

Python Basic Programming Assignment 8

1. Write a Python Program to Add Two Matrices?

```
In [22]: 1 #CREATE 2 MATRICS WITH LIST
          2 A=[5,6,7],
          3     [8,9,10],
          4     [11,12,13]]
          5 B=[14,15,16],
          6     [17,18,19],
          7     [20,21,22]]
          8 #To add the matrices, we need to create null matrices
          9 result=[[0,0,0],
         10             [0,0,0],
         11             [0,0,0]]
         12 #to iterate through column & rows we can use for Loops:Here "i" is iterating
         13
         14 #To iteratie through rows
         15 for i in range(len(A)):
         16     #To iterate through columns use A[0]
         17     for j in range(len(A[0])):
         18         result[i][j]=A[i][j]+B[i][j]
         19 # To print the result in matrix form, we can use for Loop
         20 for r in result:
         21     print(r)

[19, 21, 23]
[25, 27, 29]
[31, 33, 35]
```

2. Write a Python Program to Multiply Two Matrices?

```
In [28]: 1 #CREATE 2 MATRICES WITH LIST
2 A=[[5,6,7],
3     [8,9,10],
4     [11,12,13]]
5 B=[[14,15,16],
6     [17,18,19],
7     [20,21,22]]
8 #To multiply the matrices, we need to create null matrices
9 result=[[0,0,0],
10         [0,0,0],
11         [0,0,0]]
12 #To iterate over rows
13 for i in range(len(A)):
14     #to iterate over columns
15     for j in range(len(B[0])):
16         #to add the elements after the row(A) & column(B) multiplication
17         for k in range(len(B)):
18             result[i][j] += A[i][k] * B[k][j]
19 for r in result:
20     print(r)
```

```
[312, 330, 348]
[465, 492, 519]
[618, 654, 690]
```

3. Write a Python Program to Transpose a Matrix?

```
In [1]: 1 import numpy as np
2 a=[[10,20,30],[40,50,60],[70,80,90]]
3 print("The transpose of a matrix is:",np.transpose(a))
```

```
The transpose of a matrix is: [[10 40 70]
 [20 50 80]
 [30 60 90]]
```

4. Write a Python Program to Sort Words in Alphabetic Order?

```
In [25]: 1 word="This is the example of sorted words in Alphabetical order"
2 #make the sentence lower case and split
3 list1=word.lower().split()
4 #we can sort the words by using numpy sort command
5 print("The sorted words in the sentence are :",np.sort(list1))
```

```
The sorted words in the sentence are : ['alphabetical' 'example' 'in' 'is' 'of'
 'order' 'sorted' 'the' 'this'
 'words']
```

5. Write a Python Program to Remove Punctuation From a String?

```
In [44]: 1 punc='''!@#$%^&*(){}[]<,>./''''''''
2 words=input("Enter anything here:")
3 empty_str=" "
4 for i in words:
5     if i not in punc:
6         empty_str=empty_str + i
7 print(empty_str)
```

```
Enter anything here:Hello!!!! Hope you are doing well?????
Hello Hope you are doing well
```