

Name	Subasri.S
Register number	720419104026
Team Size	4
Team ID	PNT2022TMID43507

## ASSIGNMENT - I

# Fertilizer recommendation system for disease prediction

## Basic Python

### 1. Split this string

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

```
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 ofEarthis 12742kilometers.
```

### 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)
```

```
2023-01-01 00:00:00
2023-01-02 00:00:00
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
2023-01-06 00:00:00
2023-01-07 00:00:00
```

2023-01-08 00:00:00  
2023-01-09 00:00:00  
2023-01-10 00:00:00  
2023-01-11 00:00:00  
2023-01-12 00:00:00  
2023-01-13 00:00:00  
2023-01-14 00:00:00  
2023-01-15 00:00:00  
2023-01-16 00:00:00  
2023-01-17 00:00:00  
2023-01-18 00:00:00  
2023-01-19 00:00:00  
2023-01-20 00:00:00  
2023-01-21 00:00:00  
2023-01-22 00:00:00  
2023-01-23 00:00:00  
2023-01-24 00:00:00  
2023-01-25 00:00:00  
2023-01-26 00:00:00  
2023-01-27 00:00:00  
2023-01-28 00:00:00  
2023-01-29 00:00:00  
2023-01-30 00:00:00  
2023-01-31 00:00:00  
2023-02-01 00:00:00  
2023-02-02 00:00:00  
2023-02-03 00:00:00  
2023-02-04 00:00:00  
2023-02-05 00:00:00  
2023-02-06 00:00:00  
2023-02-07 00:00:00

2023-02-08 00:00:00

2023-02-09 00:00:00

2023-02-10 00:00:00

2023-02-11 00:00:00

2023-02-12 00:00:00

2023-02-13 00:00:00

2023-02-14 00:00:00

2023-02-15 00:00:00

2023-02-16 00:00:00

2023-02-17 00:00:00 2023-02-18  
00:00:00

2023-02-19 00:00:00

2023-02-20

2023-02-21 00:00:00

2023-02-22 00:00:00

2023-02-23 00:00:00

2023-02-24 00:00:00

2023-02-25 00:00:00

2023-02-26 00:00:00

2023-02-27 00:00:00

2023-02-28 00:00:00

2023-03-01 00:00:00

2023-03-02 00:00:00

2023-03-03 00:00:00

2023-03-04 00:00:00

2023-03-05 00:00:00

2023-03-06 00:00:00

2023-03-07 00:00:00

2023-03-08 00:00:00

2023-03-09 00:00:00

2023-03-10 00:00:00

2023-03-11 00:00:00

2023-03-12 00:00:00

2023-03-13 00:00:00

2023-03-14 00:00:00

2023-03-15 00:00:00

2023-03-16 00:00:00

2023-03-17 00:00:00

2023-03-18 00:00:00

2023-03-19 00:00:00

2023-03-20 00:00:00

2023-03-21 00:00:00

2023-03-22 00:00:00

2023-03-23 00:00:00

2023-03-24 00:00:00  
2023-03-25 00:00:00  
2023-03-26 00:00:00  
2023-03-27 00:00:00  
2023-03-28 00:00:00  
2023-03-29 00:00:00  
2023-03-30 00:00:00  
2023-03-31 00:00:00  
2023-04-01 00:00:00  
2023-04-02 00:00:00  
2023-04-03 00:00:00  
2023-04-04 00:00:00  
2023-04-05 00:00:00  
2023-04-06 00:00:00  
2023-04-07 00:00:00  
2023-04-08 00:00:00  
2023-04-09 00:00:00  
2023-04-10 00:00:00  
2023-04-11 00:00:00  
2023-04-12 00:00:00  
2023-04-13 00:00:00  
2023-04-14 00:00:00  
2023-04-15

2023-04-16 00:00:00  
2023-04-17 00:00:00  
2023-04-18 00:00:00  
2023-04-19 00:00:00  
2023-04-20 00:00:00  
2023-04-21 00:00:00  
2023-04-22 00:00:00  
2023-04-23 00:00:00

2023-04-24 00:00:00

2023-04-25 00:00:00

2023-04-26 00:00:00

2023-04-27 00:00:00

2023-04-28 00:00:00

2023-04-29 00:00:00

2023-04-30 00:00:00

2023-05-01 00:00:00

