

Assignment -1

Basic python

Assignment Date	18 September 2022
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Student Roll Number	923119106006
Maximum Marks	2 Marks

1. Split this string

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

```
s="Hi there Sam"
s.split()
['Hi', 'there', 'Sam']

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

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

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

```
planet = "Earth"
diameter = 12742
```

```
planet="Earth"
diameter=12742
print(f"The diameter of {planet} is {diameter} kilometer")
```

The diameter of Earth is 12742 kilometer

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

hello

Numpy

```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

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

An array of 10 zeros:
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

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

An array of 10 fives:
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]

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

```
import numpy as np  
array=np.arange(20,36,2)  
print("Array of the even integer from 20 to 36")  
print(array)
```

Array of the even integer from 20 to 36
[20 22 24 26 28 30 32 34]

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

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

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

7. 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])  
b=np.array([4,5,6])  
np.concatenate((a,b),axis=0)
```

```
array([1, 2, 3, 4, 5, 6])
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd  
  
import numpy as np  
A=np.random.randint(10,size=(3,2))  
print(A)
```

```
[[0 4]  
 [8 5]  
 [4 1]]
```

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

```
import pandas as pd
pd=pd.date_range(start='01/01/2023',end='10/02/2023')
print(pd)

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')
```

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]]

import pandas as pd
lists=[[1,'aaa',22],[2,'bbb',25],[3,'ccc',24]]
df=pd.DataFrame(lists,columns=['num','char','value'])
print(df)
```

	num	char	value
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24