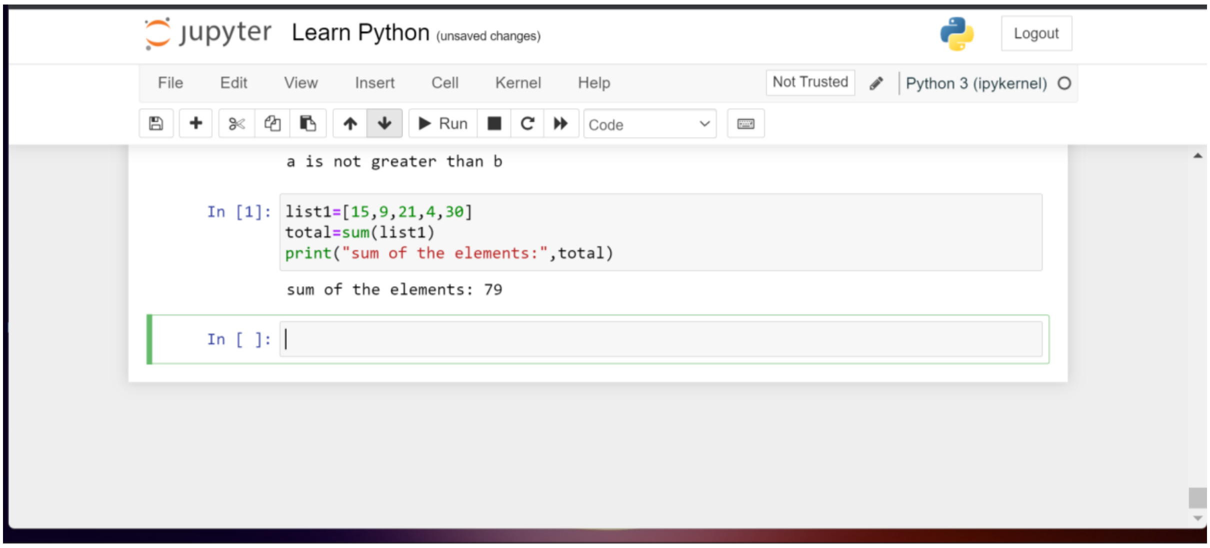
1. Write a Python program to sum all the items in a list.



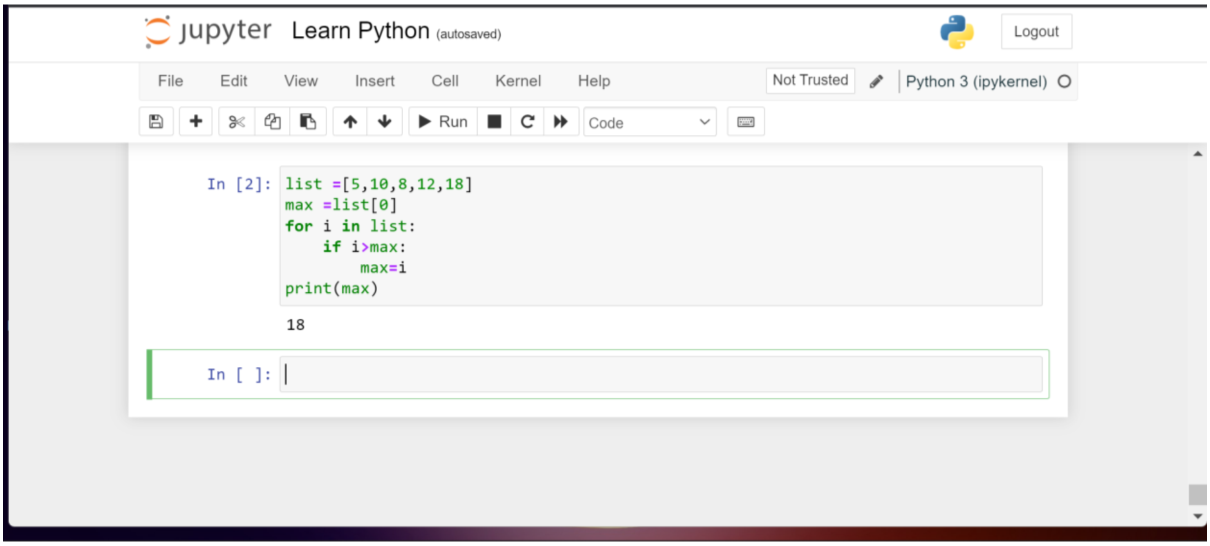
```
a is not greater than b

In [1]: list1=[15,9,21,4,30]
        total=sum(list1)
        print("sum of the elements:",total)

sum of the elements: 79

In [ ]: 
```

