ASSIGNMENT 1

Assignment Date	23/09/2022
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Maximum Marks	2 Marks

Basic Python

1. Split the String

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

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

3. In this nest dictionary grab the word “hello”

4. NUMPY

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

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])

PANDAS

8. Create a dataframe with 3 rows and 2 columns

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

10. Create 2D list to DataFrame

Lists = [[1, ‘aaa’, 22],[2,’bbb’,25],[3,’ccc’,24]]

1.

1. Split this string

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

```
[ ]  print(s.split())
```

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

2.

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

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

```
[ ]  planet = "Earth"
     diameter = 12742
```

```
s="The diameter of {} is {} kilometers".format("Earth",12742)
print(s)
```

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

3.

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'
```

+ Code

4.

Numpy

```
[ ]  import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
[ ]  a=np.zeros(10)
     print(a)
```

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

```
[ ]  a=np.ones(10)*5
     print(a)
```

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

5.

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

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

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

6.

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

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

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

7.

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]
```

8.

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
[ ]  import pandas as pd
```

```
d = {'Name': ['Tom', 'Chris','peter'],
     'Job':['Actor','Doctor','Dancer']
     }
a=pd.DataFrame(d)
print(a)
```

```
    Name     Job
0    Tom   Actor
1  Chris  Doctor
2  peter  Dancer
```

9.

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

+ Code + Text

```
import datetime
d= datetime.timedelta(days=1)
start_date = datetime.date(2023,1,1)
end_date = datetime.date(2023,2,10)

for i in range((end_date - start_date).days):
    print(start_date + i*d)
```

```
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
```

10.

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]]
```

```
d = pd.DataFrame(lists, columns =['Sno', 'name','roll'])
print(d)
```

```
   Sno name  roll
0    1  aaa    22
1    2  bbb    25
2    3  ccc    24
```