Assignment -1
Python Programming

Assignment Date	30 September 2022
Student Name	Mr. N. GILBART
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Maximum Marks	2 Marks

Question-1:

Split this string

> **Solution:**

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

Question-2:

Use .format() to print the following string.

> **Solution:**

> > Output should be: The diameter of Earth is 12742 kilometers.
> > planet = "Earth"
> > diameter = 12742
> > a="The diameter of {planet}is{diameter}kilometers"
> > print(a.format(planet="Earth",diameter = 12742))
> > The diameter of Earthis12742kilometers

Question-3:

In this nest dictionary grab the word "hello"

> **Solution:**

> > d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':
> > [1,2,3,'hello']}]}]}
> > print(d)
> > {'k1': [1, 2, 3, {'tricky': ['oh', 'man', 'inception', {'target': [1,2, 3, 'hello']}]}]}

Question-4:

Numpy

4.1 Create an array of 10 zeros?

> **Solution:**

>> ```
>> import numpy as np
>> b=np.zeros(10)*0
>> print(b)
>> [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
>> ```

4.2 Create an array of 10 fives?

> **Solution:**

>> ```
>> import numpy as np
>> b=np.ones(10)*5
>> print(b)
>> [5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
>> ```

Question-5:

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

> **Solution:**

>> ```
>> import numpy as np
>> a=np.arange(20,35,2)
>> print(a)
>> [20 22 24 26 28 30 32 34]
>> ```

Question-6:

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

> **Solution:**

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

Solution:

```
import numpy as np
arr1=np.array([1,2,3])
arr2=np.array([4,5,6])
arr=np.concatenate((arr1,arr2))
print(arr)
[1 2 3 4 5 6]
```

Question-8:

Pandas

Create a dataframe with 3 rows and 2 columns

Solution:

```
import pandas as pd
data=[{'a':12,'b':45},{'a':54,'b':23},{'a':94,'b':76}]
df=pd.DataFrame(data)
print(df)
    a    b
0   12   45
1   54   23
2   94   76
```

Question-9:

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

Solution:

```
import pandas as pd
a=pd.date_range(start='1/1/2023',end='10/2/2023')
print(a)
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',
               ...
               '2023-09-23', '2023-09-24', '2023-09-25', '2023-09-26',
               '2023-09-27', '2023-09-28', '2023-09-29', '2023-09-30',
               '2023-10-01', '2023-10-02'],
              dtype='datetime64[ns]', length=275, freq='D')
```

Question-10:

Create 2D list to DataFrame

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
import pandas as pd
lst=[[1,'aaa',22],[2,'bbb,25'],[3,'ccc',24]]
df=pd.DataFrame(lst)
print(df)
0       1       2
0 1     aaa     22.0
1 2     bbb,25  NaN
2 3     ccc     24.0
```