**VSB ENGINEERING COLLEGE , KARUR-639111**

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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AI ASSIGNMENT

AI-Powered Nutrition Analyzer for Fitness Enthusiasts

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CODE:

Split this string

```
s = "Hi there Pari!"
```

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

Hi there Pari!

['Hi', 'there', 'Pari!']

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( 'The diameter of {} is {} kilometers.' .format(planet,diameter));
```

The diameter of Earth is 12742 kilometers.

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.]

```
import numpy as np
array=np.ones(10)
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(20,35,2)

print("Array of all the even integers from 20 to 35")

print(array)
```

Array of all the even integers from 20 to 35

[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])

c = np.concatenate((a,b))

print (c)
```

[1 2 3 4 5 6]

Pandas

8. Create a datafParie with 3 rows and 2 columns

```
import pandas as pd

import pandas as pd

data = [['sasi', 60], ['nithin', 36], ['prassana', 44]]
```

```
df = pd.DataFParie(data, columns=['Name', 'Age'])
df
Name    Age
0       sasi      60
1       nithin    36
2       prassana          44
```

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

```
import pandas as pd
from datetime import datetime
pd.date_range(start="2023-01-01",end="2023-02-10").to_pydatetime().tolist()
[datetime.datetime(2023, 1, 1, 0, 0),
 datetime.datetime(2023, 1, 2, 0, 0),
 datetime.datetime(2023, 1, 3, 0, 0),
 datetime.datetime(2023, 1, 4, 0, 0),
 datetime.datetime(2023, 1, 5, 0, 0),
 datetime.datetime(2023, 1, 6, 0, 0),
 datetime.datetime(2023, 1, 7, 0, 0),
 datetime.datetime(2023, 1, 8, 0, 0),
 datetime.datetime(2023, 1, 9, 0, 0),
 datetime.datetime(2023, 1, 10, 0, 0),
 datetime.datetime(2023, 1, 11, 0, 0),
 datetime.datetime(2023, 1, 12, 0, 0),
 datetime.datetime(2023, 1, 13, 0, 0),
 datetime.datetime(2023, 1, 14, 0, 0),
 datetime.datetime(2023, 1, 15, 0, 0),
```

datetime.datetime(2023, 1, 16, 0, 0),

datetime.datetime(2023, 1, 17, 0, 0),

datetime.datetime(2023, 1, 18, 0, 0),

datetime.datetime(2023, 1, 19, 0, 0),

datetime.datetime(2023, 1, 20, 0, 0),

datetime.datetime(2023, 1, 21, 0, 0),

datetime.datetime(2023, 1, 22, 0, 0),

datetime.datetime(2023, 1, 23, 0, 0),

datetime.datetime(2023, 1, 24, 0, 0),

datetime.datetime(2023, 1, 25, 0, 0),

datetime.datetime(2023, 1, 26, 0, 0),

datetime.datetime(2023, 1, 27, 0, 0),

datetime.datetime(2023, 1, 28, 0, 0),

datetime.datetime(2023, 1, 29, 0, 0),

datetime.datetime(2023, 1, 30, 0, 0),

datetime.datetime(2023, 1, 31, 0, 0),

datetime.datetime(2023, 2, 1, 0, 0),

datetime.datetime(2023, 2, 2, 0, 0),

datetime.datetime(2023, 2, 3, 0, 0),

datetime.datetime(2023, 2, 4, 0, 0),

datetime.datetime(2023, 2, 5, 0, 0),

datetime.datetime(2023, 2, 6, 0, 0),

datetime.datetime(2023, 2, 7, 0, 0),

datetime.datetime(2023, 2, 8, 0, 0),

datetime.datetime(2023, 2, 9, 0, 0),

datetime.datetime(2023, 2, 10, 0, 0)]

10. Create 2D list to DataFParie

```
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.DataFParie(lists, columns =['s.no', 'alphabet', 'number'])
print(df)
```

```
   s.no alphabet  number
0     1      aaa      22
1     2      bbb      25
2     3      ccc      24
```