Assignment -1
Basic Python

Assignment Date	09 September 2022
Student Name	Gokulakrishnan G
Student Roll Number	2116190701053
Maximum Marks	2 Marks

- 1. Split this string

```
s = "Hi there Sam!"


x=s.split()
print(x)
```

```
['Hi', 'there', 'Sam!']
```

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

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

```
p1anet = "Earth"
diameter = 12742


txt= "The diameter of {} is {} kilometers.".format(planet,diameter)
print(txt)
```

```
    The diameter of Earth is 12742 kilometers.
```

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

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

d['k1'][3]['tricky'][3]['target'][3]
```

```
    'hello'
```

- Numpy

```
import numpy as np
```

- 4.1 Create an array of 10 zeros?

  4.2 Create an array of 10 fives?

```
np.zeros(10)
```

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

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

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

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

```
array1=np.arange(20,36,2)
print(array1)
```

```
[20 22 24 26 28 30 32 34]
```

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

```
array2=np.arange(0,9).reshape(3,3)
print(array2)
```

```
[[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])

```
a=np.array([1,2,3])
b=np.array([4,5,6])
c=np.concatenate((a,b),axis=0)
print(c)
```

```
[1 2 3 4 5 6]
```

- Pandas

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

```
import pandas as pd
```

```
data={'A' :[1,2,3],
      'B':[4,5,6],
      'C':[7,8,9]

df=pd.DataFrame(data)
df
```

	A	B	C
0	1	4	7
1	2	5	8
2	3	6	9

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

```
import datetime
test_date   datetime.datetime.strptime("01-01-2022", "%d-%m-%")
K    41
date_generated    pd.date_range(test_date, periods=K)
print(date_generated.strftime("%d-%m-%Y"))

    Index(['01-01-2022', '02-01-2022', '03-01-2022', '04-01-2022', '05-01-2022',
           '06-01-2022', '07-01-2022', '08-01-2022', '09-01-2022', '10-01-2022',
           '11-01-2022', '12-01-2022', '13-01-2022', '14-01-2022', '15-01-2022',
           '16-01-2022', '17-01-2022', '18-01-2022', '19-01-2022', '20-01-2022',
           '21-01-2022', '22-01-2022', '23-01-2022', '24-01-2022', '25-01-2022',
           '26-01-2022', '27-01-2022', '28-01-2022', '29-01-2022', '30-01-2022',
           '31-01-2022', '01-02-2022', '02-02-2022', '03-02-2022', '04-02-2022',
           '05-02-2022', '06-02-2022', '07-02-2022', '08-02-2022', '09-02-2022',
           '10-02-2022'],
          dtype='object')
```

- ## 10. Create 2D list to DataFrame
  lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]

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


df = pd.DataFrame(lists)
print(df)

        8    1    2
    0   1  aaa   22
    1   2  bbb   25
    2   3  ccc   24
```

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