2023-05-02 00:00:00

2023-05-03 00:00:00

2023-05-04 00:00:00

2023-05-05 00:00:00

2023-05-06 00:00:00

2023-05-07 00:00:00

2023-05-08 00:00:00

2023-05-09 00:00:00

2023-05-10 00:00:00

2023-05-11 00:00:00

2023-05-12 00:00:00

2023-05-13 00:00:00

2023-05-14 00:00:00

2023-05-15 00:00:00

2023-05-16 00:00:00

2023-05-17 00:00:00

2023-05-18 00:00:00

2023-05-19 00:00:00

2023-05-20 00:00:00

2023-05-21 00:00:00

2023-05-22 00:00:00

2023-05-23 00:00:00

2023-05-24 00:00:00

2023-05-25 00:00:00

2023-05-26 00:00:00

2023-05-27 00:00:00

2023-05-28 00:00:00

2023-05-29

2023-05-30

2023-05-31

2023-06-01

2023-06-02

2023-06-03

2023-06-04

2023-06-05

2023-06-06 2023-06-07

2023-06-08

2023-06-09

2023-06-10 00:00:00

2023-06-11 00:00:00

2023-06-12 00:00:00

2023-06-13 00:00:00

2023-06-14 00:00:00

2023-06-15 00:00:00

2023-06-16 00:00:00

2023-06-17 00:00:00

2023-06-18 00:00:00

2023-06-19 00:00:00

2023-06-20 00:00:00

2023-06-21 00:00:00

2023-06-22 00:00:00

2023-06-23 00:00:00

2023-06-24 00:00:00

2023-06-25 00:00:00

2023-06-26 00:00:00



2023-06-27 00:00:00

2023-06-28 00:00:00

2023-06-29 00:00:00

2023-06-30 00:00:00

2023-07-01 00:00:00

2023-07-02 00:00:00

2023-07-03 00:00:00

2023-07-04 00:00:00

2023-07-05 00:00:00

2023-07-06 00:00:00

2023-07-07 00:00:00

2023-07-08 00:00:00

2023-07-09 00:00:00

2023-07-10 00:00:00

2023-07-11 00:00:00

2023-07-12 00:00:00

2023-07-13 00:00:00

2023-07-14 00:00:00

2023-07-15 00:00:00

2023-07-16 00:00:00

2023-07-17 00:00:00

2023-07-18 00:00:00

2023-07-19 00:00:00

2023-07-20 00:00:00

2023-07-21

2023-07-22

2023-07-23

2023-07-24

2023-07-25

2023-07-26

2023-07-27

2023-07-28

2023-07-29

2023-07-30

2023-07-31

2023-08-01

2023-08-02 00:00:00

2023-08-03 00:00:00

2023-08-04 00:00:00

2023-08-05 00:00:00

2023-08-06 00:00:00

2023-08-07 00:00:00

2023-08-08 00:00:00

2023-08-09 00:00:00

2023-08-10 00:00:00

2023-08-11 00:00:00

2023-08-12 00:00:00

2023-08-13 00:00:00

2023-08-14 00:00:00

2023-08-15 00:00:00

2023-08-16 00:00:00

2023-08-17 00:00:00

2023-08-18 00:00:00

2023-08-19 00:00:00

2023-08-20 00:00:00

2023-08-21 00:00:00

2023-08-22 00:00:00

2023-08-23 00:00:00

2023-08-24 00:00:00

2023-08-25 00:00:00

2023-08-26 00:00:00

2023-08-27 00:00:00

2023-08-28 00:00:00

2023-08-29 00:00:00  
2023-08-30 00:00:00  
2023-08-31 00:00:00  
2023-09-01 00:00:00  
2023-09-02 00:00:00  
2023-09-03 00:00:00  
2023-09-04 00:00:00  
2023-09-05 00:00:00  
2023-09-06 00:00:00  
2023-09-07 00:00:00  
2023-09-08 00:00:00  
2023-09-09 00:00:00  
2023-09-10 00:00:00  
2023-09-11 00:00:00  
2023-09-12  
2023-09-13  
2023-09-14  
2023-09-15  
2023-09-16  
2023-09-17  
2023-09-18  
2023-09-19  
2023-09-20 2023-09-21  
2023-09-22  
2023-09-23  
2023-09-24 00:00:00  
2023-09-25 00:00:00 2023-09-26 00:00:00  
2023-09-27 00:00:00  
  
2023-09-28 00:00:00  
2023-09-29 00:00:00

2023-09-30 00:00:00

2023-10-01 00:00:00

2023-10-02 00:00:00

## 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
```