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In [ ]:
```
#1. Write a Python program to sum all the items in a list.
```

In [47]:
```
mylist=[1,2,3,4,5,6,7,8,9]
sum([i for i in mylist])
```

Out[47]: 45

In [ ]:
```
#2 Write a Python program to get the largest number from a list.
```

In [28]:
```
mylist=[1,2,3,4,5,6,7,9,12,8]
mylist.sort()
mylist[-1]
```

Out[28]: 12

In [ ]:
```
#3 . Write a Python program to count the number of strings from a given list ofstrings.
#The string length is 2 or more and the first and last characters are thesame.
```

In [46]:
```
item=["apple","orange","mango","banana","malayalam","australia","2542"]
len([i for i in item if i[0]==i[-1]])
```

Out[46]: 3

In [48]:
```
#4. Write a Python program to remove duplicates from a list.
```

In [58]:
```
group=["apple","orange",2,10,2.3,2.3,"apple"]
a=set(group)
list(a)
```

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Out[46]: 3

In [48]:
```
#4. Write a Python program to remove duplicates from a list.
```

In [58]:
```
group=["apple","orange",2,10,2.3,2.3,"apple"]
a=set(group)
list(a)
```

Out[58]: [2, 2.3, 10, 'orange', 'apple']

In [59]:
```
#5. Write a Python program to check if a list is empty or not.
```

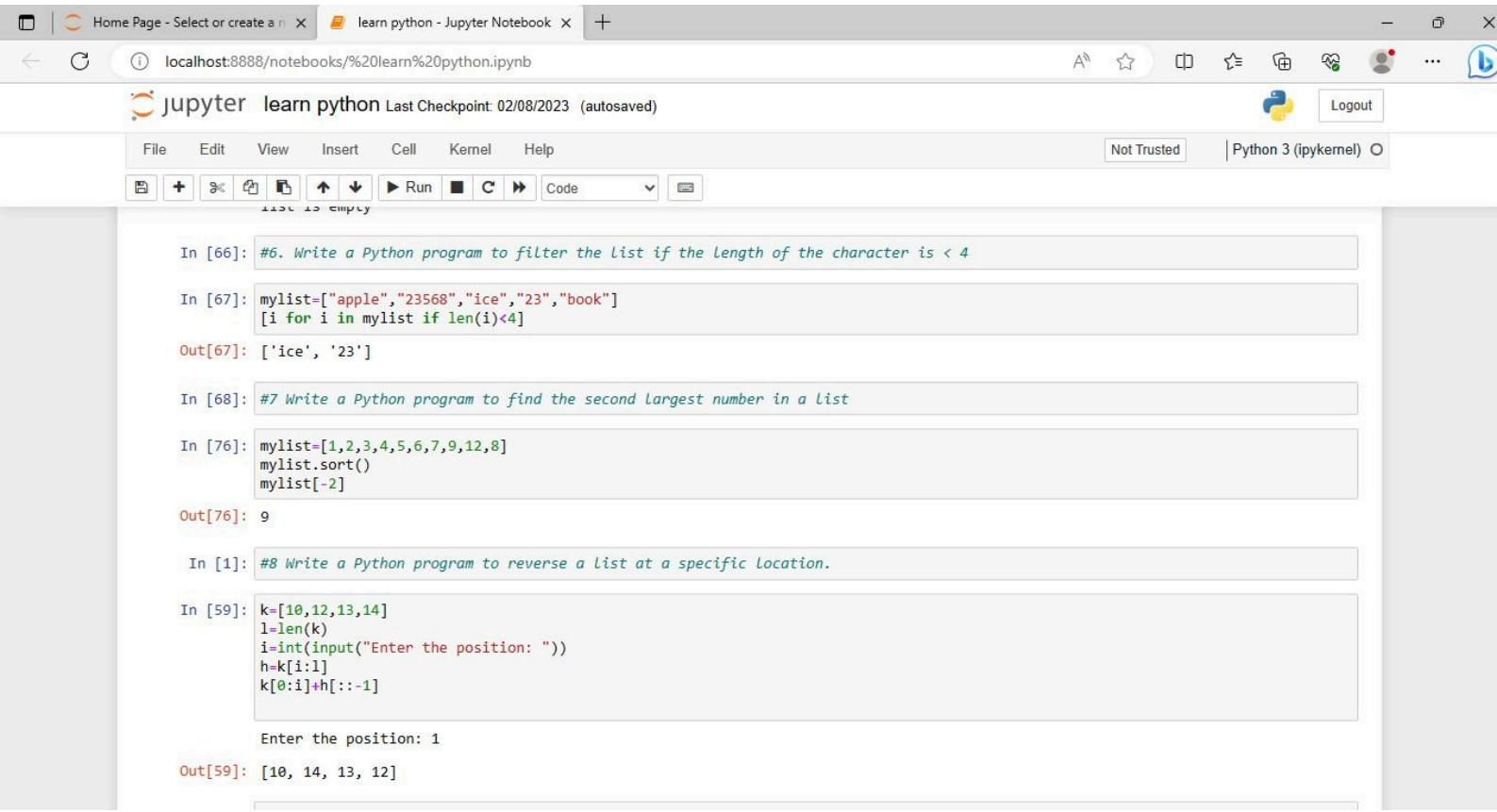
In [64]:
```
group=["apple","orange",2,10,2.3,2.3,"apple"]
if i in group:
    print("list is not empty")
else:
     print("list is empty")
```

```
list is not empty
```

