Date	**15-10-2022**
Name	**A.hemavathi**
Project name	**AI based Nutrient analysis**
Maximum marks	**2 marks**

1. Split this string s = "Hi there Sam!"

Answer:

```
s="Hi there Sam!"
s=s.split()
print(s);
```

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

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

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

Answer:

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

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

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

Answer:

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

4.1 Create an array of 10 zeros?

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

4.2 Create an array of 10 fives?

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

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

Answer:

```
import numpy as np
array=np.arange(20,31,2)
print("Array of all the even integers from 20 to 35")
print(array)
```

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

Answer:

```
np.arange(0,9).reshape((3,3))
```

```
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])

Answer;

```
print(“% s % s” % (a, b))
```

8. Create a dataframe with 3 rows and 2 columns

import pandas as pd

Answer:

```
import numpy as np
A = np.random.randint(10, size=(3,2))
array([[9, 2], [4, 3],  [2, 3]])
```

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

Answer:

```
start = datetime.date(2023,1,1)
 k=(2023,2,10)
 res = []
 for day in range(k):
    date = (start + datetime.timedelta(days = day)).isoformat()
    res.append(date)
print("Next K dates list: " + str(res))
```

10. Create 2D list to DataFrame

lists = [[1, 'aaa', 22],

[2, 'bbb', 25],

[3, 'ccc', 24]]

Answer:

```
lst = [['1', 'aaa', 22], ['2', 'bbb', 25], ['3', 'ccc', 24]]
df = pd.DataFrame(lst, columns =['FName', 'LName', 'Age'],dtype
=float)
print(df)
```