**1. Split this string**

s = "Hi there Sam!"

print(s.split())

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

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

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

Basic Python

planet = "Earth"

diameter = 12742

print("The diameter of {0} is {1} 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']}]}]}

print(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)

print(a)

[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

a=np.ones(10) \*5

print(a)

[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]

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

a=np.arange(20, 35,2)

print(a)

[20 22 24 26 28 30 32 34]

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

m=np.arange(0, 9).reshape(3, 3)

print(m)

[[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])

print(np.concatenate((a, b),axis=0))

[1 2 3 4 5 6]

Pandas

**8. Create a dataframe with 3 rows and 2 columns**

import pandas as pd

data=[["Anbu", 30], ["Kala", 25], ["prabhu", 20]]

print(pd.DataFrame(data,columns=["Name","Age"]))

Name Age

0 Anbu 30

1 Kala 25

2 prabhu 20

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

from datetime import datetime

date=pd.date\_range(start="2023-01-01", end="2023-02-10")

print(pd.Series(date))

0 2023-01-01

1 2023-01-02

2 2023-01-03

3 2023-01-04

4 2023-01-05

5 2023-01-06

6 2023-01-07

7 2023-01-08

8 2023-01-09

9 2023-01-10

10 2023-01-11

11 2023-01-12

12 2023-01-13

13 2023-01-14

14 2023-01-15

15 2023-01-16

16 2023-01-17

17 2023-01-18

18 2023-01-19

19 2023-01-20

20 2023-01-21

21 2023-01-22

22 2023-01-23

23 2023-01-24

24 2023-01-25

25 2023-01-26

26 2023-01-27

27 2023-01-28

28 2023-01-29

29 2023-01-30

30 2023-01-31

31 2023-02-01

32 2023-02-02

33 2023-02-03

34 2023-02-04

35 2023-02-05

36 2023-02-06

37 2023-02-07

38 2023-02-08

39 2023-02-09

40 2023-02-10

dtype: datetime64[ns]

**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]]

pd. DataFrame (lists, columns=["S.No", "Name", " Quantity "])

S.No Name Quantity

0 1 aaa 22

1 2 bbb 25

2 3 ccc 24