**Picture Lab – Activity 4: 2D Arrays**

**Exercises –** Copy and paste the 3 methods from the IntArrayWorker Class below once you have them working.

1. Write a getCount method in the IntArrayWorker class that returns the count of the number of times a passed integer value is found in the matrix. There is already a method to test this in IntArrayWorkerTester. Just uncomment the method testGetCount() and the call to it in the main method of IntArrayWorkerTester.

/\*\*

\* Get count of specific integer

\* @param iNum Integer to scan for

\* @return Number of times found

\*/

public int getCount(int iNum)

{

int iCount = 0;

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

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

if (matrix[i][j] == iNum)

iCount++;

return iCount;

}

1. Write a getLargest method in the IntArrayWorker class that returns the largest value in the matrix. There is already a method to test this in IntArrayWorkerTester. Just uncomment the method testGetLargest() and the call to it in the main method of IntArrayWorkerTester.

/\*\*

\* Get largest number in matrix

\* @return Largest number in matrix

\*/

public int getLargest()

{

int iLargest = matrix[0][0];

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

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

if (matrix[i][j] > iLargest)

iLargest = matrix[i][j];

return iLargest;

}

1. Write a getColTotal method in the IntArrayWorker class that returns the total of all integers in a specified column. There is already a method to test this in IntArrayWorkerTester. Just uncomment the method testGetColTotal() and the call to it in the main method of IntArrayWorkerTester.

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\* Get total in a column (Dimension 1)

\* @param iCol Dimension 1 index

\*/

public int getColTotal(int iCol)

{

int iTotal = 0;

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

iTotal += matrix[i][iCol];

return iTotal;

}