1. Write a Python Program to Add Two Matrices?

In [1]:
```python
# Initialize two matrices
matrix1 = [[1, 2, 3],
           [4, 5, 6],
           [7, 8, 9]]

matrix2 = [[10, 11, 12],
           [13, 14, 15],
           [16, 17, 18]]

# Create an empty matrix to store the result
result = [[0, 0, 0],
          [0, 0, 0],
          [0, 0, 0]]

# Iterate through each element of the matrices and add them
for i in range(len(matrix1)):
    for j in range(len(matrix1[0])):
        result[i][j] = matrix1[i][j] + matrix2[i][j]

# Print the result
for row in result:
    print(row)
```

```
[11, 13, 15]
[17, 19, 21]
[23, 25, 27]
```

2. Write a Python Program to Multiply Two Matrices?

In [2]:
```python
# Define the two matrices as lists of lists
matrix1 = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
matrix2 = [[10, 11, 12], [13, 14, 15], [16, 17, 18]]

# Define the size of the matrices
m1_rows = len(matrix1)
m1_cols = len(matrix1[0])
m2_cols = len(matrix2[0])

# Create an empty result matrix
result = [[0 for j in range(m2_cols)] for i in range(m1_rows)]

# Multiply the matrices
for i in range(m1_rows):
    for j in range(m2_cols):
        for k in range(m1_cols):
            result[i][j] += matrix1[i][k] * matrix2[k][j]

# Print the result matrix
for row in result:
    print(row)
```

```
[84, 90, 96]
[201, 216, 231]
[318, 342, 366]
```

3. Write a Python Program to Transpose a Matrix?

In [3]:
```python
# Define a matrix
matrix = [
    [1, 2],
    [3, 4],
    [5, 6]
]

# Define the transposed matrix as an empty list
transposed = []

# Loop through the columns of the original matrix
for i in range(len(matrix[0])):
    # Define a row as an empty list
    row = []
    # Loop through the rows of the original matrix
    for j in range(len(matrix)):
        # Append the element at (j, i) to the row
        row.append(matrix[j][i])
    # Append the row to the transposed matrix
    transposed.append(row)

# Print the transposed matrix
for row in transposed:
    print(row)
```

```
[1, 3, 5]
[2, 4, 6]
```

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

In [4]:
```python
# Get a list of words from the user
words = input("Enter a list of words separated by spaces: ").split()

# Sort the list in alphabetical order
words.sort()

# Print the sorted list
print("Sorted words:")
for word in words:
    print(word)
```

```
Enter a list of words separated by spaces: HIMANSHU ,DEEPAK,JP,RANJEET,VICKY,HARSHIT
Sorted words:
,DEEPAK,JP,RANJEET,VICKY,HARSHIT
HIMANSHU
```

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

In [5]:
```python
import string

def remove_punctuation(input_string):
    """Removes punctuation from a given string"""
    translator = str.maketrans("", "", string.punctuation)
    return input_string.translate(translator)

# Example usage
input_string = "Hello, World! This is an example string."
output_string = remove_punctuation(input_string)
print(output_string)  # Output: "Hello World This is an example string"
```

```
Hello World This is an example string
```

In [ ]: