Assignment -1
Python Programming

Assignment Date	19 September 2022
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Student Roll Number	CITC1907031
Maximum Marks	2 Marks

Question-1: Split this string

```
In [1]:   s = "Hi there Sam!"

In [2]:   s.split(" ")

Out[2]:   ['Hi', 'there', 'Sam!']
```

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

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

```
In [3]:   planet = "Earth"
          diameter = 12742

In [4]:   txt = "The diameter of {planet} is {diameter} kilometers"
          print(txt.format(planet = "Earth",
          diameter = 12742))

          The diameter of Earth is 12742 kilometers
```

Question-3: In this nest dictionary grab the word "hello"

```
In [5]:   d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,
```

```
In [6]:   d['k1'][3]['tricky'][3]['target'][3]
```

```
Out[6]:   'hello'
```

Numpy

```
In [7]:   import numpy as np
```

Question-4.1: Create an array of 10 zeros?

Question-4.2: Create an array of 10 fives?

```
In [8]:   array=np.zeros(10)
          print(array)
```

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

```
In [9]:   array=np.ones(10)*5
          print(array)
```

```
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

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

```
In [10]:   array=np.arange(20,35,2)

In [11]:   print(array)

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

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

```
In [12]:   x =  np.arange(0, 9).reshape(3,3)
           print(x)

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

Question-7: Concatenate a and b

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

```
In [13]:   a = np.array([1, 2, 3])
           b = np.array([4, 5, 6])
           print(np.concatenate([a,b]))

[1 2 3 4 5 6]
```

Pandas

Question-8: Create a dataframe with 3 rows and 2 columns

```python
In [14]:    import pandas as pd
```

```python
In [15]:    df= pd.DataFrame({'Name': ['Tom', 'Jack', 'nick'],
                    'marks': [99, 98, 95]})
            print(df)
```

```
        Name  marks
    0    Tom     99
    1   Jack     98
    2   nick     95
```

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

```python
In [16]:    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')
```

```
Out[16]:    DatetimeIndex(['2023-01-01', '2023-01-02', '2023-01-03', '2023-01-0
            4',
                           '2023-01-05', '2023-01-06', '2023-01-07', '2023-01-0
            8',
                           '2023-01-09', '2023-01-10', '2023-01-11', '2023-01-1
            2',
                           '2023-01-13', '2023-01-14', '2023-01-15', '2023-01-1
            6',
                           '2023-01-17', '2023-01-18', '2023-01-19', '2023-01-2
            0',
                           '2023-01-21', '2023-01-22', '2023-01-23', '2023-01-2
            4',
                           '2023-01-25', '2023-01-26', '2023-01-27', '2023-01-2
            8',
                           '2023-01-29', '2023-01-30', '2023-01-31', '2023-02-0
            1',
                           '2023-02-02', '2023-02-03', '2023-02-04', '2023-02-0
            5',
                           '2023-02-06', '2023-02-07', '2023-02-08', '2023-02-0
            9'],
                          dtype='datetime64[ns]', freq='D')
```

Question-10: Create 2D list to DataFrame

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

In [17]:
```python
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

In [18]:
```python
df = pd.DataFrame(lists)
print(df)
```

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

In [ ]: