### Date : 16.09.2022

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# Basic Python - Assignment 1

## Split this string

s = "Hi there Sam!"

s.split()

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

## 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 of Earth is 12742 kilometers.

## 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

## Create an array of 10 zeros?

* 1. Create an array of 10 fives?

array=np.zeros(10) array

array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])

array=np.ones(10)\*5 array

array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])

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

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

array([20, 22, 24, 26, 28, 30, 32, 34])

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

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

|  |  |  |
| --- | --- | --- |
| array([[0, | 1, | 2], |
| [3, | 4, | 5], |
| [6, | 7, | 8]]) |

## 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])

arr=np.concatenate((a,b)) arr

array([1, 2, 3, 4, 5, 6])

# Pandas

8. Create a dataframe with 3 rows and 2 columns

import pandas as pd

Datainput=[['Keerthi',95],['Rithika',96],['Pavithra',98]] Output=pd.DataFrame(Datainput,columns=['Name','Marks']) Output

|  |  |
| --- | --- |
| **Name** | **Marks** |
| **0** Keerthi | 95 |
| **1** Rithika | 96 |
| **2** Pavithra | 98 |

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

d=pd.date\_range(start='01-01-2023',end='02-10-2023') s=pd.Series(d)

s

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]

## 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]]

d=pd.DataFrame(lists) d

**0 1 2**

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