# Basic Python

## 1. Split this string

s = "Hi there Sam!"

w=s.split(" ")

print(w)

## 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 {} kilometers.' .format(planet,diameter));

## 3. In this nest dictionary grab the word "hello"

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

w=d['k1'][3]['tricky'][3]['target'][3]

print(w)

# Numpy

import numpy as np

## 4.1 Create an array of 10 zeros?

## 4.2 Create an array of 10 fives?

arr=np.zeros(10)

print(arr)

arr=np.ones(10)\*5

print(arr)

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

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

print(arr)

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

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

print(mat)

## 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])

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

print(carr)

# Pandas

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

import pandas as pd

data=[['kaviya',13],['keerthana',14],['ranjith',34]]

df=pd.DataFrame(data,columns=['Name','Reg.No'])

df

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

df = pd.DataFrame()

df['Date'] = pd.date\_range(start="1/1/2023",end="2/10/2023")

df.head(len(df["Date"]))

## 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, columns=['Sno','Name','Age']);

print(df)