**1. Split this string**

In [ ]:

s **=** "Hi there Sam!"

In [ ]:

n**=**s**.**split()

print(n)

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

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

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

In [ ]:

planet **=** "Earth"

diameter **=** 12742

In [ ]:

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

The diameter of Earth is 12742 kilometers.

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

In [ ]:

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

In [ ]:

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

'hello'

# Numpy

In [ ]:

**import** numpy **as** np

## 4.1 Create an array of 10 zeros?

## 4.2 Create an array of 10 fives?

In [ ]:

array**=**np**.**zeros(10)

print("An array of 10 zeros")

print(array)

An array of 10 zeros

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

In [ ]:

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

print("An array of 10 fives")

print(array)

An array of 10 fives

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

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

a**=**np**.**arange(20,35,2)

print(a)

[20 22 24 26 28 30 32 34]

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

In [ ]:

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

print(x)

[[0 1 2]

[3 4 5]

[6 7 8]]

## 7. Concatenate a and b

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

In [ ]:

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

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

np**.**concatenate((a, b,), axis**=**0, out**=None**)

Out[ ]:

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

# Pandas

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

**import** pandas **as** pd

In [ ]:

data**=**[ [ 'Hari' , 55], ['vamsi' , 20], [ 'sai' , 30] ]

a**=**pd **.** DataFrame (data, columns**=**[ 'Name' , 'Age' ])

print(a)

Name Age

0 Hari 55

1 vamsi 20

2 sai 30

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

In [ ]:

**from** datetime **import** date, timedelta

sdate **=** date(2023,1,1)

edate **=** date(2023,2,11)

[sdate**+**timedelta(days**=**x) **for** x **in** range((edate**-**sdate)**.**days)]

Out[ ]:

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

datetime.date(2023, 1, 2),

datetime.date(2023, 1, 3),

datetime.date(2023, 1, 4),

datetime.date(2023, 1, 5),

datetime.date(2023, 1, 6),

datetime.date(2023, 1, 7),

datetime.date(2023, 1, 8),

datetime.date(2023, 1, 9),

datetime.date(2023, 1, 10),

datetime.date(2023, 1, 11),

datetime.date(2023, 1, 12),

datetime.date(2023, 1, 13),

datetime.date(2023, 1, 14),

datetime.date(2023, 1, 15),

datetime.date(2023, 1, 16),

datetime.date(2023, 1, 17),

datetime.date(2023, 1, 18),

datetime.date(2023, 1, 19),

datetime.date(2023, 1, 20),

datetime.date(2023, 1, 21),

datetime.date(2023, 1, 22),

datetime.date(2023, 1, 23),

datetime.date(2023, 1, 24),

datetime.date(2023, 1, 25),

datetime.date(2023, 1, 26),

datetime.date(2023, 1, 27),

datetime.date(2023, 1, 28),

datetime.date(2023, 1, 29),

datetime.date(2023, 1, 30),

datetime.date(2023, 1, 31),

datetime.date(2023, 2, 1),

datetime.date(2023, 2, 2),

datetime.date(2023, 2, 3),

datetime.date(2023, 2, 4),

datetime.date(2023, 2, 5),

datetime.date(2023, 2, 6),

datetime.date(2023, 2, 7),

datetime.date(2023, 2, 8),

datetime.date(2023, 2, 9),

datetime.date(2023, 2, 10)]

## 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]]

In [ ]:

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

df**=**pd**.**DataFrame(lists, columns**=**[ 'Number' , 'FName' , 'Age' ])

print (df)

Number FName Age

0 1 aaa 22

1 2 bbb 25

2 3 ccc 24