

UML Diagram

WRAPPER

CSVArray

```
import java.util.ArrayList;
import java.util.Scanner;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.BufferedWriter;
import java.io.FileWriter;
import java.io.IOException;
public ArrayList<ArrayList> _data;
    private String _filename;
public CSVArray(String fileName)
public String toString()
public void write()
public static Object typePicker()
public void increaseCols()
public void increaseRows()
public int numRows()
public int numCols()
public Object getCell(int x, int y)
public ArrayList getRow(int row)
public ArrayList getCol(int col)
public CSVArray setCell(int x, int y, Object val)
public CSVArray setRow(CSVArray rowVal, int rowPos)
public CSVArray setCol(CSVArray rowVal, int colPos)
public CSVArray addCol(CSVArray col)
public CSVArray addCol(CSVArray col, int pos)
public CSVArray addRow(CSVArray row)
public CSVArray addRow(CSVArray row, int pos)
public CSVArray deleteCell(x,y)
public CSVArray deleteRow(int rowPos)
public CSVArray deleteCol(int colPos)
public ArrayList
bubbleSort(ArrayList<Comparable> data)
public ArrayList sort(int colPos)
public ArrayList searchCell(String target)
public int searchRow(String target)
public int searchCol(String target)
```

DRIVER

Woo

```
import java.util.ArrayList;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.io.File;
public static String help()
public static String specificHelp(String method)
public static boolean invalidFile(String fileName)
public static String rowString(ArrayList arr)
public static String colString(ArrayList arr)
public static void catchOOB(int numArgs, int argLen)
```

CSVMath

```
import java.util.ArrayList
public static double sum(int col, CSVArray csv)
public static ArrayList add(int col1, int col2, CSVArray csv)
public static ArrayList subtract(int col1, int col2, CSVArray csv)
public static ArrayList multiply(int col1, int col2, CSVArray csv)
public static ArrayList divide(int col1, int col2, CSVArray csv)
```

CSVGeneral

```
import java.util.ArrayList
public static String
prettyPrint(CSVArray csv)
private static String
formatCell(Object cell, int maxSize)
private static int
maxSize(ArrayList col)
private static int maxSize(int[] maxSizes, Integer numRows)
private static String
tableBarrier(int[] maxSizes, Integer numRows)
private static String colLabel(int[] maxSizes, Integer numRows)
```

CSVStat

```
import java.util.ArrayList
public static double min(int col, CSVArray csv)
public static double firstQ(int col, CSVArray csv)
public static double
median(ArrayList<Object> arr)
public static double median(int col, CSVArray csv)
public static double thirdQ(int col, CSVArray csv)
public static double max(int col, CSVArray csv)
public static double average(int col, CSVArray csv)
public static void statSummary(int col, CSVArray csv)
public static double standardDev(int col, CSVArray csv)
public static double correlation(int col1, int col2, CSVArray csv)
```