2021 2D Array Project

Start creating a class named `Table` that creates a 2 dimensional array initialized with integer test data:

```
public class Table
{
	private int[][] values;
	public Table(int rows, int columns)
	{
		values = new int[rows][columns]
	}

	public void set(int row, int column, int number)
	{
		values[row][column] = number;
	}
}
```

The `Table` class should have the following methods which will be written to handle arrays of any dimension.

- `getTotal` - This method returns the total of all the values in the array.
- `getAverage` - This method returns the average of all values in the array.
- `getRowTotal` - This method accepts an integer parameter that refers to a row in the array. The method returns the total of the values in that row.
- `getColumnTotal` - This method accepts an integer parameter that refers to a column in the array. The method returns the total of the values in that column.
- `getHighestInRow` - This method accepts an integer parameter that refers to a row in the array. The method returns the largest value in the specified row.
- `getLowestInRow` -This method accepts an integer parameter that refers to a row in the array. The method returns the smallest value in the specified row.
- `printTable` - This method prints out the array values row by row..

In another file named `TestTable.java` the main routine needs to do the following::

```
public static void main(String[] args)
{
	// Create a table object.

	// Call set method to initialize the table object
```

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```
      // Print out the initialized table

      System.out.println("***** Check the methods with parameters in
range ********");

      //Call getTotal and print out the result.  Print out the
expected result, too, based on your initialized table.

      // Call getAverage and print out the result.  Print out the
expected result, too.

      // Call getRowTotal and print out the result.  Print out the
expected result, too.

      // Call getColumnTotal and print out the result.  Print out the
expected result, too.

      // Call getHighestInRow and print out the result.  Print out
the expected result, too.

      // Call getLowestInRow and print out the result.  Print out the
expected result, too.

      System.out.println("***** Check the methods with parameters out
of range ********");

      // Now call getColumnTotal with a negative column value.
Program should not crash.

      // Now call getRowTotal with a row value greater than the
number of rows in the table object.  Program should not crash.


      // Now call getLowestInRow with a negative row value.  Program
should not crash.

      // Now call getHighestInRow with a row value greater than the
number of rows in the table object.  Program should not crash

} // end Main
```