1. Split this string

s = "Hi there Sam!"

a = s.split()

print(a)

['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 {} kilometer.".format(planet,diameter))

the diameter of Earth is 12742 kilometer.

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?

array = np.zeros(10)

print(array)

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

array1 = np.ones(10)\*5

print(array1)

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

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

array2 = np.arange(20,36,2)

print(array2)

[20 22 24 26 28 30 32 34]

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

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

print(x)

[[0 1 2]

[3 4 5]

[6 7 8]]

7. Concatinate 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": ["NAH", "HAN", "jay"], "age" : [27,10,12]}

df=pd.DataFrame(d)

df

name age

0 NAH 27

1 HAN 10

2 jay 12

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

from datetime import datetime

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

[datetime.datetime(2023, 1, 1, 0, 0),

datetime.datetime(2023, 1, 2, 0, 0),

datetime.datetime(2023, 1, 3, 0, 0),

datetime.datetime(2023, 1, 4, 0, 0),

datetime.datetime(2023, 1, 5, 0, 0),

datetime.datetime(2023, 1, 6, 0, 0),

datetime.datetime(2023, 1, 7, 0, 0),

datetime.datetime(2023, 1, 8, 0, 0),

datetime.datetime(2023, 1, 9, 0, 0),

datetime.datetime(2023, 1, 10, 0, 0),

datetime.datetime(2023, 1, 11, 0, 0),

datetime.datetime(2023, 1, 12, 0, 0),

datetime.datetime(2023, 1, 13, 0, 0),

datetime.datetime(2023, 1, 14, 0, 0),

datetime.datetime(2023, 1, 15, 0, 0),

datetime.datetime(2023, 1, 16, 0, 0),

datetime.datetime(2023, 1, 17, 0, 0),

datetime.datetime(2023, 1, 18, 0, 0),

datetime.datetime(2023, 1, 19, 0, 0),

datetime.datetime(2023, 1, 20, 0, 0),

datetime.datetime(2023, 1, 21, 0, 0),

datetime.datetime(2023, 1, 22, 0, 0),

datetime.datetime(2023, 1, 23, 0, 0),

datetime.datetime(2023, 1, 24, 0, 0),

datetime.datetime(2023, 1, 25, 0, 0),

datetime.datetime(2023, 1, 26, 0, 0),

datetime.datetime(2023, 1, 27, 0, 0),

datetime.datetime(2023, 1, 28, 0, 0),

datetime.datetime(2023, 1, 29, 0, 0),

datetime.datetime(2023, 1, 30, 0, 0),

datetime.datetime(2023, 1, 31, 0, 0),

datetime.datetime(2023, 2, 1, 0, 0),

datetime.datetime(2023, 2, 2, 0, 0),

datetime.datetime(2023, 2, 3, 0, 0),

datetime.datetime(2023, 2, 4, 0, 0),

datetime.datetime(2023, 2, 5, 0, 0),

datetime.datetime(2023, 2, 6, 0, 0),

datetime.datetime(2023, 2, 7, 0, 0),

datetime.datetime(2023, 2, 8, 0, 0),

datetime.datetime(2023, 2, 9, 0, 0),

datetime.datetime(2023, 2, 10, 0, 0)]

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]]

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