Basic Python

1. Split this string

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(f'The diameter of {planet} is {diameter} kilometers.') The diameter of Earth is 12742 kilometers.

1. In this nest dictionary grab the word "hello"

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

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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

* 1. Create an array of 10 zeros?
  2. Create an array of 10 fives? arr=np.zeros(10)

print(arr)

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

arr=np.ones(10)\*5 print(arr)

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

1. Create an array of all the even integers from 20 to 35 import numpy as np

array=np.arange(20,36,2) print(array)

[20 22 24 26 28 30 32 34]

1. Create a 3x3 matrix with values ranging from 0 to 8 arr=np.arange(0,9).reshape(3,3)

print(arr) [[0 1 2]

[3 4 5]

[6 7 8]]

1. Concatenate a and b

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

a=np.array([1,2,3])

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

Pandas

1. Create a dataframe with 3 rows and 2 columns import pandas as pd

import pandas as pd df = pd.DataFrame() print(df)

Empty DataFrame Columns: []

Index: []

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

import pandas as pd

test\_date = datetime.datetime.strptime("01-01-2023", "%d-%m-%Y") k=41

date\_generated = pd.date\_range(test\_date, periods=k) print(date\_generated.strftime("%d-%m-%Y"))

Index(['01-01-2023', '02-01-2023', '03-01-2023', '04-01-2023', '05-01-2023',

'06-01-2023', '07-01-2023', '08-01-2023', '09-01-2023', '10-01-2023',

'11-01-2023', '12-01-2023', '13-01-2023', '14-01-2023', '15-01-2023',

'16-01-2023', '17-01-2023', '18-01-2023', '19-01-2023', '20-01-2023',

'21-01-2023', '22-01-2023', '23-01-2023', '24-01-2023', '25-01-2023',

'26-01-2023', '27-01-2023', '28-01-2023', '29-01-2023', '30-01-2023',

'31-01-2023', '01-02-2023', '02-02-2023', '03-02-2023', '04-02-2023',

'05-02-2023', '06-02-2023', '07-02-2023', '08-02-2023', '09-02-2023',

'10-02-2023'],

dtype='object')

1. Create 2D list to DataFrame

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

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[2, 'bbb', 25],

[3, 'ccc', 24]]