

1 Python Basic Programming Assignment 8

1.0.1 1. Write a Python Program to Add Two Matrices?

```
In [4]: 1 # Program to add two matrices using nested loop
2
3 A = [[12,7,3],
4       [4 ,5,6],
5       [7 ,8,9]]
6
7 B = [[5,8,1],
8       [6,7,3],
9       [4,5,9]]
10
11 result = [[0,0,0],
12            [0,0,0],
13            [0,0,0]]
14
15 # iterate through rows
16 for i in range(len(A)):
17     # iterate through columns
18     for j in range(len(A[0])):
19         result[i][j] = A[i][j] + B[i][j]
20
21 for r in result:
22     print(r)
23
```

```
[17, 15, 4]
[10, 12, 9]
[11, 13, 18]
```

1.0.2 2. Write a Python Program to Multiply Two Matrices?

```
In [6]: 1 X = [[12,7,3],
2         [4 ,5,6],
3         [7 ,8,9]]
4
5 Y = [[5,8,1,2],
6       [6,7,3,0],
7       [4,5,9,1]]
8
9 result = [[sum(a*b for a,b in zip(X_row,Y_col)) for Y_col in zip(*Y)] for X_row in X]
10
11 for r in result:
12     print(r)
13
```

```
[114, 160, 60, 27]
[74, 97, 73, 14]
[119, 157, 112, 23]
```

1.0.3 3. Write a Python Program to Transpose a Matrix?

```
In [12]: 1 T = [[12,7],
2         [4 ,5],
3         [3 ,8]]
4
5 result = [[T[j][i] for j in range(len(T))] for i in range(len(T[0]))]
6
7 for r in result:
8     print(r)
```

```
[12, 4, 3]
[7, 5, 8]
```

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

```
In [11]: 1 my_str = "Welcome to the world of Metaverse"
2
3 words = [word.lower() for word in my_str.split()]
4
5 words.sort()
6
7 print("The sorted words are:")
8 for word in words:
9     print(word)
```

The sorted words are:
metaverse
of
the
to
welcome
world

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

```
In [15]: 1 punctuations = '!()-[]{};:'"\<>./?@$%^&*~''
2
3 my_str = "Hello!!!, he said ---and went."
4
5 no_punct = ""
6 for char in my_str:
7     if char not in punctuations:
8         no_punct = no_punct + char
9 print(no_punct)
10
```

Hello he said and went

```
In [ ]: 1
```