

Assignment 3
Data Analytics
Project title: Retail Store Stock Inventory Analytics

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What is 7 to the power of 4?SSU

In [1]:

7 **4

Output 1

2401

Split this string:

**s = "Hi there
Sam!"into a list.**

Input

**s = 'Hi there
Sam!s.split()**

Output

['Hi', 'there', 'dad!']

Given the

variables:

planet = "Earth" diameter = 12742

Use .format() to print the following string:

The diameter of Earth is 12742

kilometers.planet = "Earth"

diameter = 12742

print("The diameter of {} is {} kilometers.".format(planet,diameter))

Output

The diameter of Earth is 12742 kilometers.

Given this nested list, use indexing to grab the word

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

In [14]:

**lst[3][1][2][0]
]**

Outpu

t

'hello'

Given this nest dictionary grab the word "hello". Be prepared, this will be annoying/trick

```
d =
{'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
In [22]:
d['k1'][3]['tricky'][3]['target'][3]
```

Output
t
'hello'

What is the main difference between a tuple and a

list?# Tuple is immutable

Create a function that grabs the email website domain from a string in the form:

user@domain.com

So for example, passing "user@domain.com" would return: domain.com

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

Output
'domain.com'

Create a basic function that returns 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.

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

Output
tTrue

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

```
def
countDog(st):
    count = 0
    for word in
        st.lower().split():
        if word
            == 'dog':
                count +=
            1
    return count
countDog("This dog runs faster than the other dog dude!")
```

Output
t2

You are driving a little too fast, and a police officer stops you. Write a function to return one of 3 possible results: "No ticket", "Small ticket", or "Big Ticket". If your speed is 60 or less, the result is "No Ticket". 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.

```
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'
caught_speeding(81,True)
```

```
Output
'Small
Ticket'
caught_speeding(81,Fals
e) 'Big Ticket'
```

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

```
def weeklyPaid(hours_worked,
    wage):
    if hours_worked > 40:
        return 40 * wage + (hours_worked - 40) * wage * 1.5
    else:
        return hours_worked * wage
hours_worked = 50
wage = 100
pay = weeklyPaid(hours_worked,
wage)
print(f"Total gross pay:
Rs.{pay:.2f} ")
```