**Phase 1 Practice Project – Assisted Practice**

**4 . Write a program in java to multiply two matrices**

**Source Code:**

**package** slm2;

**public** **class** MatrixMultiplication {

**public** **static** **void** main(String[] args) {

**int**[][] matrix1 = {

{1, 2, 3},

{4, 5, 6},

{7, 8, 9}

};

**int**[][] matrix2 = {

{9, 8, 7},

{6, 5, 4},

{3, 2, 1}

};

**int**[][] result = *multiplyMatrices*(matrix1, matrix2);

// Print the result

**for** (**int** i = 0; i < result.length; i++) {

**for** (**int** j = 0; j < result[i].length; j++) {

System.***out***.print(result[i][j] + " ");

}

System.***out***.println();

}

}

**public** **static** **int**[][] multiplyMatrices(**int**[][] matrix1, **int**[][] matrix2) {

**int** rows1 = matrix1.length;

**int** cols1 = matrix1[0].length;

**int** cols2 = matrix2[0].length;

**int**[][] result = **new** **int**[rows1][cols2];

**for** (**int** i = 0; i < rows1; i++) {

**for** (**int** j = 0; j < cols2; j++) {

**for** (**int** k = 0; k < cols1; k++) {

result[i][j] += matrix1[i][k] \* matrix2[k][j];

}

}

}

**return** result;

}

}

**Output :**



