

In [1]:

```
7**4
```

Out[1]:

```
2401
```

In [2]:

```
planet="Earth"
diameter=12742
print("The diameter of {} is {} kilometers.".format(planet,diameter))
```

The diameter of Earth is 12742 kilometers.

In [3]:

```
s= 'Hi there sam!'
s.split()
```

Out[3]:

```
['Hi', 'there', 'sam!']
```

In [4]:

```
lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
lst[3][1][2][0]
```

Out[4]:

```
'hello'
```

In [5]:

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

Out[5]:

```
'hello'
```



```
In [2]: def domainGet(email):  
        return email.split('@')[-1]  
        domainGet('user@domain.com')
```

```
Out[2]: 'domain.com'
```

```
In [3]: def findDog(st):  
        return 'dog' in st.lower().split()  
        findDog('Is there a dog here?')
```

```
Out[3]: True
```

```
In [5]: seq = ['soup', 'dog', 'salad', 'cat', 'great']  
        list(filter(lambda word: word[0]=='s', seq))
```

```
Out[5]: ['soup', 'salad']
```

In [2]: `def caught_speeding(speed,is_birthday):`

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

    if speeding > 80:
        return 'Big Ticket'
    elif speeding > 60:
        return 'Small Ticket'
    else:
        return 'No Ticket'
```

In [3]: `caught_speeding(81,True)`

Out[3]: 'Small Ticket'

In [4]: `caught_speeding(81,False)`

Out[4]: 'Big Ticket'