2. Write a Python program to get the largest number from a list.

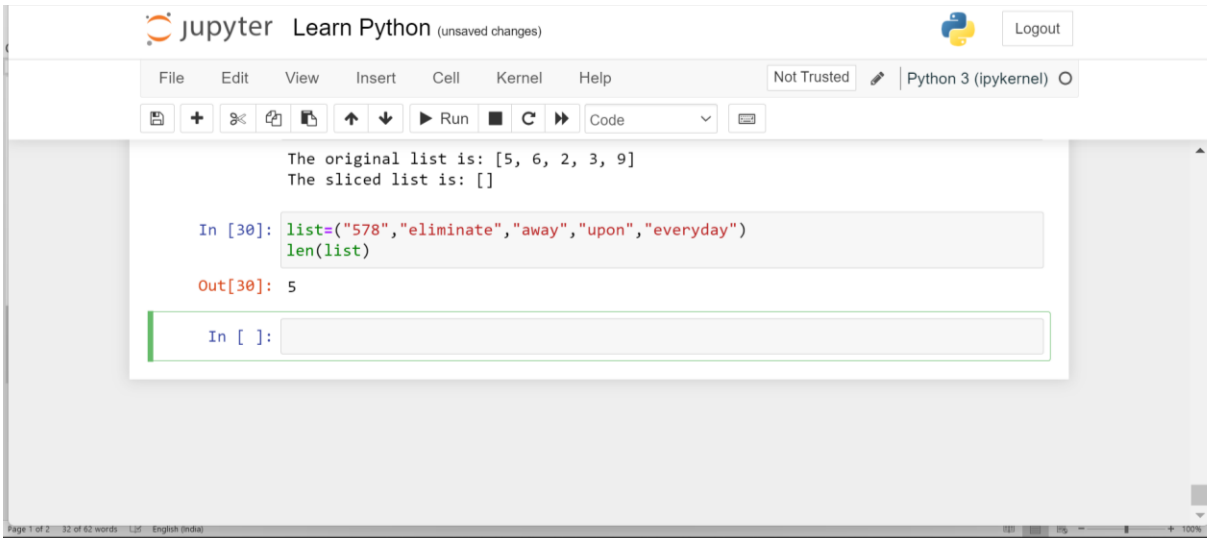


```
In [2]: list =[5,10,8,12,18]
        max =list[0]
        for i in list:
            if i>max:
                max=i
        print(max)

18

In [ ]: 
```

3. Write a Python program to count the number of strings from a given list of strings. The string length is 2 or more and the first and last characters are the same.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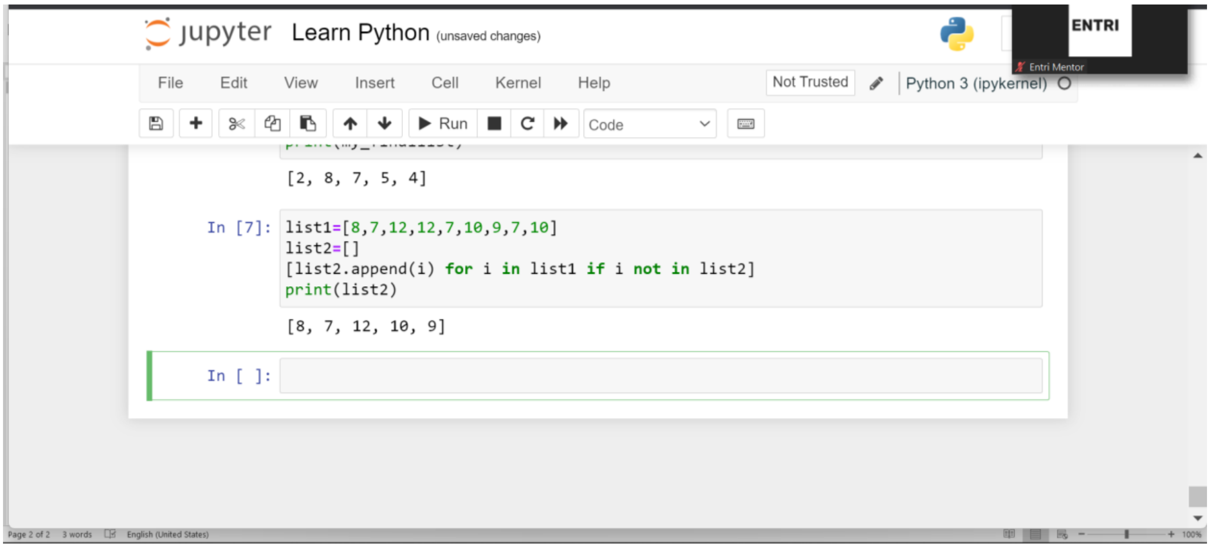
```
The original list is: [5, 6, 2, 3, 9]
The sliced list is: []

In [30]: list=("578","eliminate","away","upon","everyday")
         len(list)

Out[30]: 5

In [ ]:
```

4. Write a Python program to remove duplicates from a list.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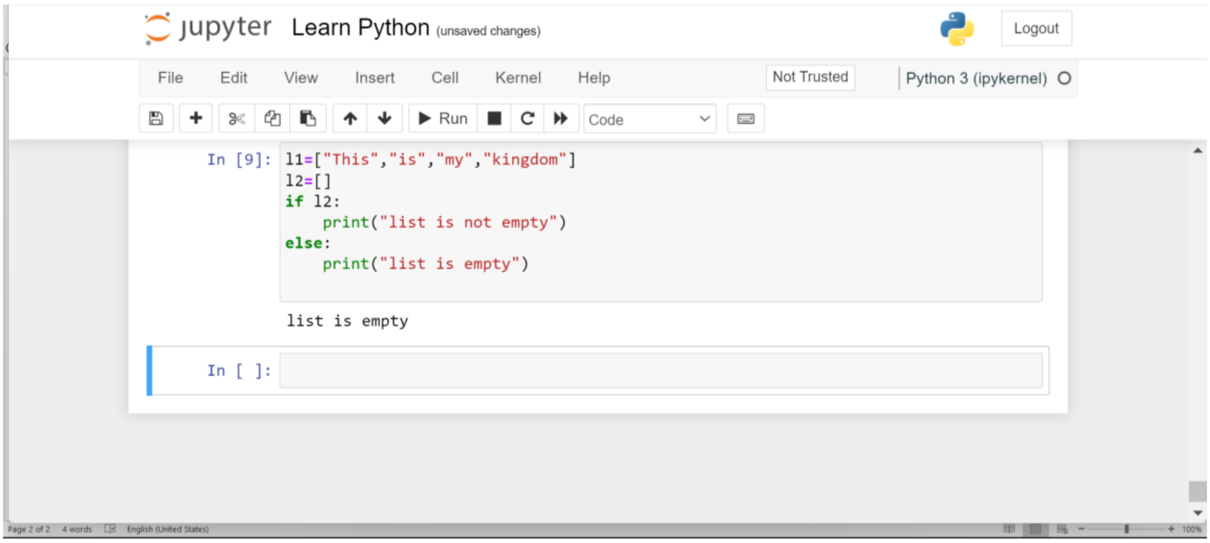
```
[2, 8, 7, 5, 4]

In [7]: list1=[8,7,12,12,7,10,9,7,10]
        list2=[]
        [list2.append(i) for i in list1 if i not in list2]
        print(list2)

[8, 7, 12, 10, 9]

In [ ]:
```

