**Assisted Practice: 4.4 Matrix**

This section will guide you to:

* Write a program in Java to multiply two matrices
* Use Eclipse (the popular text editor for Java programs)
* Push code to Git

This lab has three subsections, namely:

* + 1. Creating a new project in Eclipse
    2. Writing the program in Java to multiply two matrices
    3. Pushing the code to your GitHub repositories

**Step 4.4.1:** Creating a new project in Eclipse

* Open Eclipse
* Go to File -> New -> Project -> Java Project -> Next
* Type in any project name and click on Finish
* Select your project and go to File -> New -> Class
* Enter **MultiplyMatrices** in class name, check the checkbox **public static void main(String args)**, and click on Finish

**Step 4.4.2:** Writing the program in Java to multiply two matrices

public class MultiplyMatrices

{

public static void main(String[] args)

{

int r1 = 2, c1 = 3;

int r2 = 3, c2 = 2;

int[][] firstMatrix = { {3, -2, 5}, {3, 0, 4} };

int[][] secondMatrix = { {2, 3}, {-9, 0}, {0, 4} };

int[][] product = multiplyMatrices(firstMatrix, secondMatrix, r1, c1, c2);

displayProduct(product);

}

public static int[][] multiplyMatrices(int[][] firstMatrix, int[][] secondMatrix, int r1, int c1, int c2)

{

int[][] product = new int[r1][c2];

for(int i = 0; i < r1; i++)

{

for (int j = 0; j < c2; j++)

{

for (int k = 0; k < c1; k++)

{

product[i][j] += firstMatrix[i][k] \* secondMatrix[k][j];

}

}

}

return product;

}

public static void displayProduct(int[][] product)

{

System.out.println("Product of two matrices is: ");

for(int[] row : product)

{

for (int column : row)

{

System.out.print(column + " ");

}

System.out.println();

}

}

}

**Output:**



**Step 4.4.3:** Pushing the code to your GitHub repositories

* Open your command prompt and navigate to the folder where you have created your files.

**cd <folder path>**

* Initialize your repository using the following command:

**git init**

* Add all the files to your git repository using the following command:

**git add .**

* Commit the changes using the following command:

**git commit . -m “Changes have been committed.”**

* Push the files to the folder you initially created using the following command:

**git push -u origin master**