BASIC PYTHON

1. Split this string

In [ ]:

s = "Hi there Sam!"

In [ ]:

italicized text## 2. Use .format() to print the following string.

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

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

In [ ]:

planet = "Earth"

diameter = 12742

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

In [ ]:

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

Out[]:

'hello'

Numpy

In [ ]:

import numpy **as** np

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
np.zeros([10])
```

Out[]:

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

In []:

```
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

Out[]:

```
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

In [ ]:

```
array=np.arange(20,35,2)
print("Array of all the even integers from 20 to 35:",array)
```

Out[]:

```
Array of all the even integers from 20 to 35: [20 22 24 26 28 30 32 34]
```

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

In [ ]:

```
a = np.arange(9).reshape(3,3)
print (a)
```

```
[[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=None)
```

Out[]:

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

Pandas

In [ ]:

```
import pandas as pd
```

8. Create a data frame with 3 rows and 2 columns

```
a=np.random.randint(10,size=(3,2))
df=pd.DataFrame(a)
print(df)
```

```
   0  1
0  3  7
1  6  9
2  6  5
```

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

```
d = pd.date_range("1/1/2023","2/10/2023")
print(d)
```

```
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')
```

10. Create 2D list to DataFrame

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

In [21]:

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df = pd.DataFrame(lists, columns = ['s.no' , 'name' , 'number'])
print(df)
```

```
   s.no name  number
0     1  aaa      22
1     2  bbb      25
2     3  ccc      24
```