In [65]:
```
item=[]
if i in item:
    print("list is not empty")
else:
     print("list is empty")
```

```
list is empty
```

In [66]:
```
#6. Write a Python program to filter the list if the length of the character is < 4
```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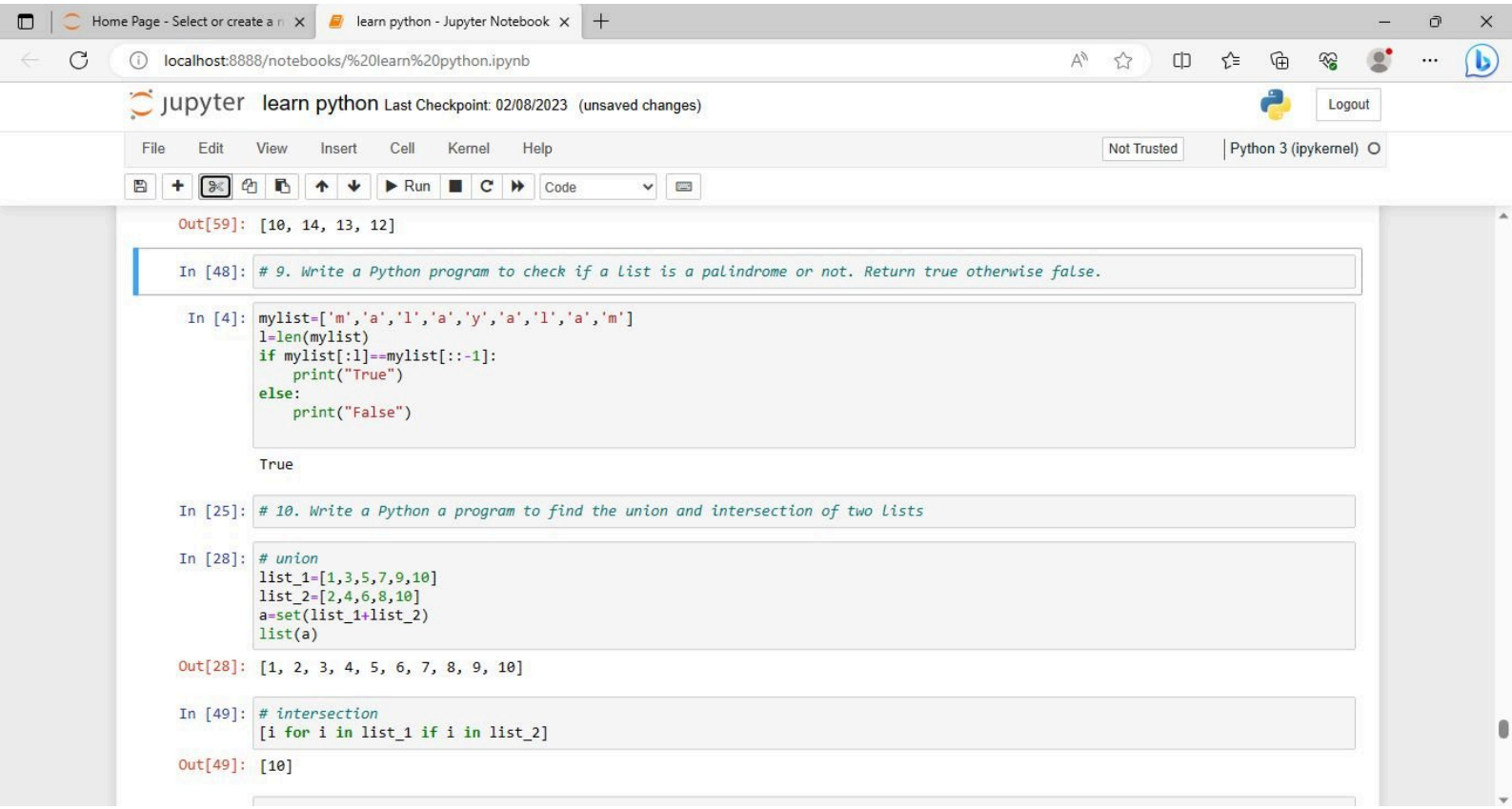
Code
In [66]: #6. Write a Python program to filter the list if the length of the character is < 4
In [67]: mylist=["apple","23568","ice","23","book"]
[i for i in mylist if len(i)<4]
Out[67]: ['ice', '23']
In [68]: #7 Write a Python program to find the second largest number in a list
In [76]: mylist=[1,2,3,4,5,6,7,9,12,8]
mylist.sort()
mylist[-2]
Out[76]: 9
In [1]: #8 Write a Python program to reverse a list at a specific location.
In [59]: k=[10,12,13,14]
l=len(k)
i=int(input("Enter the position: "))
h=k[i:l]
k[0:i]+h[::-1]
Enter the position: 1
Out[59]: [10, 14, 13, 12]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Out[59]: [10, 14, 13, 12]
In [48]: # 9. Write a Python program to check if a list is a palindrome or not. Return true otherwise false.
In [4]: mylist=['m','a','l','a','y','a','l','a','m']
l=len(mylist)
if mylist[:l]==mylist[::-1]:
print("True")
else:
print("False")
True
In [25]: # 10. Write a Python a program to find the union and intersection of two lists
In [28]: # union
list_1=[1,3,5,7,9,10]
list_2=[2,4,6,8,10]
a=set(list_1+list_2)
list(a)
Out[28]: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
In [49]: # intersection
[i for i in list_1 if i in list_2]
Out[49]: [10]

