

MatrixMultiplier.java

```

1 import java.util.Arrays;
2
3
4 /**
5  * Multiplies two matrixes and calculates the total number of operations.
6  *
7  * @author Jack Zhan
8  * @date 2016-02-20
9  */
10
11 public class MatrixMultiplier {
12
13     /**
14      * Create an object of the solver class.
15      */
16
17     public MatrixMultiplier() {
18         System.out.println("Matrix Multiplier created.");
19     }
20
21     public double solve(List<Integer> LOrder, List<int[][]> LMatrix1, List<int[][]>
LMatrix2) {
22
23         int order = 0;
24         int[][] matrix1 = null;
25         int[][] matrix2 = null;
26         int[][] matrix3 = null;
27         int sum;
28         int counter = 0;
29
30         for( int index = 0; index<LOrder.size(); index++){
31             // Grabbing the required inputs from Array list
32             order = LOrder.get(index);
33             matrix1 = LMatrix1.get(index);
34             matrix2 = LMatrix2.get(index);
35             matrix3 = new int[order][order];
36             counter = 0;
37             System.out.println("Multiplying Matrix of order " + order);
38             //Algorithm for multiplying Matrixes
39             for(int i=0; i<order; i++){
40                 for(int j=0; j<order; j++){
41                     sum=0;
42                     for(int k=0; k<order; k++){
43                         sum += matrix1[i][k]*matrix2[k][j];
44                         counter += 1;
45                     }
46                     matrix3[i][j] = sum;
47                 }
48             }
49             System.out.println("Matrix A = " + Arrays.deepToString(matrix1));
50             System.out.println("Matrix B = " + Arrays.deepToString(matrix2));
51             System.out.println("Solution = " + Arrays.deepToString(matrix3));
52             System.out.println("Total Number of operations = " + counter);
53
54         }
55         return 1.2;
56     }
57 }
58

```