

Answer on Programming / Java | JSP | JSF - 53291

```
/*
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 * and open the template in the editor.
 */
package pkg55291;

public class Main {

    public static int[][] multiply(int[][] A, int[][] B) throws IllegalArgumentException{
        int rowsA = A.length;
        int columnsA = A[0].length;
        int rowsB = B.length;
        int columnsB = B[0].length;

        if (columnsA != rowsB) {
            throw new IllegalArgumentException("Wrong dimensions! Cannot multiply.");
        }

        int[][] result = new int[rowsA][columnsB];

        //Multiply row from A by column from B
        for (int i = 0; i < rowsA; i++) {
            for (int j = 0; j < columnsB; j++) {
                //Clear the cell
                result[i][j] = 0;
                //Multiply
                for (int k = 0; k < columnsA; k++) {
                    result[i][j] += A[i][k] * B[k][j];
                }
            }
        }
    }
}
```

```
    return result;
}
```

```
public static boolean any(boolean[] anyBoolean){
    boolean result = false;

    for (int i = 0; i < anyBoolean.length; i++) {
        if (anyBoolean[i] == true) {
            result = true;
            break;
        }
    }
    return result;
}
```

```
public static boolean all(boolean[] anyBoolean){
    boolean result = true;

    for (int i = 0; i < anyBoolean.length; i++) {
        if (anyBoolean[i] == false) {
            result = false;
            break;
        }
    }
    return result;
}
```

```
public static void main(String[] args) throws Exception {
    int[][] m1 = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}};
    int[][] m2 = {{9, 8, 7}, {6, 5, 4}, {3, 2, 1}};

    int[][] m3 = multiply(m1, m2);
    int[][] expected = {{30, 24, 18}, {84, 69, 54}, {138, 114, 90}};
```

```
for(int i=0; i<3; i++) {
    for(int j=0; j<3; j++) {
        System.out.print(m3[i][j] + "\t");
        if(m3[i][j] != expected[i][j]) {
            throw new Exception("Wrong result!");
        }
    }
    System.out.println();
}

boolean[] arr1 = {false, false, false};
boolean[] arr2 = {false, false, false, true, false, false, false, false};
boolean[] arr3 = {true, true, true, true};

System.out.println(any(arr1));
System.out.println(any(arr2));
System.out.println(any(arr3));

System.out.println(all(arr1));
System.out.println(all(arr2));
System.out.println(all(arr3));
}
}
```