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Out[49]:
```
[10]
```

In [31]:
```
# 11.Write a Python script to sort (ascending and descending) a dictionary by value
```

In [2]:
```
mydict={"men":20,"women":35,"child":10}
d=sorted(mydict.items(),key=lambda mydict: mydict[1])
d
```

Out[2]:
```
[('child', 10), ('men', 20), ('women', 35)]
```

In [15]:
```
d[::-1]
```

Out[15]:
```
[('women', 35), ('men', 20), ('child', 10)]
```

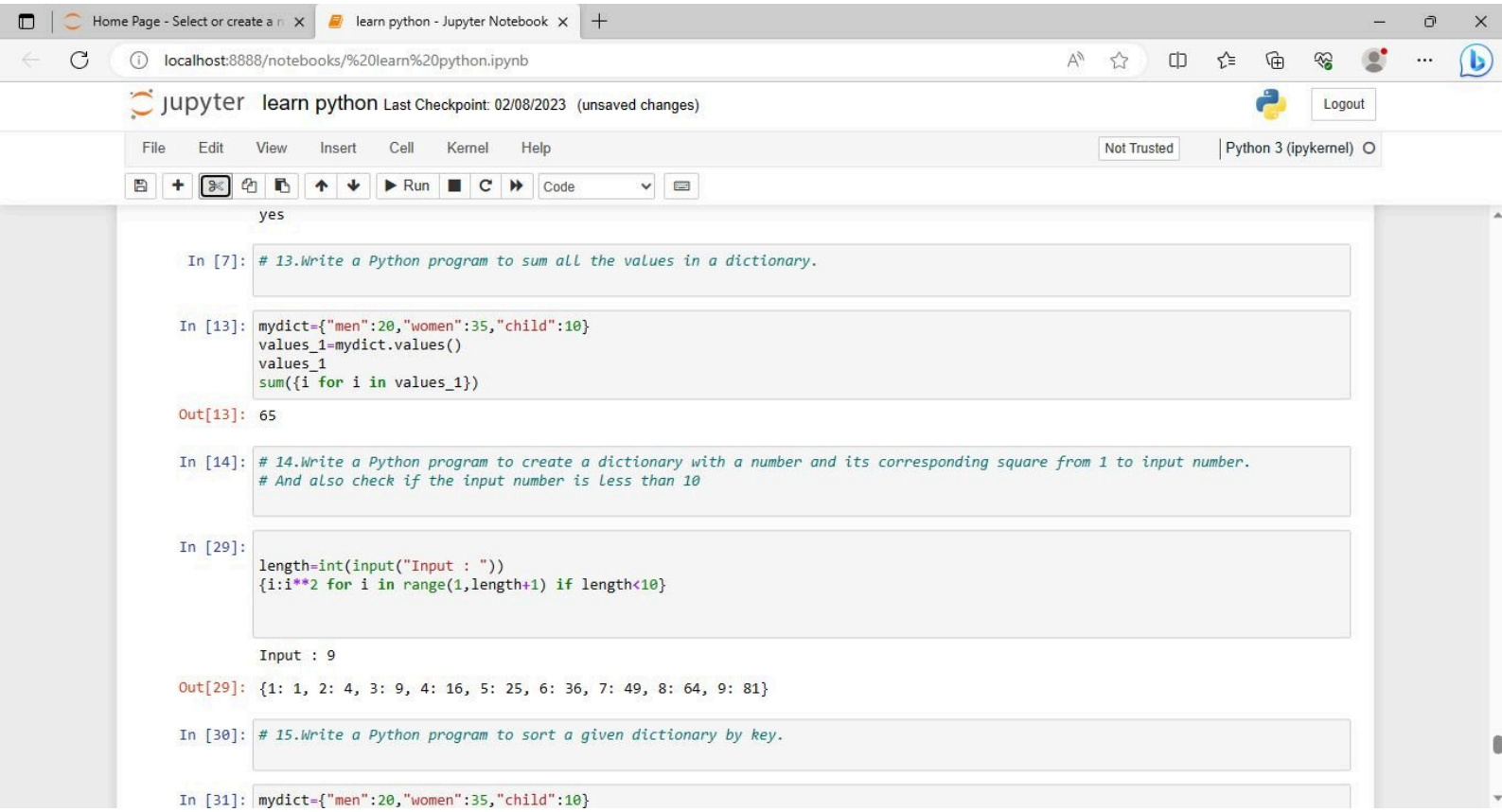
In [5]:
```
# 12. Write a Python script to check whether a given key already exists in a dictionary.
```

In [6]:
```
mydict={"men":20,"women":35,"child":10}
if "men" in mydict:
    print("yes")
```

```
yes
```

In [7]:
```
# 13.Write a Python program to sum all the values in a dictionary.
```

