# Java to Python Code Conversion Problems(convert Java Code to Python)

## Array Manipulation (For MATLAB Translation)

def array\_elementwise\_addition(array1, array2):

return [x + y for x, y in zip(array1, array2)]

## Matrix Multiplication (For MATLAB Translation)

def matrix\_multiplication(matrix\_a, matrix\_b):

return [[sum(a \* b for a, b in zip(row\_a, col\_b)) for col\_b in zip(\*matrix\_b)] for row\_a in matrix\_a]

## Plotting a Graph (For MATLAB Translation)

def plot\_line\_graph(x\_values, y\_values):

import matplotlib.pyplot as plt

plt.plot(x\_values, y\_values)

plt.xlabel('X-axis')

plt.ylabel('Y-axis')

plt.title('Sample Line Graph')

plt.show()

## Numerical Integration (For MATLAB Translation)

def trapezoidal\_rule(f, a, b, n):

h = (b - a) / n

result = 0.5 \* f(a) + 0.5 \* f(b)

for i in range(1, n):

result += f(a + i \* h)

return result \* h