5. Write a Python program to check if a list is empty or not.



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Page 2 of 2 4 words English (United States)
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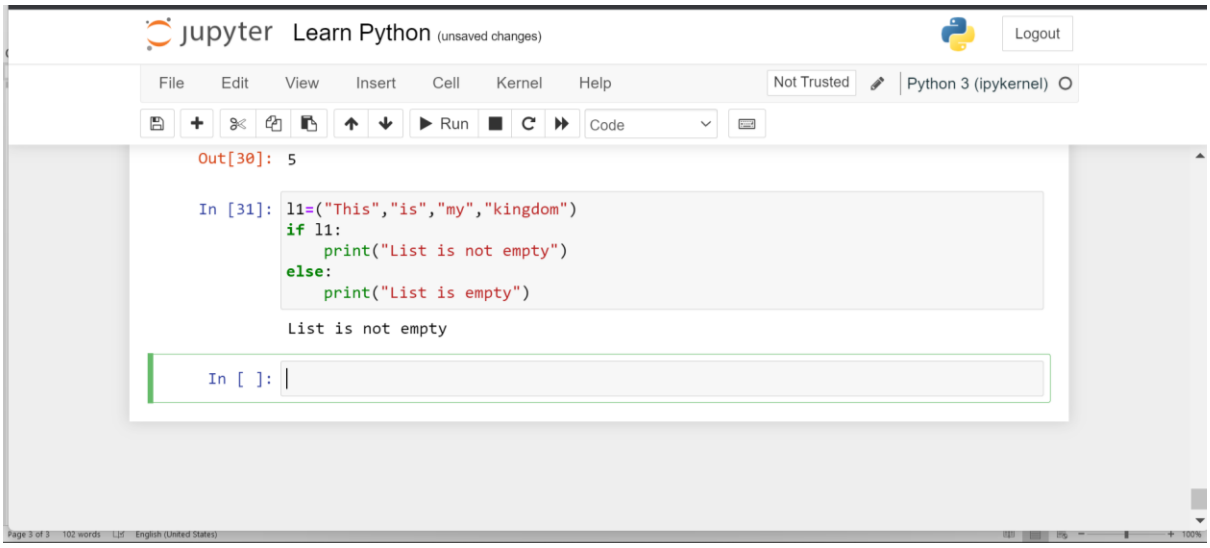
```
In [9]: l1=["This","is","my","kingdom"]
        l2=[]
        if l2:
            print("list is not empty")
        else:
            print("list is empty")

        list is empty

In [ ]:
```



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Run
Code
Page 3 of 3 102 words English (United States)
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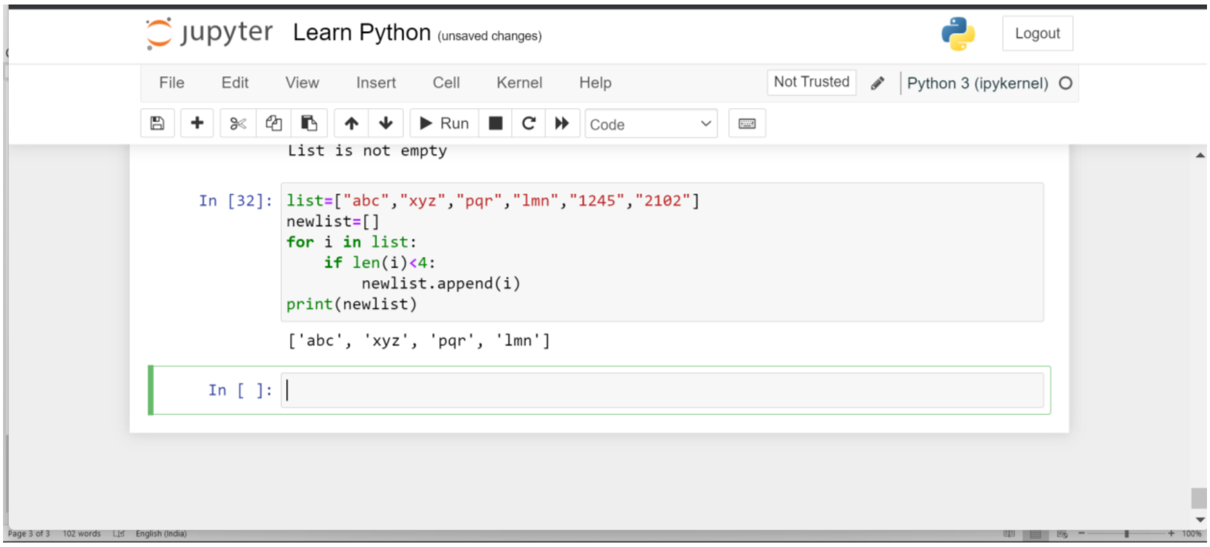
```
Out[30]: 5

In [31]: l1=("This","is","my","kingdom")
         if l1:
             print("List is not empty")
         else:
             print("List is empty")

         List is not empty

In [ ]:
```