In [13]:
```
mydict={"men":20,"women":35,"child":10}
values_1=mydict.values()
```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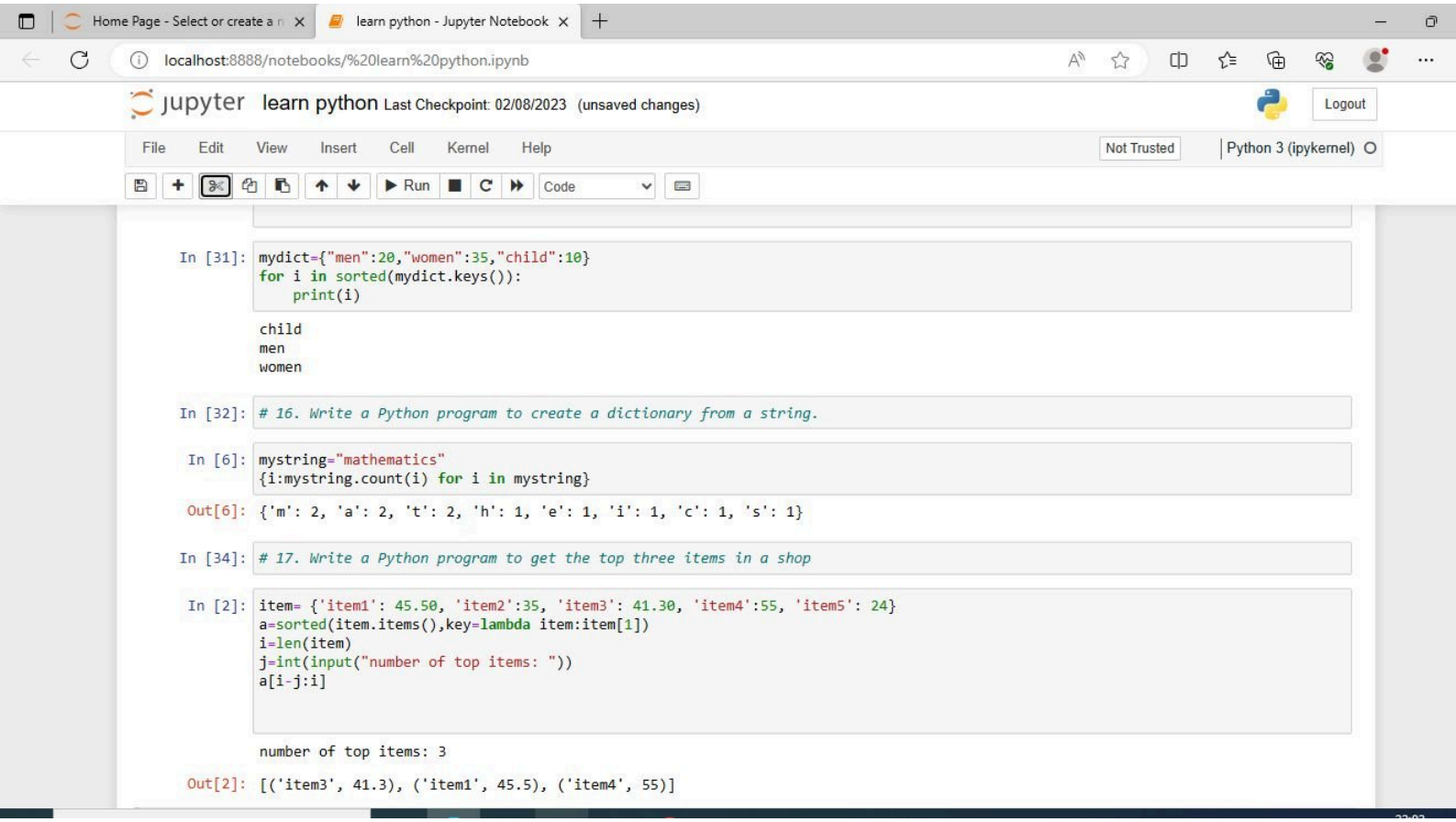
Code
yes
In [7]: # 13.Write a Python program to sum all the values in a dictionary.
In [13]: mydict={"men":20,"women":35,"child":10}
values_1=mydict.values()
values_1
sum({i for i in values_1})
Out[13]: 65
In [14]: # 14.Write a Python program to create a dictionary with a number and its corresponding square from 1 to input number.
And also check if the input number is less than 10
In [29]: length=int(input("Input : "))
{i:i**2 for i in range(1,length+1) if length<10}
Input : 9
Out[29]: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81}
In [30]: # 15.Write a Python program to sort a given dictionary by key.
In [31]: mydict={"men":20,"women":35,"child":10}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Python 3 (ipykernel)
Run
Code
In [31]:
mydict={"men":20,"women":35,"child":10}
for i in sorted(mydict.keys()):
print(i)
child
men
women
In [32]:
16. Write a Python program to create a dictionary from a string.
In [6]:
mystring="mathematics"
{i:mystring.count(i) for i in mystring}
Out[6]:
{'m': 2, 'a': 2, 't': 2, 'h': 1, 'e': 1, 'i': 1, 'c': 1, 's': 1}
In [34]:
17. Write a Python program to get the top three items in a shop
In [2]:
item= {'item1': 45.50, 'item2':35, 'item3': 41.30, 'item4':55, 'item5': 24}
a=sorted(item.items(),key=lambda item:item[1])
i=len(item)
j=int(input("number of top items: "))
a[i-j:i]
number of top items: 3
Out[2]:
[('item3', 41.3), ('item1', 45.5), ('item4', 55)]