**Basic Python**

In [1]:

print("hi")

hi

**1. Split this string**

In [2]:

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

In [3]:

s**.**split('e')

Out[3]:

['Hi th', 'r', ' 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 [4]:

planet**=** "The diameter of Earth"

diameter**=** " is 12742 kilometers."

print(planet **+** diameter**.**format())

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 [5]:

print("hello")

hello

**Numpy**

In [3]:

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

**4.1 Create an array of 10 zeros?**

**4.2 Create an array of 10 fives?**

In [4]:

np**.**zeros(10)

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

np**.**zeros(10)

Out[4]:

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

In [5]:

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

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

print(SherlinAlone)

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

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

In [6]:

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

print(array)

[20 22 24 26 28 30 32 34]

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

In [7]:

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

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 [8]:

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

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

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

Out[8]:

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

**Pandas**

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

In [11]:

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

In [12]:

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

df **=** {'col\_1':[0, 1, 2, 3],

'col\_2':[4, 5, 6, 7]}

df **=** pd**.**DataFrame(df)

print(df)

col\_1 col\_2

0 0 4

1 1 5

2 2 6

3 3 7

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

In [13]:

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

dRan1 **=** pd**.**date\_range(start **=** '1-1-2023',

end **=**'10-01-2023', freq **=**'M')

print(dRan1)

DatetimeIndex(['2023-01-31', '2023-02-28', '2023-03-31', '2023-04-30',

'2023-05-31', '2023-06-30', '2023-07-31', '2023-08-31',

'2023-09-30'],

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

**10. Create 2D list to DataFrame**

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

In [14]:

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

In [15]:

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

arr**=**np**.**arraylists **=** [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]

df**=**pd**.**DataFrame(arr)

print(df)

0 1 2

0 1 aaa 22

1 2 bbb 25

2 3 ccc 24