6. Write a Python program to filter the list if the length of the character is < 4



```
List is not empty
```

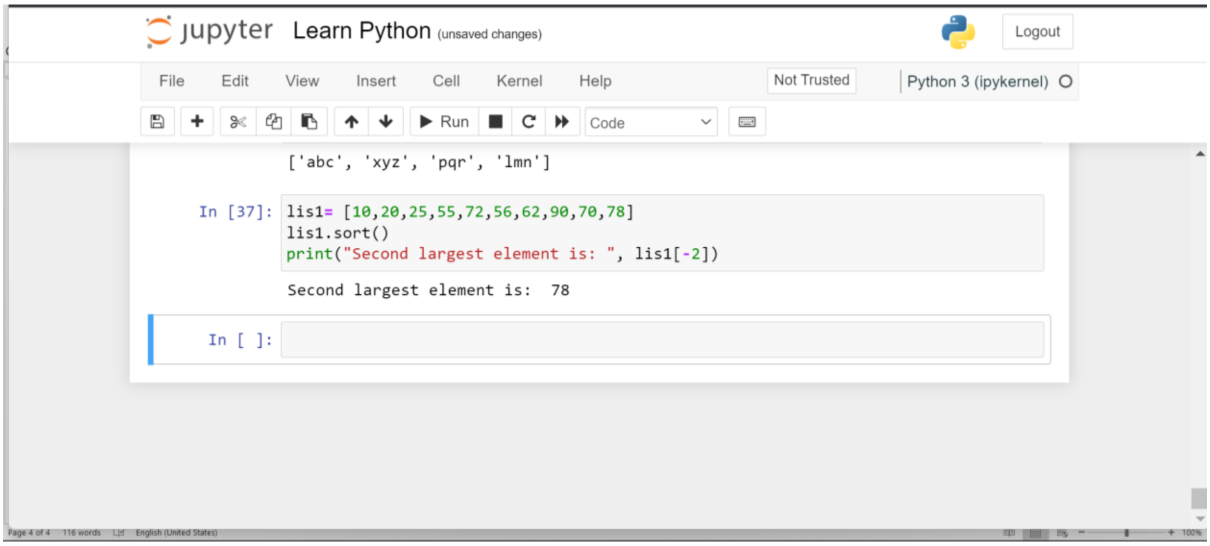
In [32]:

```python
list=["abc","xyz","pqr","lmn","1245","2102"]
newlist=[]
for i in list:
    if len(i)<4:
        newlist.append(i)
print(newlist)
```

```
['abc', 'xyz', 'pqr', 'lmn']
```

In [ ]:

7. Write a Python program to find the second largest number in a list.



```
['abc', 'xyz', 'pqr', 'lmn']
```

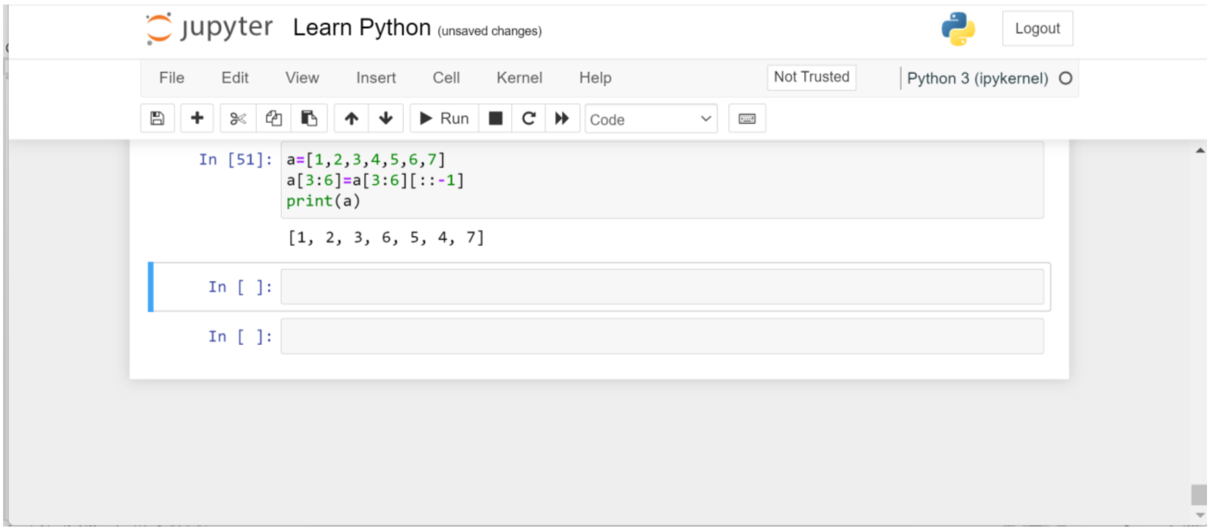
In [37]:

```python
lis1= [10,20,25,55,72,56,62,90,70,78]
lis1.sort()
print("Second largest element is: ", lis1[-2])
```

```
Second largest element is:  78
```

In [ ]:

