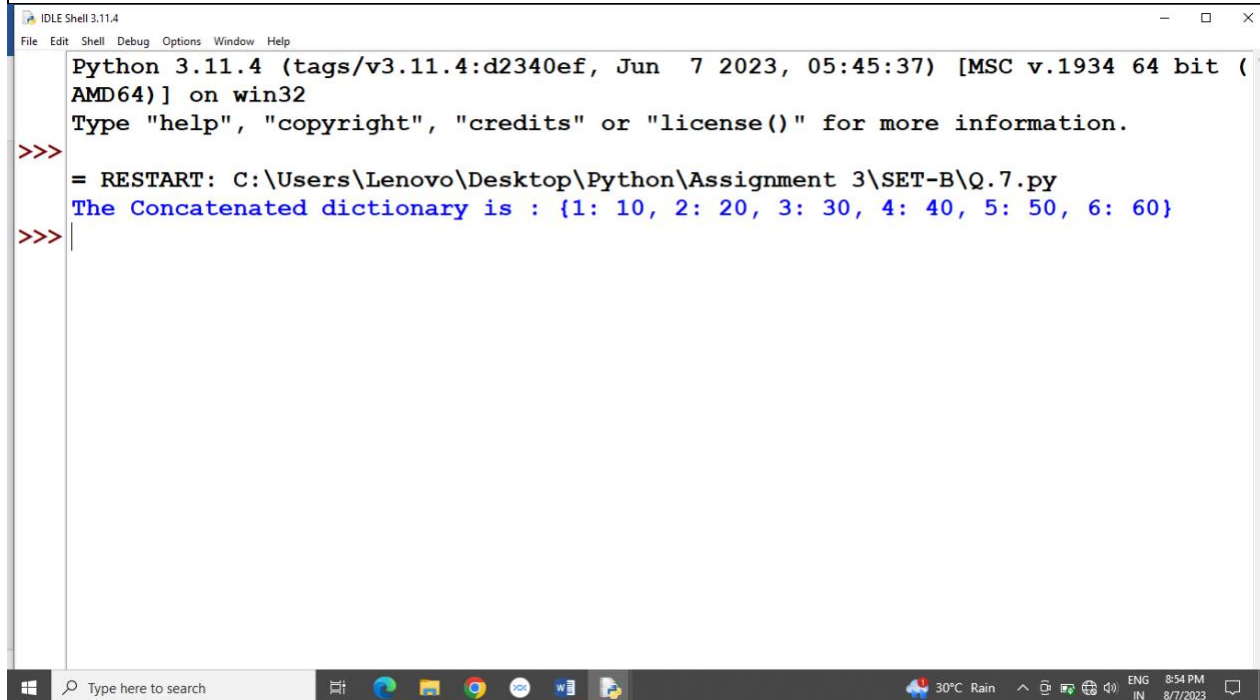
SET-B

Q.7 Write a Python script to concatenate following dictionaries to create a new one. Sample Dictionary : dic1={1:10, 2:20} dic2={3:30, 4:40} dic3={5:50,6:60} Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}

Ans:

```
dic1={1:10,2:20}
dic2={3:30,4:40}
dic3={5:50,6:60}
dic={**dic1,**dic2,**dic3}
print("The Concatenated dictionary is :",dic)
```

Output:



```
IDLE Shell 3.11.4
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 3\SET-B\Q.7.py
The Concatenated dictionary is : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
>>>
```

