# Basic Python 1. Split this string In [17]: s = "Hi there Sam!" In [19]: s="Hi there Sam!" s="s: split() print(s); ['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 [27]: planet="Earth"

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

The diameter of Earth is 12742 Kilometers.

print("The diameter of {} is {} Kilometers.".format(planet, diameter))

### Numpy

diameter=12742

```
In []: import numpy as np
```

### 4.1 Create an array of 10 zeros?

### 4.2 Create an array of 10 fives?

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

```
In [9]: import numpy as np
array=np.arange(20,35,2)
print("Array of all the even integers from 20 to 35")
print(array)

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 [11]: import numpy as np
    a=np.arange(0,9).reshape(3,3)
    print(a)

[[0 1 2]
    [3 4 5]
    [6 7 8]]
```

## 7. Concatinate a and b

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

```
In [8]: import numpy as np
    a=np.array([1,2,3])
    b=np.array([4,5,6])
    array=np.concatenate((a,b),axis=0)
    print(array)
[1 2 3 4 5 6]
```

# Pandas

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

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

```
In [32]: import pandas as pd
                                           import numpy as np
                                           data = np.array(['Jan 2023','Jan 
                                           'Jan 2023','Jan 2023','Jan 2023','Jan 2023','Jan 2023','Jan 2023','Jan 2023','Jan 2023','Jan 2023','Jan 2023','feb 2023',
                                           s = pd.Series(data,index=['1st','2nd','3rd','4th','5th','6th','7th','8th','9th','10th','11th','12th','13th','14th','15th','16th','17th','18th','19th','20th','2
                                           print(s)
                                           1st
                                                                              Jan 2023
                                           2nd
                                                                              Jan 2023
                                           3rd
                                                                              Jan 2023
                                           4th
                                                                              Jan 2023
                                           5th
                                                                              Jan 2023
                                           6th
                                                                              Jan 2023
                                           7th
                                                                              Jan 2023
                                                                              Jan 2023
                                           8th
                                          9th
                                                                              Jan 2023
                                                                              Jan 2023
                                          10th
                                          11th
                                                                              Jan 2023
                                                                              Jan 2023
                                          12th
                                                                              Jan 2023
                                          13th
                                          14th
                                                                              Jan 2023
                                          15th
                                                                              Jan 2023
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                                          16th
                                                                              Jan 2023
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                                                                              Jan 2023
                                           20th
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                                           21st
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                                           22nd
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                                           23rd
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                                           24th
                                                                              Jan 2023
                                           25th
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                                           26th
                                                                              Jan 2023
                                           27th
                                                                              Jan 2023
                                           28th
                                                                              Jan 2023
                                          29th
                                                                              Jan 2023
                                           30th
                                                                              Jan 2023
                                                                              Jan 2023
                                          31st
                                                                              feb 2023
                                          1st
                                           2nd
                                                                              feb 2023
                                           3rd
                                                                              feb 2023
                                           4th
                                                                              feb 2023
                                           5th
                                                                              feb 2023
                                           6th
                                                                              feb 2023
                                           7th
                                                                              feb 2023
                                           8th
                                                                              feb 2023
                                                                              feb 2023
                                           9th
                                           10th
                                                                            feb 2023
                                          dtype: object
```

### 10. Create 2D list to DataFrame

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

CCC

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