8. Write a Python program to reverse a list at a specific location.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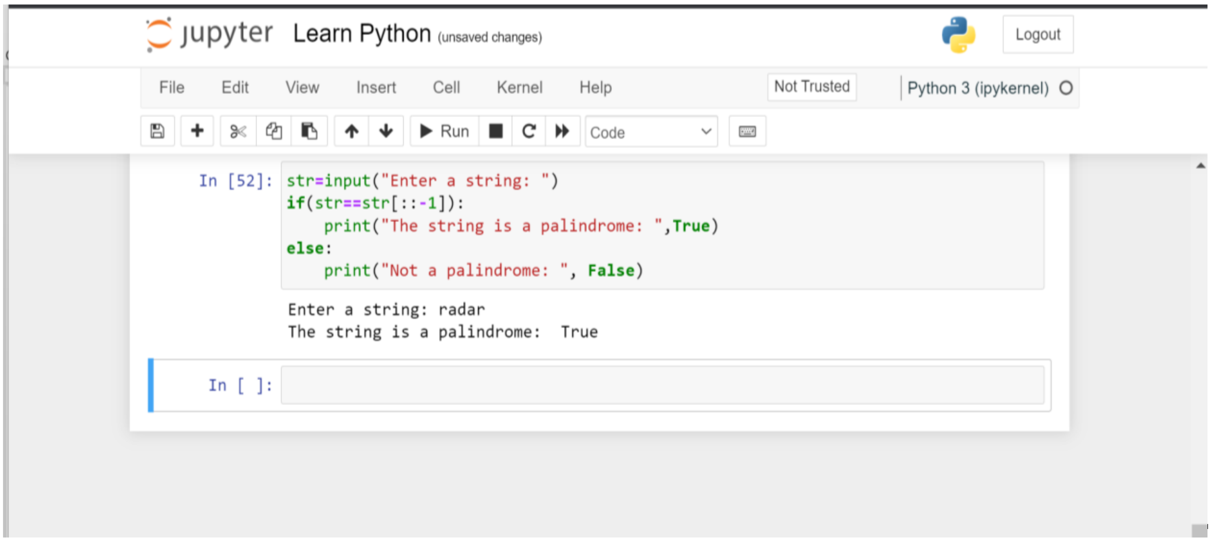
```
In [51]: a=[1,2,3,4,5,6,7]
         a[3:6]=a[3:6][::-1]
         print(a)

         [1, 2, 3, 6, 5, 4, 7]

In [ ]:

In [ ]:
```

9. Write a Python program to check if a list is a palindrome or not. Return true otherwise false.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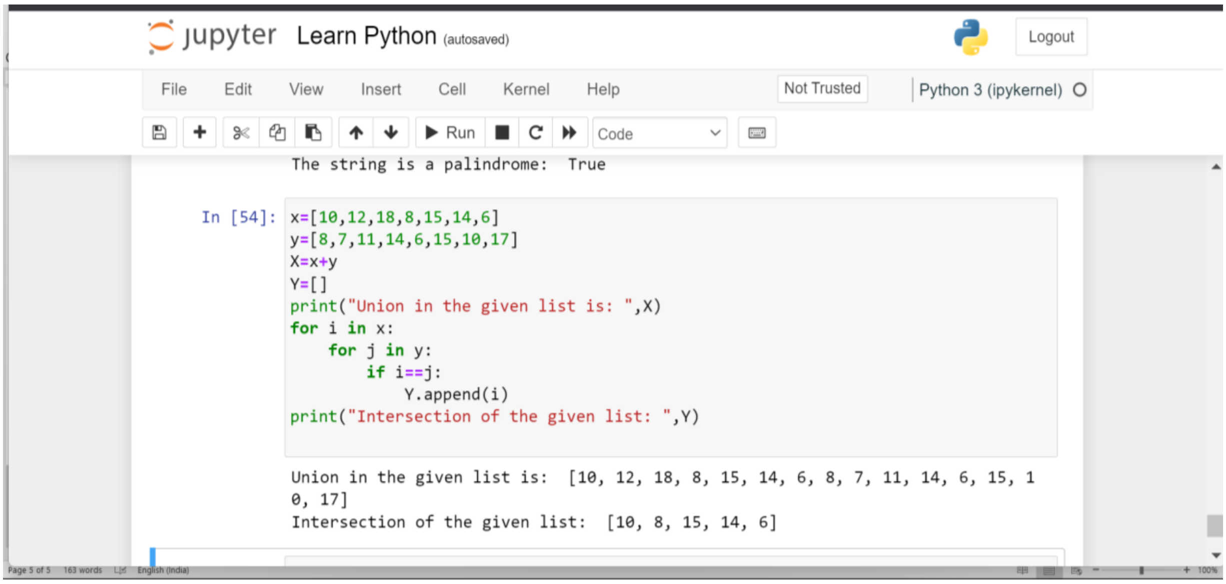
```
In [52]: str=input("Enter a string: ")
         if(str==str[::-1]):
             print("The string is a palindrome: ",True)
         else:
             print("Not a palindrome: ", False)

         Enter a string: radar
         The string is a palindrome:  True

In [ ]:
```

10. Write a Python a program to find the union and intersection of two lists.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Run
Code
Page 5 of 5 163 words English (India)
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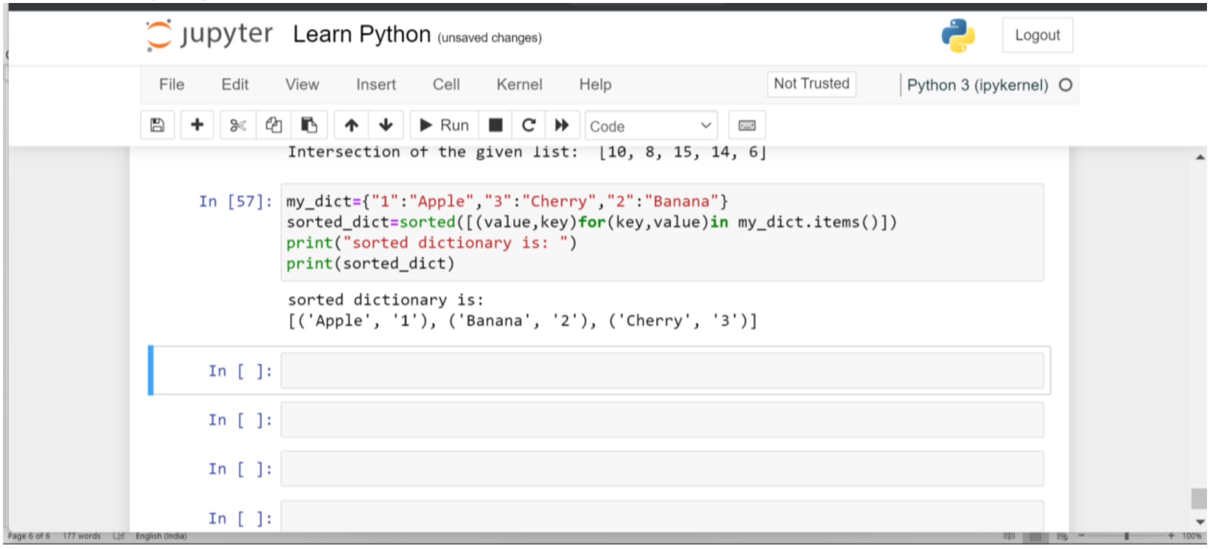
```
The string is a palindrome:  True
```

```
In [54]: x=[10,12,18,8,15,14,6]
         y=[8,7,11,14,6,15,10,17]
         X=x+y
         Y=[]
         print("Union in the given list is: ",X)
         for i in x:
             for j in y:
                 if i==j:
                     Y.append(i)
         print("Intersection of the given list: ",Y)
```

```
Union in the given list is:  [10, 12, 18, 8, 15, 14, 6, 8, 7, 11, 14, 6, 15, 1
0, 17]
Intersection of the given list:  [10, 8, 15, 14, 6]
```

