elijahkorneffel@Elijahs-MacBook-Pro  ~/Git/CS2261-JAVA/Project2   project2\_03\_03\_$

9 ●  script addDiagonal\_output

Script started, output file is addDiagonal\_output

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9 ●  cat AddDiagonal.java

//Class: CS2261-JAVA

//Due Date: 03/04/19

//Author: Elijah Korneffel

//Description: This script finds the sum of a 4x4 matrix diagonal.

import java.util.Scanner;

import java.util.Arrays;

public class AddDiagonal

{

public static void main(String[] args)

{

double[][] matrix = new double[4][4];

double sum = 0;

Scanner input = new Scanner(System.in);

matrix = inputMatrix(input);

sum = addDiagonal(matrix);

printMatrix(matrix);

System.out.printf("Your diagonal sum is %f", sum);

}

//This method isn't necessary but prints the matrix to view input.

public static void printMatrix(double[][] myMatrix)

{

for(int i = 0; i < myMatrix.length; i++)

{

for(int j = 0; j < myMatrix[i].length; j++)

{

System.out.print("[");

System.out.print(myMatrix[i][j]);

System.out.print("]");

}

System.out.println("");

}

}

//This method takes the inputs from the user to build 4x4 matrix.

public static double[][] inputMatrix(Scanner input)

{

double[][] myMatrix = new double[4][4];

System.out.println("Enter 4x4 matrix row by row:");

for(int i = 0; i < myMatrix.length; i++)

{

for(int j = 0; j < myMatrix[i].length; j++)

{

myMatrix[i][j] = input.nextDouble();

}

}

return myMatrix;

}

//This method adds the diagonal of given matrix.

public static double addDiagonal(double[][] matrix)

{

double matrixSum = 0;

for(int i = 0; i < matrix.length; i++)

{

for(int j = 0; j < matrix[i].length; j++)

{

if(j == i)

{

matrixSum += matrix[i][j];

}

}

}

return matrixSum;

}

}

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9 ●  javac AddDiagonal.java

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9 ●  java AddDiagonal

Enter 4x4 matrix row by row:

1.23 2 3 4

1 -2.3 3 4

1 2 3.33333 4

1 2 3 -40.23

[1.23][2.0][3.0][4.0]

[1.0][-2.3][3.0][4.0]

[1.0][2.0][3.33333][4.0]

[1.0][2.0][3.0][-40.23]

Your diagonal sum is -37.966670%

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it/CS2261-JAVA/Project2   project2\_03\_03\_19 ● 

Script done, output file is addDiagonal\_output