Lab Journal 1

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- **01-134212-152**


```
matrix_a = [
    [1, 2, 3],
    [4, 5, 6],
    [7, 8, 9]
]

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

def add_matrices(matrix_a, matrix_b):
    result_matrix = []
    for i in range(len(matrix_a)):
        row = []
        for j in range(len(matrix_a[0])):
            row.append(matrix_a[i][j] + matrix_b[i][j])
        result_matrix.append(row)
    return result_matrix

result_matrix = add_matrices(matrix_a, matrix_b)

print("Matrix A + Matrix B = ")
for row in result_matrix:
    print(row)
```

```
Matrix A + Matrix B =
 [10, 10, 10]
 [10, 10, 10]
 [10, 10, 10]
```

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

matrix_b = [
    [7, 8],
    [9, 10],
    [11, 12]
]

def multiply_matrices(matrix_a, matrix_b):
    result_matrix = [[0, 0], [0, 0]]

    for i in range(len(matrix_a)):
        for j in range(len(matrix_b[0])):
            for k in range(len(matrix_b)):
                result_matrix[i][j] += matrix_a[i][k] * matrix_b[k][j]

    return result_matrix

result = multiply_matrices(matrix_a, matrix_b)

print("Matrix A * Matrix B = ")
for row in result:
    print(row)
```

```
Matrix A * Matrix B =
 [58, 64]
 [139, 154]
```