ASSIGNMENT 3

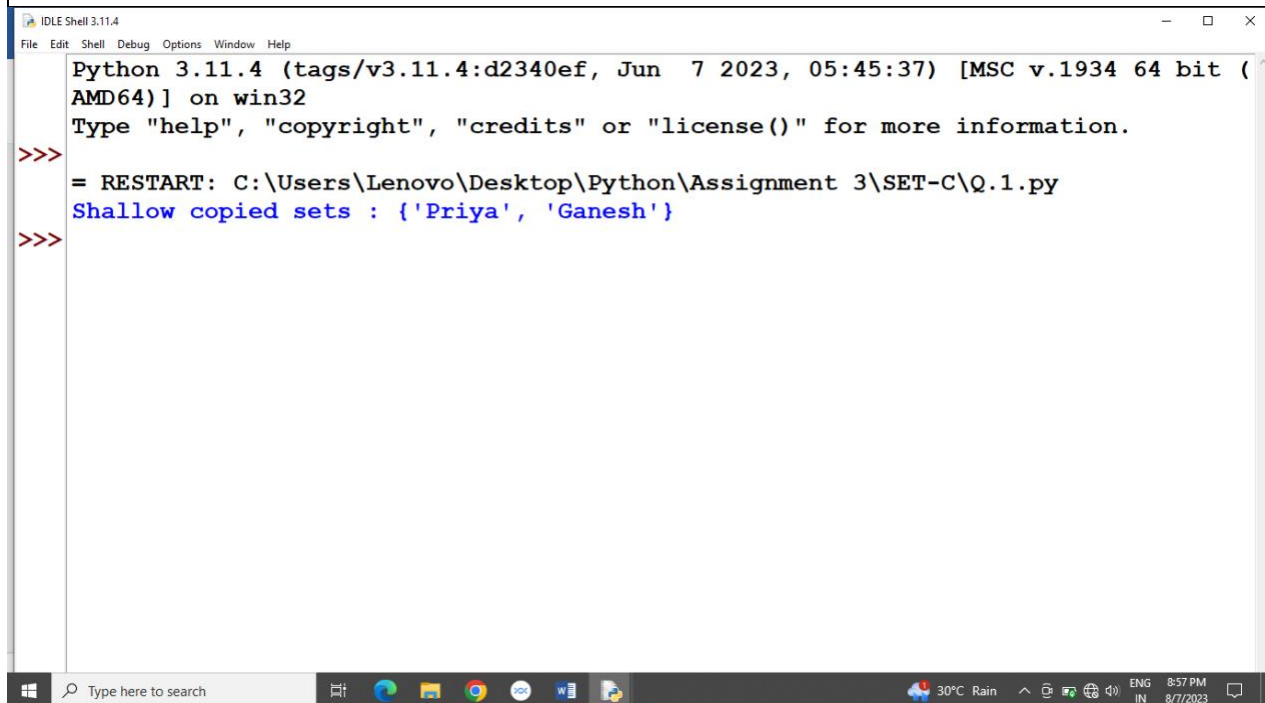
SET-C

Q.1 Write a Python program to create a shallow copy of sets

Ans:

```
s1={"Ganesh","Priya"}  
s2={"Priya","Ganesh"}  
cpy=s1.copy()  
print("Shallow copied sets :",cpy)
```

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 3\SET-C\Q.1.py  
Shallow copied sets : {'Priya', 'Ganesh'}  
>>>
```


ASSIGNMENT 3

SET-C

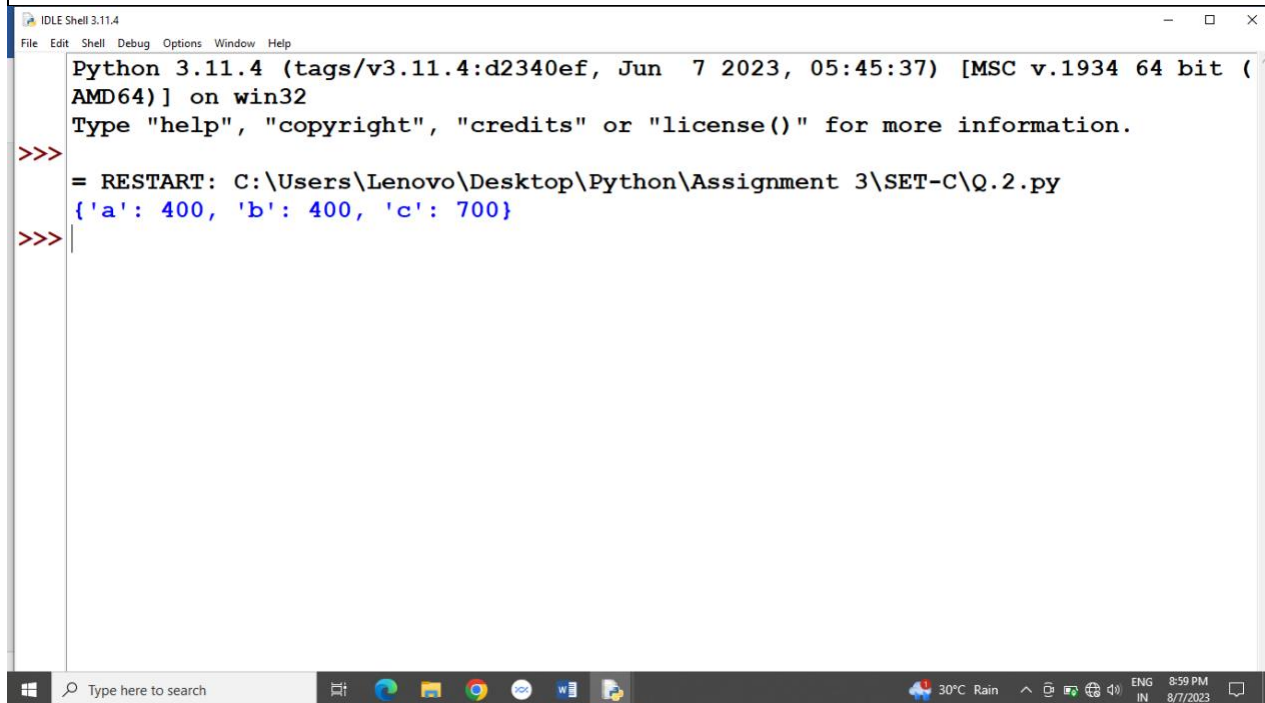
Q.2 Write a Python program to combine two dictionary adding values for common keys. d1 = {'a': 100, 'b': 200, 'c': 300} d2 = {'a': 300, 'b': 200, 'd': 400} Sample output: Counter({'a': 400, 'b': 400, 'd': 400, 'c': 300})

Ans:

```
a={"a":100,"b":200,"c":300}
b={"a":300,"b":200,"c":400}
c=a.copy()
for i in b:
    if i in c:
        c[i]=c[i]+b[i]
    else:
        c[i]=b[i]

print(c)
```

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 3\SET-C\Q.2.py
{'a': 400, 'b': 400, 'c': 700}
>>>
```