Estimate The Crop Yield Using Data Analytics

Assignment -3

1.What is 7 to the power of 4?

In [1]:

```
print(7**4)
```

2401

2.Split this string:

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

In [4]:

```
s = "Hi there Sam!"
```

In [5]:

```
print(s.split())
```

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

3. Given the variables:

Use .format() to print the following string:

planet = "Earth"
diameter = 12742

The diameter of Earth is 12742 kilometers.

In [8]:

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

In [10]:

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

The diameter of Earth is 12742 kilometers.

4.Given this nested list, use indexing to grab the word "hello"

In [13]:

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

In [14]:

```
print(lst[3][1][2])
```

['hello']

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

In [35]:

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

In [48]:

```
print(d["k1"][3]["tricky"][3]['target'][3])
```

hello

6.What is the main difference between a tuple and a list?

List	Tuple
Dynamic	Static
Mutable	Immutable
Consumes More memory	Consumes Less memory
Time Consuming	Comparitively Faster

7.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

In [53]:

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

'domain.com'

8 .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.

In [65]:

```
def check(word):
  for i in word.split():
  if i == "dog":
  return True
  return False
check( "I prefer dog than cat")
```

Out[65]:

True

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

In [67]:

```
def wordCount(word):
  count = 0
  for i in word.split():
  if i == 'dog':
  count += 1
  print("Total Dogs"+str(count))
```

In [68]:

```
wordCount("dog dog DOG cat mouse Dog DOG dog")
```

Total Dogs 4

Problem

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.

In [69]:

```
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 [72]:

```
caught_speeding(87,False)
```

Out[72]:

'Big Ticket'

In [73]:

```
caught_speeding(65,False)
```

Out[73]:

```
'Small Ticket'
```

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

In [101]:

```
e=[["emp1",[1325,4975,8660,6037,8308]],["emp2",[5678,5847,3375,3415,6640]],["emp3",[1
806,5144,8340,1253,6667]],["emp4",[8381,7678,8599,3629,9345]],["emp5",[7066,1307,3023,6 295,2046]]]
```

In [106]:

```
total = 0
for i in range(len(e)):
  for j in e[i][1]:
  total += j
  print(str(e[i][0])+" earns "+str(total))
```

```
emp1 earns 29305
emp2 earns 54260
emp3 earns 77470
emp4 earns 115102
emp5 earns 134839
```

In [91]:

```
print(employee)
```

```
[['emp1', [1325, 4975, 8660, 6037, 8308]], ['emp2', [5678, 5847, 3375, 341 5, 6640]], ['emp3', [1806,
5144, 8340, 1253, 6667]], ['emp4', [8381, 7678, 8599, 3629, 9345]], ['emp5', [7066, 1307, 3023,
6295, 2046]]]
```

Create two dictionaries in Python:

First one to contain fields as Empid, Empname, Basicpay

Second dictionary to contain fields as DeptName, DeptId.

Combine both dictionaries.

In [81]:

```
dic1 = {"Empid": 123, "Empname": "dan", "Basicpay": 7500} dic2 =
{"DeptName": "CSE", "Deptid": 4500}
dic3 = {**dic1, **dic2}
print(dic3)
```

```
{'Empid': 123, 'Empname': 'dan', 'Basicpay': 7500, 'DeptName': 'CSE', 'Dep tid': 4500}
```