

CSE143 Section #18 Cheat Sheet

Two-dimensional arrays are covered in chapter 7. The first index represents the row and the second index represents the column, as in `data[3][5]` for the value in row 3 and column 5. In a rectangular array, the number of columns is the same for each row. It is typically constructed as follows (constructing an array of four rows and six columns):

```
int[][] data = new int[4][6];
```

In a jagged array, the number of columns varies across rows. You construct one by first constructing the array of rows and then each individual row, as in:

```
int[][] data = new int[3][];  
data[0] = new int[2];  
data[1] = new int[3];  
data[2] = new int[5];
```

This constructs an array of three rows where row 0 has 2 columns, row 1 has 3 columns, and row 2 has 5 columns.

For all problems involving a two-dimensional array, the contents should be indicated using the `Arrays.deepToString` format of nested bracketed lists. For example, given the following array:

```
int[][] data = {{8, 12, 14}, {7, 19, 4}, {8, 3, 42}};
```

Its contents should be displayed as follows:

```
[[8, 12, 14], [7, 19, 4], [8, 3, 42]]
```