Exercises
Exercises

Answerthequestionsorcompletethetasksoutlinedinboldbelow,usethespecificmethoddescribedifapplicable.

Whatis7tothepowerof4?

Whatis7tothepowerof4?

In[17]:
```python
print("7tothepowerof4is:",7**4)
```

7tothepowerof4is:2401

Splitthisstring:

Splitthisstring:

    s="HithereSam!"
intoalist.

intoalist.

In[2]:
```python
s="HithereSam!"l=s.split(
)print(l)
```

Giventhevariables:
['Hi','there','Sam!']

Giventhevariables:

    planet="Earth"diamete
r=12742
Use.format()toprintthefollowingstring:

Use.format()toprintthefollowingstring:ThediameterofEarthis12742kilometers.

| {planet} {diameter} |

In[3]:
```python
print("Thediameterof{planet}is{diameter}kilometers.".format(planet="Earth",diameter=12742
))
```

ThediameterofEarthis12742kilometers.

Giventhisnestedlist,useindexingtograbtheword"hello"

Giventhisnestedlist,useindexingtograbtheword"hello"

In[4]:
```python
lst=[1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
str=lst[3][1][2][0]print(str)
```

hello

Giventhisnestdictionarygrabtheword"hello".Beprepared,thiswillbeannoying/tricky

Giventhisnestdictionarygrabtheword"hello".Beprepared,thiswillbeannoying/tricky

In[5]:
```python
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}print(d['k1'][3]['tricky'][3]['target'][3])
```

hello

Whatisthemaindifferencebetweenatupleandalist?

| is | is |

Whatisthemaindifferencebetweenatupleandalist?

Createafunctionthatgrabstheemailwebsitedomainfromastringintheform:

In[]:
```python
tupleisimmutablebutlistismutable.
```

Createafunctionthatgrabstheemailwebsitedomainfromastringintheform:user
Soforexample,passing"user@domain.com"wouldreturn:domain.com
    @domain.com

| for in |

Soforexample,passing"user@domain.com"wouldreturn:domain.com
    continueif

In[6]:
```python
s=input()l=0
foriins:
    ifi=="@":l=1
        continueifl=
=1:
        print(i,end="")
```

CreateabasicfunctionthatreturnsTrueiftheword'dog'iscontainedintheinputstring.Don'tworryaboutedgecaseslikeapunctuation
beingattachedtotheworddog,butdoaccountforcapitalization.
user@domain.comdomain.

com

def	
if	returnTru
else	
return	

CreateabasicfunctionthatreturnsTrueiftheword'dog'iscontainedintheinputstring.Don'tworryaboutedgecaseslikeapunctuationbeingattachedtothe
worddog,butdoaccountforcapitalization.

False

In[7]:
```python
defconf(input1):
    if(input1.count('dog')):returnTrue
    else:
        returnFalses=in
put().lower()conf(s)
```

Dogispetanimal.

Create a function that counts the number of times the word 'dog' occurs in a string. Again ignore edge cases.

In[8]:
```python
def conf(input1):
    return input1.count('dog')
s=input().lower()
conf(s)
```

Dogispetanimal.Ilovedog   Out[8]: 2

Problem

You are driving a little too fast, and a police officer stops you. Write a function to return one of 3 possible results: "Noticket", "SmallTicket" or "BigTicket". If your speed is 60 or less, the result is "NoTicket". If speed is between 61 and 80 inclusive, the result is "Small Ticket". If speed is 81 or more, the result is "Big Ticket". Unless it is your birthday(encoded as a boolean value in the parameters of the function) – on your birthday, your speed can be 5 higher in all cases.

In[9]:
```python
def caught_speeding(speed,is_birthday):
    if is_birthday:speeding=speed-5
    else:
        speeding=speed

    if speeding>=81:
        return 'BigTicket'
    elif speeding>=61 and speeding<=80:
        return 'SmallTicket'
    else: return
        return 'NoTicket'
a=int(input())
b=input()
if(b=='1'):
    print(caught_speeding(a,True))
else:
    print(caughtspeeding(a,False))
```

51
1
NoTicket

In[10]:
```python
def caught_speeding(speed,is_birthday):
    if is_birthday:speeding=speed-5
    else:
        speeding=speed

    if speeding>=81:
        return 'BigTicket'
    elif speeding>=61 and speeding<=80:
        return 'SmallTicket'
    else: return
        return 'NoTicket'
a=int(input())
b=input()
if(b=='1'):
    print(caught_speeding(a,True))
else:
    print(caughtspeeding(a,False))
```

65
0
SmallTicket

In[11]:
```python
def caught_speeding(speed,is_birthday):
    if is_birthday:speeding=speed-5
    else:
        speeding=speed

    if speeding>=81:
        return 'BigTicket'
    elif speeding>=61 and speeding<=80:
        return 'SmallTicket'
    else: return
        return 'NoTicket'
a=int(input())
b=input()
if(b=='1'):
    print(caught_speeding(a,True))
else:
    print(caughtspeeding(a,False))
```

90
1
BigTicket

Create an employee list with basic salary values (atleast 5 values for 5 employees) and using a for loop to retrieve each employees salary and calculate total salary expenditure.

In[13]:
```python
l=[5000,7000,9000,11000,13000]
t_salary=0
for i in l:
    t_salary+=i
print("Totalsalaryexpenditure",t_salary)
```

Totalsalaryexpenditure45000

Create two dictionaries in Python: First one to contain fields as Empid, Empname, Basicpay Second dictionary to contain fields as DeptName, DeptId. Combi

In[]:
```python
d1={"Empid":1,"Empname":"AravinthS","Basicpay":30000}d2={"DeptName":"IT","DeptId":1}
d={**d1,**d2}print(d)
```

{'Empid':1,'Empname':'AravinthS','Basicpay':30000,'DeptName':'IT','DeptId':1}