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Exercises

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Answerthequestionsorcompletethetasksoutlinedinboldbelow,usethespecificmethoddescribedifapplicable.

Whatis7tothepowerof4?

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

7tothepowerof4is:2401

Splitthisstring:

Splitthisstring:

```
s="HithereSam!"
```

intoalist.

intoalist.

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

Giventhevariables:

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

Giventhevariables:

```
planet="Earth"diameter=12742
```

Use.format()toprintthefollowingstring:

Use.format()toprintthefollowingstring:ThediameterofEarthis12742kilometers.

```
{planet} {diameter}
```

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

Giventhisnestedlist,useindexingtograbtheword"hello"

Giventhisnestedlist,useindexingtograbtheword"hello"

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

Giventhisnestdictionarygrabtheword"hello".Beprepared,thiswillbeannoying/tricky

hello

Giventhisnestdictionarygrabtheword"hello".Beprepared,thiswillbeannoying/tricky

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

Whatisthemaindifferencebetweenatupleandalist?

hello

```
is is
```

Whatisthemaindifferencebetweenatupleandalist?

Createafunctionthatgrabstheemailwebsitedomainfromastringintheform:

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

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

```
@domain.com
```

```
for in
```

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

```
if
    continueif
```

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

Createabasicfunctionthatreturns True if the word 'dog' is contained in the input string. Don't worry about edge cases like a punctuation
being attached to the word dog, but do account for capitalization.

user@domain.comdomain.

com

```
def
    if returnTru
```

Createabasicfunctionthatreturns True if the word 'dog' is contained in the input string. Don't worry about edge cases like a punctuation being attached to the
word dog, but do account for capitalization.

```
else
    return
```

False

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

Dogispetanimal.

Out[7]:True

Createafunctionthatcountsthenumberoftimestheword"dog"occursinastring.Againignorecaseandedgecases.

Createafunctionthatcountsthenumberoftimestheword"dog"occursinastring.Againignorecaseandedgecases.

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

Dogispetanimal.IlovedogOut[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 "SmallTicket". If speed is 81 or more, the result is "BigTicket". 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]:
```
def caught_speeding(speed,is_birthday):

    if is_birthday:speeding=speed-5
    else:
        speeding=speed

    if speeding>=81:
        return'BigTicket'elifspeeding>=61andspeeding<=80:
    elif return'SmallTicket'
    else: return
    else return'NoTicket'a=int(in
put())b=i return
nput()if(b
=='1'):
if    print(caught_speeding(a,True))
else:
else  print(caughtspeeding(a,False))
```

51
1
NoTicket

In[10]:
```
def caught_speeding(speed,is_birthday):

    if is_birthday:speeding=speed-5
    else:
        speeding=speed

    if speeding>=81:
        return'BigTicket'elifspeeding>=61andspeeding<=80:
    elif return'SmallTicket'
    else: return
    else return'NoTicket'a=int(in
put())b=i return
nput()if(b
=='1'):
if    print(caught_speeding(a,True))
else:
else  print(caughtspeeding(a,False))
```

65
0
SmallTicket

In[11]:
```
def caught_speeding(speed,is_birthday):

    if is_birthday:speeding=speed-5
    else:
        speeding=speed

    if speeding>=81:
        return'BigTicket'elifspeeding>=61andspeeding<=80:
    elif return'SmallTicket'
    else: return
    else return'NoTicket'a=int(in
put())b=i return
nput()if(b
=='1'):
if    print(caught_speeding(a,True))
else:
else  print(caughtspeeding(a,False))
```

90
1
BigTicket

Createanemployeelistwithbasicsalaryvalues(atleast5valuesfor5employees)andusingaforloopretreiveeachemployeesalaryandcalculatetotals
alaryexpenditure.

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

Totalsalaryexpenditure45000

Createtwodictionariesin Python: First one to contain fields as Empid, Empname, Basicpay Second dictionary to contain fields as DeptName, DeptId. Combi

In[]:

```
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}
```