

Assignment -1
Python Programming

Assignment Date	19 September 2022
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Student Roll Number	820419104081
Maximum Marks	2 Marks

Question : 01. Split this string

s = "Hi there Sam!"

```
s = "Hi there Sam!"
x = s.split()
print(x)
```

✓ 0.1s Python

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

Question : 02. Use .format() to print the following string.

planet = "Earth"

diameter = 12742

```
planet = "Earth"
diameter = 12742
print ('The diameter of {planet} is {measure} kilometers'.format(planet="Earth", measure=12742.34))
```

✓ 0.5s Python

The diameter of Earth is 12742.34 kilometers

Question : 03. In this nest dictionary grab the word "hello"

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

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

✓ 0.3s Python

'hello'

Numpy :

import numpy as np

```
import numpy as np
```

✓ 1.9s Python

Question : 4.1. Create an array of 10 zeros?

```
import numpy as np
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
```

✓ 0.4s

Python

An array of 10 zeros:

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

Question : 4.2. Create an array of 10 fives?

```
import numpy as np
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

✓ 0.3s

Python

An array of 10 fives:

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

Question : 05. Create an array of all the even integers from 20 to 35

```
import numpy as np
array=np.arange(20,35,2)
print("Array of all the even integers from 20 to 35")
print(array)
```

✓ 0.2s

Python

Array of all the even integers from 20 to 35

[20 22 24 26 28 30 32 34]

Question : 06. Create a 3x3 matrix with values ranging from 0 to 8

```
import numpy as np
arr = np.arange(0,9).reshape(3,3)

print(arr)
```

✓ 0.2s

Python

[[0 1 2]

[3 4 5]

[6 7 8]]

Question : 07. Concatenate a and b

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

```
import numpy as np
a = np.array([[1,2,3]])

print ('First array:')
print (a)
print ('\n')
b = np.array([[4,5,6]])

print ('Second array:')
print (b)
print ('\n')
# both the arrays are of same dimensions

print ('Joining the two arrays along axis 0:')
print (np.concatenate((a,b)) )
print ('\n')

print ('Joining the two arrays along axis 1:')
print (np.concatenate((a,b),axis = 1))
```

✓ 0.3s Python

First array:
[[1 2 3]]

Second array:
[[4 5 6]]

Joining the two arrays along axis 0:
[[1 2 3]
[4 5 6]]

Joining the two arrays along axis 1:
[[1 2 3 4 5 6]]

Question : 08. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd

data = [[10,20],[30,40],[50,60]]

# Create the pandas DataFrame with column name is provided explicitly
df = pd.DataFrame(data, columns=['Numbers','Numbers2'])

# print dataframe.
df
```

✓ 0.6s Python

	Numbers	Numbers2
0	10	20
1	30	40
2	50	60

Question : 09. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

```
import datetime
import pandas as pd
start = datetime.datetime.strptime("01-01-2023", "%d-%m-%Y")
date_generated = pd.date_range(start, periods=41)
print(date_generated.strftime("%d-%m-%Y"))
```

```
Index(['01-01-2023', '02-01-2023', '03-01-2023', '04-01-2023', '05-01-2023',
      '06-01-2023', '07-01-2023', '08-01-2023', '09-01-2023', '10-01-2023',
      '11-01-2023', '12-01-2023', '13-01-2023', '14-01-2023', '15-01-2023',
      '16-01-2023', '17-01-2023', '18-01-2023', '19-01-2023', '20-01-2023',
      '21-01-2023', '22-01-2023', '23-01-2023', '24-01-2023', '25-01-2023',
      '26-01-2023', '27-01-2023', '28-01-2023', '29-01-2023', '30-01-2023',
      '31-01-2023', '01-02-2023', '02-02-2023', '03-02-2023', '04-02-2023',
      '05-02-2023', '06-02-2023', '07-02-2023', '08-02-2023', '09-02-2023',
      '10-02-2023'],
      dtype='object')
```

Question : 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]]
```

```
[ ]
```

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

```
[8]
```

```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
pd.DataFrame( lists, columns=['a', 'b', 'c'])
```

```
...
```

	a	b	c
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24