11. Write a Python script to sort (ascending and descending) a dictionary by value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Run
Code
Page 6 of 6 177 words English (India)
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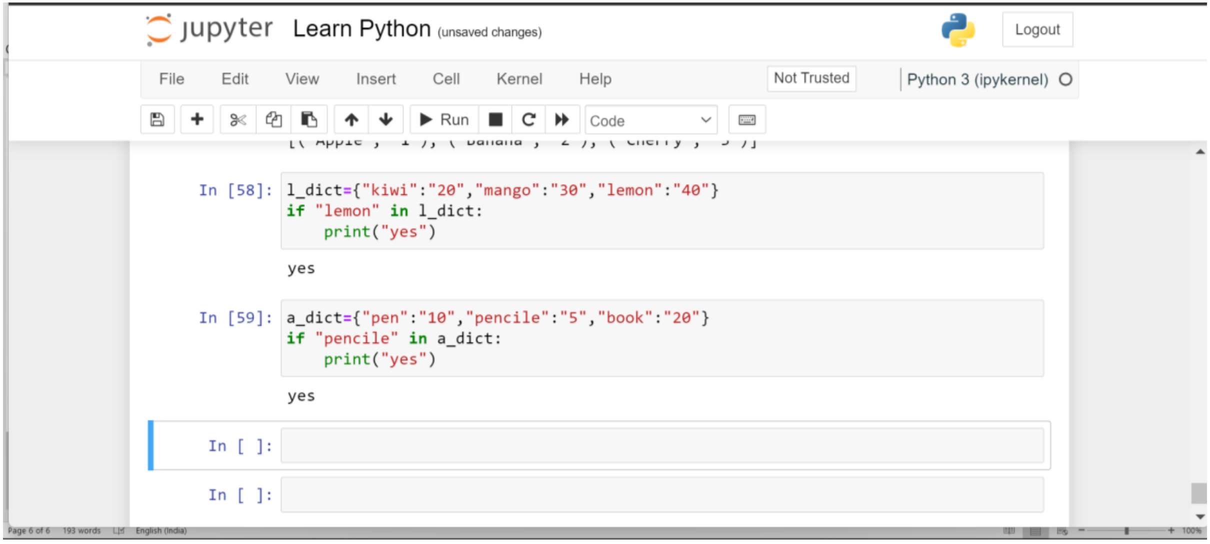
```
Intersection of the given list:  [10, 8, 15, 14, 6]
```

```
In [57]: my_dict={"1":"Apple","3":"Cherry","2":"Banana"}
         sorted_dict=sorted([(value,key)for(key,value)in my_dict.items()])
         print("sorted dictionary is: ")
         print(sorted_dict)
```

```
sorted dictionary is: 
[('Apple', '1'), ('Banana', '2'), ('Cherry', '3')]
```

```
In [ ]:

In [ ]:

In [ ]:

In [ ]:
```

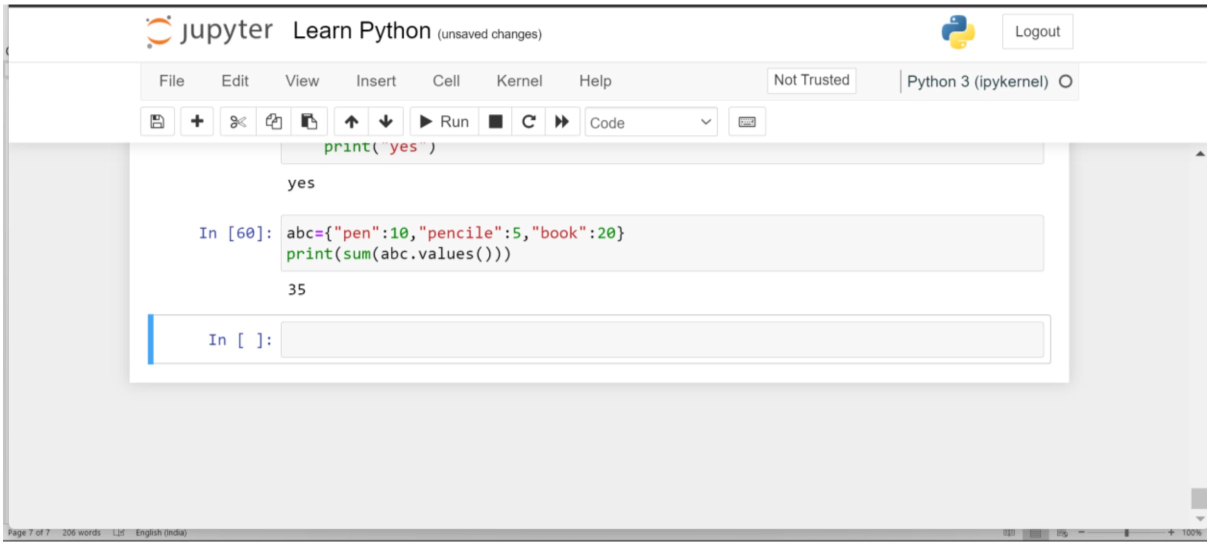
12. Write a Python script to check whether a given key already exists in a dictionary



```
[('Apple', 1), ('banana', 2), ('cherry', 3)]
```

```
In [58]: l_dict={"kiwi":"20","mango":"30","lemon":"40"}
         if "lemon" in l_dict:
             print("yes")

         yes

In [59]: a_dict={"pen":"10","pencile":"5","book":"20"}
         if "pencile" in a_dict:
             print("yes")

         yes

In [ ]:

In [ ]:
```

