

1. Write a Python Program to Add Two Matrices?

Ans:

```
3]: X = [[2,7,3],
        [4 ,5,6],
        [7 ,8,9]]

Y = [[5,8,1],
      [6,7,3],
      [4,5,5]]

result = [[0,0,0],
          [0,0,0],
          [0,0,0]]

for i in range(len(X)):
    for j in range(len(X[0])):
        result[i][j] = X[i][j] + Y[i][j]

for r in result:
    print(r)

[7, 15, 4]
[10, 12, 9]
[11, 13, 14]
```

2. Write a Python Program to Multiply Two Matrices?

Ans:

```
5]: X = [[12,7,3],
        [4 ,5,6],
        [7 ,8,9]]

Y = [[5,8,1,2],
      [6,7,3,0],
      [4,5,9,1]]

result = [[0,0,0,0],
          [0,0,0,0],
          [0,0,0,0]]

for i in range(len(X)):
    for j in range(len(Y[0])):
        for k in range(len(Y)):
            result[i][j] += X[i][k] * Y[k][j]

for r in result:
    print(r)

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

3. Write a Python Program to Transpose a Matrix?

Ans:

```
1: X = [[12,7],
        [4 ,5],
        [3 ,8]]

result = [[0,0,0],
          [0,0,0]]

for i in range(len(X)):
    for j in range(len(X[0])):
        result[j][i] = X[i][j]

for r in result:
    print(r)

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

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

Ans:

```
6]: my_str = input("Enter a string: ")
words = [word.lower() for word in my_str.split()]
words.sort()
print("The sorted words are:")
for word in words:
    print(word)

Enter a string: Hey There! I am a data science enthusiast
The sorted words are:
a
am
data
enthusiast
hey
i
science
there!
```

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

Ans:

```
: punctuations = '''!()-[]{};:'"\,.<.>./?@#%&*_~'''
my_str = input("Enter a string with punctuations : ")
print("Entered string is : ",my_str)
no_punct = ""
for char in my_str:
    if char not in punctuations:
        no_punct = no_punct + char
print("After removing punctuations, the string is : ",no_punct)

Enter a string with punctuations : Hey, there, I am a data science enthusiast.
Entered string is : Hey, there, I am a data science enthusiast.
After removing punctuations, the string is : Hey there I am a data science enthusiast
```