Assignment -1
Python Programming

Assignment Date	08 September 2022
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Maximum Marks	2

Basic Python

1. Split this string

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

```
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
```

Numpy

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

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

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

```
[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. Concatinate a and b

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

```
In [ ]: a = np.array([1, 2, 3])
        b = np.array([4, 5, 6])
        print (np.concatenate((a,b)))
```

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

Pandas

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