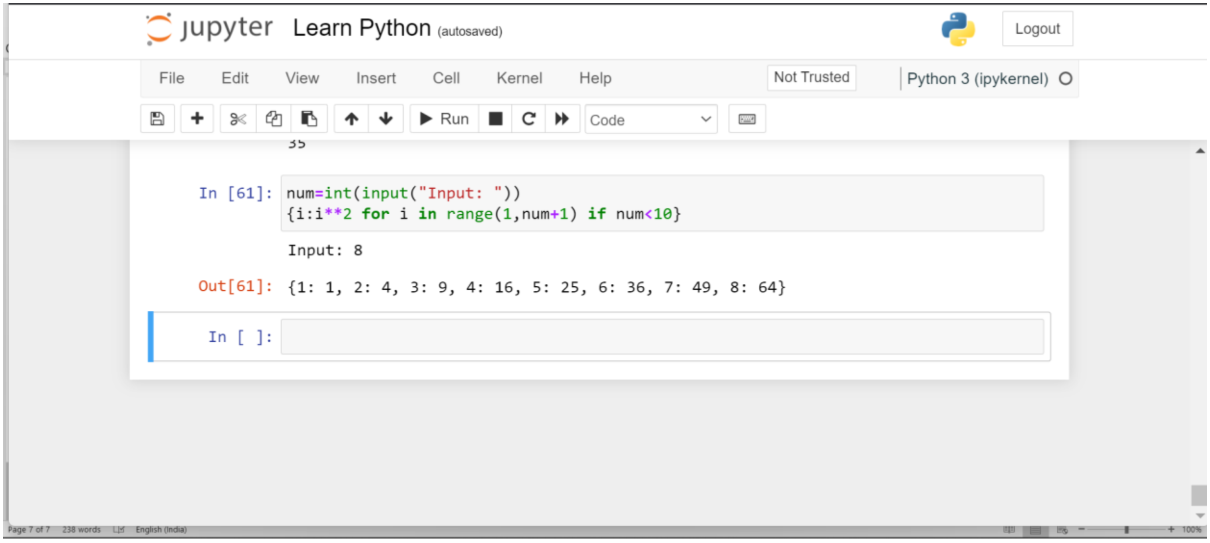
13. Write a Python program to sum all the values in a dictionary.



```
             print("yes")

         yes

In [60]: abc={"pen":10,"pencile":5,"book":20}
         print(sum(abc.values()))

         35

In [ ]:
```

14. Write a Python program to create a dictionary with a number and its corresponding square from 1 to input number. And also check if the

input number is less than 10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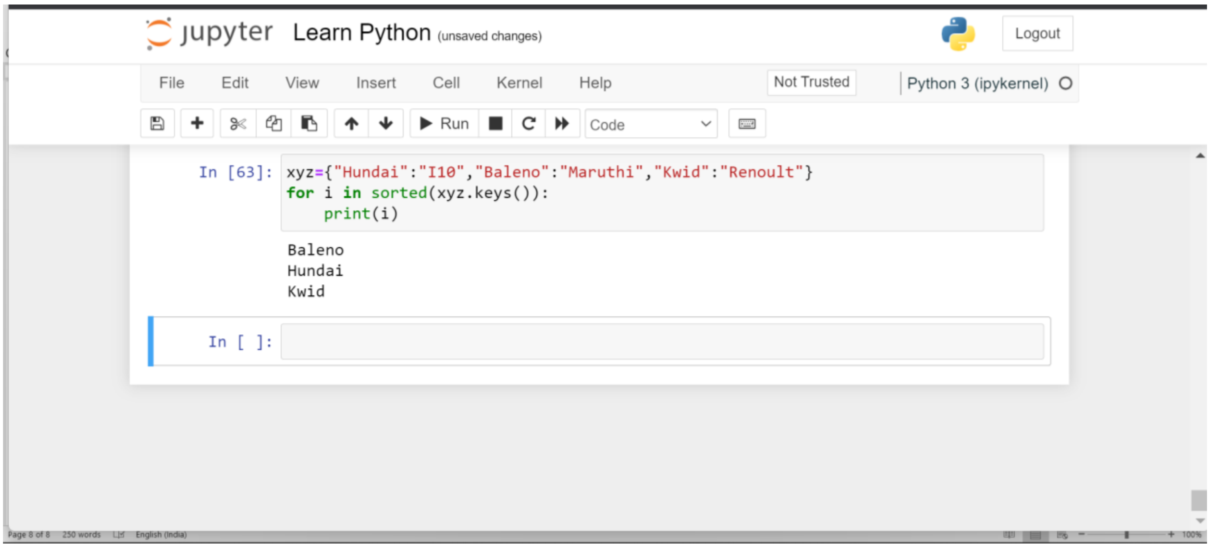
Run
Code
Page 7 of 7 238 words English (India)

```
35

In [61]: num=int(input("Input: "))
         {i:i**2 for i in range(1,num+1) if num<10}

         Input: 8

Out[61]: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64}

In [ ]:
```

