**ASSIGNMENT-1**

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!']

1. **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.

1. **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

rose 20 0 jasmine 19

1 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

1. 1 aaa 22
2. 2 bbb 25
3. 3 ccc 24