Basic Python

1. Split this string

```
s = "Hi there Sam!"
print(s.split())
    ['Hi', 'there', 'Sam!']
```

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

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

```
planet = "Earth"
diameter = 12742

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"

Numpy

```
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

```
print(np.arange(20,35,2))
  [20 22 24 26 28 30 32 34]
```

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

7. Concatenate a and b

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

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

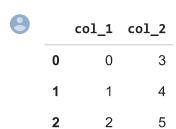
Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import numpy as np

df = pd.DataFrame({
    'col_1': [0, 1, 2],
    'col_2': [3, 4, 5]
})
df
```

import pandas as pd



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

```
import pandas as pd
from datetime import date, timedelta
sdate = date(2023,1,1)
edate = date(2023, 2, 10)
pd.date range(sdate,edate-timedelta(days=1),freq='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'],
                   dtype='datetime64[ns]', freq='D')
```

10. Create 2D list to DataFrame

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

import pandas as pd

lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
pd.DataFrame(lists)

	0	1	2
0	1	aaa	22
1	2	bbb	25
2	3	CCC	24

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