

Assignment -1
Python Programming

Assignment Date	18 September 2022
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Maximum Marks	2 Marks

Question-1:

Split this string

s = "Hi there Sam!"

Ans

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

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

Question-2:

Use .format() to print the following string.

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

Ans

```
txt="The diameter of the {planet} is {diameter} kilometers"
print (txt.format(planet="earth", diameter=12742))
```

```
The diameter of the earth is 12742 kilometers
```

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

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

```
main.py
1 d = {
2   'k1': [1, 2, 3, {
3     'tricky': ['oh', 'man', 'inception', {
4       'target': [1, 2, 3, 'hello']
5     }]
6   }]
7 }
8
9
10 print(d['k1'][3]['tricky'][3]['target'][3])
```

```
hello
>
```

Question 4.1 Create an array of 10 zeros?

main.py	<div><div>Run</div></div>	Shell
<pre>1 import numpy as np 2 array=np.zeros(10) 3 print("An array of 10 zeros:") 4 print(array)</pre>		<pre>An array of 10 zeros: [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.] > </pre>

Question 4.2 Create an array of 10 fives?

main.py	<div><div>Run</div></div>	Shell
<pre>1 import numpy as np 2 array=np.ones(10)*5 3 print("An array of 10 fives:") 4 print(array)</pre>		<pre>An array of 10 fives: [5. 5. 5. 5. 5. 5. 5. 5. 5. 5.] > </pre>

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

Ans

main.py	<div><div>Run</div></div>	Shell
<pre>1 import numpy as np 2 array=np.arange(20,35,2) 3 print("Array of all the even integers from 30 to 70") 4 print(array)</pre>		<pre>Array of all the even integers from 30 to 70 [20 22 24 26 28 30 32 34] > </pre>

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

Ans

main.py	<div><div>Run</div></div>	Shell
<pre>1 import numpy as np 2 x = np.arange(0, 9).reshape(3,3) 3 print(x)</pre>		<pre>[[0 1 2] [3 4 5] [6 7 8]] > </pre>

Question 7. Concatenate a and b

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

main.py	<div><div>Run</div></div>	Shell
<pre>1 import numpy as np 2 a = np.array([1, 2, 3]) 3 b = np.array([4, 5, 6]) 4 gfg = np.concatenate((a, b), axis = 0) 5 6 print (gfg)</pre>		<pre>[1 2 3 4 5 6] > </pre>

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

main.py

Run

Shell

```

1 import pandas as pd
2 data = {'Name':['Renault', 'Duster', 'Maruti'], 'Ratings':[9.0, 8.0, 5.0]}
3 df = pd.DataFrame(data)
4 print(df)

```

	Name	Ratings
0	Renault	9.0
1	Duster	8.0
2	Maruti	5.0

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

main.py

Run

Shell

Clear

```

1 import datetime
2 import pandas as pd
3
4 # initializing date
5 test_date = datetime.datetime.strptime("01-1-2023", "%d-%m-%Y")
6
7 # initializing K
8 K = 41
9
10 date_generated = pd.date_range(test_date, periods=K)
11 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]]

Ans:

main.py

Run

Shell

```

1 import pandas as pd
2 lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
3 df = pd.DataFrame(lists, columns = ['slno', 'Name', 'Age'])
4 print(df)

```

	slno	Name	Age
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24