# CMS COLLEGE OF ENGINEERING AND TECHNOLOGY

## Appachigoundanpathy, Kummitipathy , Coimbatore, Tamil Nadu 641032

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING.

**DETECTING PARKINSONS DISEASE (ASSIGNMENT 1)**

**DATE** : 26-09-2022

**PROBLEM :** TO ANSWER THE QUESTIONS FOR THE ANSWERS

**NAME :** KURIAN C GEORGE

**OUTPUT :**

**SCREENSHOTS :**

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### Basic Python

#### 1. Split this string

```
In [1]: s = "Hi there Sam!"
```

```
In [2]: s.split()
Out[2]: ['Hi', 'there', 'Sam!']
```

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

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

```
In [3]: planet = "Earth"
        diameter = 12742
```

```
In [5]: 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 [6]: d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
```

```
In [8]: 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 [9]: import numpy as np
```

### 4.1 Create an array of 10 zeros?

### 4.2 Create an array of 10 fives?

```
In [11]: array=np.zeros(10)
         array
```
```
Out[11]: array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

```
In [12]: array=np.ones(10)*5
         array
```
```
Out[12]: 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 [13]: array=np.arange(20,35,2)
         array
```
```
Out[13]: array([20, 22, 24, 26, 28, 30, 32, 34])
```

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

```
In [21]: matrix=np.arange(0,9).reshape(3,3)
         matrix
```
```
Out[21]: array([[0, 1, 2],
                [3, 4, 5],
                [6, 7, 8]])
```

```
In [ ]:
```

### 7. Concatenate a and b

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

```
In [24]: a = np.array([1, 2, 3])
         b = np.array([4, 5, 6])
         ab=np.concatenate((a,b),axis=0)
         ab
```
```
Out[24]: array([1, 2, 3, 4, 5, 6])
```

## Pandas

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

```
In [3]: import pandas as pd
```

```
In [4]: data = [['vignesh', 50], ['santhanam', 40], ['giri', 25]]
        df = pd.DataFrame(data, columns=['Name', 'Age'])
        df
```

Out[4]:

|   | Name | Age |
|---|------|-----|
| 0 | vignesh | 50 |
| 1 | santhanam | 40 |
| 2 | giri | 25 |

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

```
In [51]: venkat = pd.date_range(start ='01-01-2023',
                    end ='02-10-2023' )

         for val in venkat:
           print(val)
```

```
2023-01-01 00:00:00
2023-01-02 00:00:00
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
2023-01-06 00:00:00
```

```
2023-02-05 00:00:00
2023-02-06 00:00:00
2023-02-07 00:00:00
2023-02-08 00:00:00
2023-02-09 00:00:00
2023-02-10 00:00:00
```

### 10. Create 2D list to DataFrame

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

```
In [5]: lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

```
In [7]: lists = [[1,'aaa', 22], [2,'bbb', 25], [3,'ccc', 24]]

        # Create the pandas DataFrame
        df = pd.DataFrame(lists, columns = ['s.no','name','Age'])

        # print dataframe.
        print(df )
```

```
   s.no name  Age
0     1  aaa   22
1     2  bbb   25
2     3  ccc   24
```

```
In [ ]:
```

*******************************THANKING YOU*******************************