CRUDE OIL PRICE DETECTION GOBIKRISHNAN M

ASSIGNMENT 1: 737819ECL225

Basic Python

1. Split this string

CODE:

s = "Hi there Sam!"

x = s.split()

print(x)

ANS:

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

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

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

CODE:

planet = "Earth"

diameter = 12742

print( 'The diameter of {} is {} kilometers.' .format(planet,diameter));

ANS:

The diameter of Earth is 12742 kilometers.

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

CODE:

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

print(d['k1'][3]["tricky"][3]['target'][3])

ANS:

Hello

NUMPY

* 1. Create an array of 10 zeros?

CODE:

array=np.zeros(10)

print("An array of 10 zeros:")

print(array)

ANS:

An array of 10 zeros:

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

4.2 Create an array of 10 fives?

CODE:

array=np.ones(10)

print("An array of 10 ones:")

print(array)

ANS:

An array of 10 ones:

[1. 1. 1. 1. 1. 1. 1. 1. 1. 1.]

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

CODE:

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

print("Array of all the even integers from 20 to 35")

print(array)

ANS:

Array of all the even integers from 20 to 35

[20 22 24 26 28 30 32 34]

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

CODE:

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

ANS:

array([[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])

CODE:

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

b = np.array([4, 5, 6])

ab = np.array((a,b))

print (ab)

ANS:

[[1 2 3]

[4 5 6]]

PANDAS

1. Create a dataframe with 3 rows and 2 columns

CODE:

import pandas as pd

data = [10,20,30]

df = pd.DataFrame(data, columns=['Numbers'])

print(df)

ANS:

Numbers

0 10

1 20

2 30

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

CODE:

import pandas as pd

from datetime import datetime

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

ANS:

DatetimeIndex(['2023-01-01', '2023-01-02', '2023-01-03', '2023-01-04',

'2023-01-05', '2023-01-06', '2023-01-07', '2023-01-08',

'2023-01-09', '2023-01-10', '2023-01-11', '2023-01-12',

'2023-01-13', '2023-01-14', '2023-01-15', '2023-01-16',

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

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

'2023-01-25', '2023-01-26', '2023-01-27', '2023-01-28',

'2023-01-29', '2023-01-30', '2023-01-31', '2023-02-01',

'2023-02-02', '2023-02-03', '2023-02-04', '2023-02-05',

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

'2023-02-10'],

dtype='datetime64[ns]', freq='D')

1. Create 2D list to DataFrame

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

CODE:

import pandas as pd

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

df = pd.DataFrame(lists, columns =['num', 'name','no'])

print(df )

ANS:

num name no

0 1 aaa 22

1 2 bbb 25

2 3 ccc 24