15. Write a Python program to sort a given dictionary by key.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Run
Code
Page 8 of 8 250 words English (India)

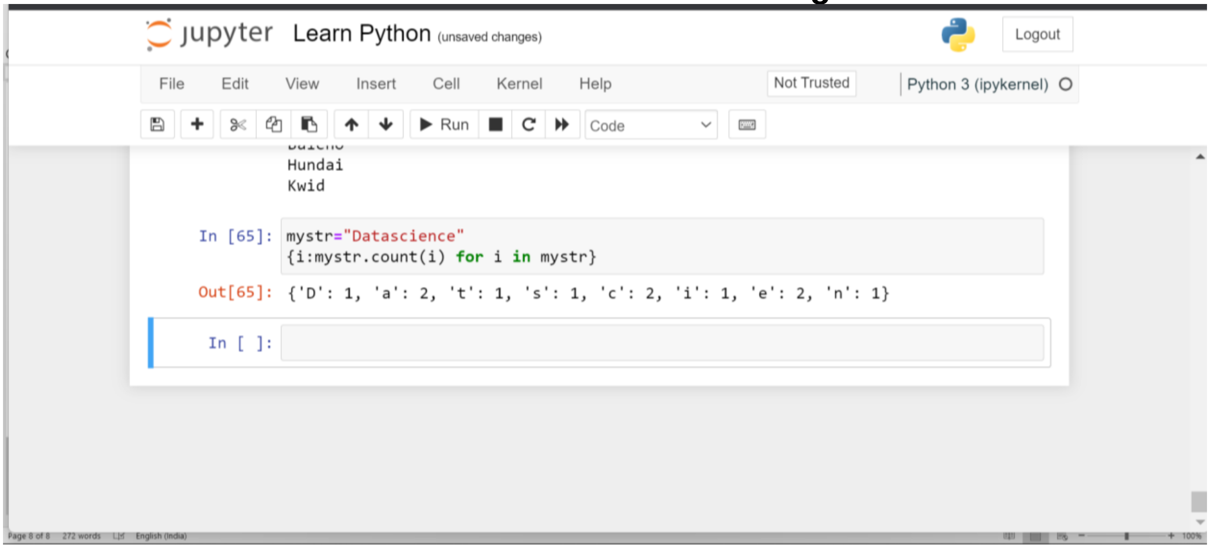
```
In [63]: xyz={"Hundai":"I10","Baleno":"Maruthi","Kwid":"Renoult"}
         for i in sorted(xyz.keys()):
             print(i)

         Baleno
         Hundai
         Kwid

In [ ]:
```

16. Write a Python program to create a dictionary from a string.

Note: Track the count of the letters from the string.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Run
Code
Page 8 of 8 272 words English (India)
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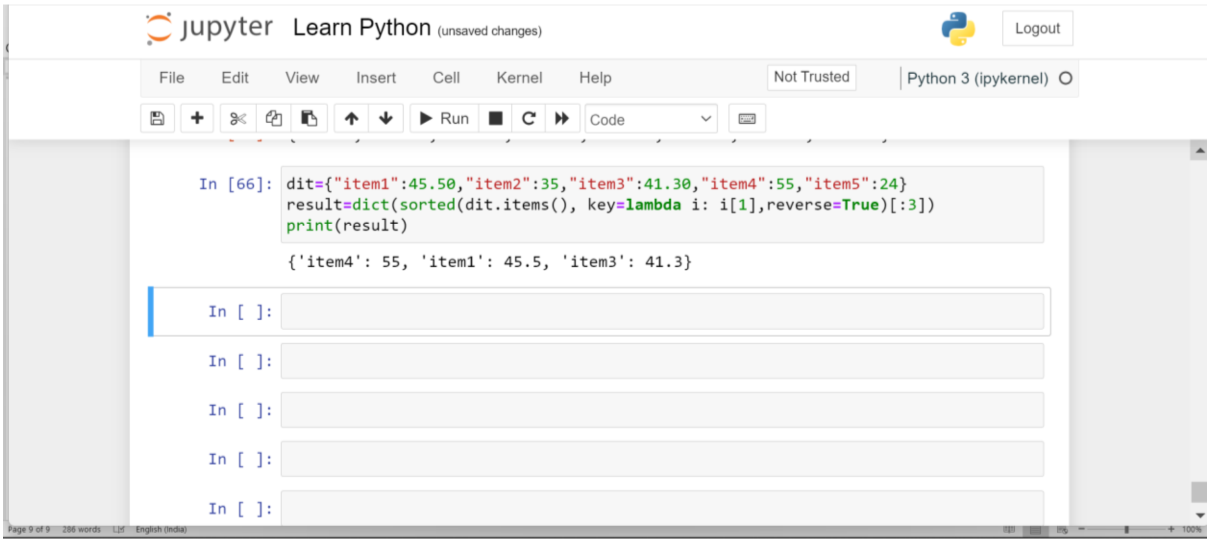
```
Hundai
Kwid
```

```
In [65]: mystr="Datascience"
         {i:mystr.count(i) for i in mystr}

Out[65]: {'D': 1, 'a': 2, 't': 1, 's': 1, 'c': 2, 'i': 1, 'e': 2, 'n': 1}

In [ ]:
```

17. Write a Python program to get the top three items in a shop.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Run
Code
Page 9 of 9 286 words English (India)
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```
In [66]: dit={"item1":45.50,"item2":35,"item3":41.30,"item4":55,"item5":24}
         result=dict(sorted(dit.items(), key=lambda i: i[1],reverse=True)[:3])
         print(result)

         {'item4': 55, 'item1': 45.5, 'item3': 41.3}

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:
```