

Assignment -1

Python Programming

Basic Python

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

1. Split this string

In []:

```
In [ ]: s="Hi there Sam!"
s=s.split()
print(s);
```

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

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

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

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

```
In [ ]: planet = "Earth"
diameter = 12742
print('The diameter of {} is {} kilometers.'.format(planet,diameter));
The diameter of Earth is 12742 kilometers.
```

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

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

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

hello
```

```
import numpy as np
```

Numpy

```
In [ ]:
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
In [ ]: array=np.zeros(10)
```

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

```
In [ ]:
```

```
array=np.ones(10)*5
print(array)
```

```
]:
```

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

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

```
In [ ]: print(np.arange(20,35,2))
```

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

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

```
In [ ]: (np.arange(0,9).reshape((3,3)))
```

```
Out[ ]: array([[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]) print  
(np.concatenate((a,b)))
```

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

```
In [ ]:
```

```
[1 2 3 4 5 6]
```

```
printPandas(array)
```

8. Create a dataframe with 3 rows and 2 columns

```
In [ ]: import pandas as pd import  
numpy as np
```

```
In [ ]: df = np.random.randint(10, size=(3,2))  
df
```

```
Out[ ]: array([[4, 9],  
               [9, 5],  
               [2, 7]])
```

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

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