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ASSIGNMENT - I

Fertilizer recommendation system for disease prediction

Basic Python

1. Split this string

```
s = "Hi there Sam!"
x=s.split(" ")
print(x)
```

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

2. Use .format() to print the following string.

Output should be: The diameter of Earth is 12742 kilometers.

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

The diameter of Earth is 12742 kilometers.

3. In this nest dictionary grab the word "hello" d =

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

'hello'

Numpy

import numpy as np **4.1 Create an**

array of 10 zeros?

4.2 Create an array of 10 fives?

```
a=np.zeros(10)
a array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
b=np.ones(10)*5
b array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

5. Create an array of all the even integers from 20 to 35

```
S=np.arange(20,35,2) S array([20, 22, 24, 26, 28, 30,
32, 34])
```

6. Create a 3x3 matrix with values ranging from 0 to 8

```
c=np.arange(0,9).reshape(3,3) c
```

```
array([[0, 1, 2],
       [3, 4, 5], [6,
7, 8]])
```

7. Concatenate

a and b a = np.array([1, 2, 3]), b = np.array([4, 5, 6])

```
a=np.array([1,2,3]) b=np.array([4,5,6])
np.concatenate((a,b),axis=0) array([1, 2, 3, 4, 5,
6])
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
```

```
d={"name":["rose", "jasmine", "lily"], "age": [20, 19, 18]}
df=pd.DataFrame(d) df
```

```
   name age
0  rose  20
1  jasmine 19
2    lily  18
```

9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

```
P=pd.date_range(start='1-1-2023',end='10-2-2023') for val in P:
print (val)
```

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10. Create 2D list to DataFrame

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]] df = pd.DataFrame(lists) df
```

```
0      1 2
0  1 aaa 22
1  2 bbb 25
2  3 ccc 24
```