Basic Python

1. Split this string

In [ ]:

```
s = "Hi there Sam!"
```

In [*]:

```
['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 [*]:

```
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 [ ]:

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

Numpy

In [ ]:

```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

In [ ]:

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

In [ ]:

```
array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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

In [ ]:

```
An array of 10 zeros is [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
An array of 10 fives is [5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

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

In [ ]:

```
array([20, 22, 24, 26, 28, 30, 32, 34])
```

7. Concatenate a and b

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

In [*]:

```
Concatination of a and b is [1 2 3 4 5 6]
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

In [ ]:

```
import pandas as pd
```

In [ ]:

```
A datafram with 3 rows and 2 columns is given below
   1  2
1  0  1
2  2  3
3  4  5
```

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

In [*]:

```
pd.date_range(start="2023-01-01",end="2023-02-10").tolist(
```

10. Create 2D list to DataFrame

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

In [ ]:

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

In [*]:

```
S/No Name  Rollno
0     1  aaa      22
1     2  bbb      25
2     3  ccc      24
```

In [ ]:

```

```