

Lab Goal : This lab was designed to teach you more about nested loops and matrices.

Lab Description : Create a grid of random values. Pass in an array of values and randomly load the values into the grid. Use `math.random()` to load the values into the matrix. Search the grid to see how many of a certain value exist in the grid. Return the largest group found out of the specified search values.

Sample Output :

```
a 7 a x a x x x a c b x a 7 a a 7 a x 2
9 x b 7 c 7 9 a 9 2 c 9 b a 7 x 9 9 a c
c x 2 7 c 2 b b c x 9 a 7 7 7 x x b x x
7 x 7 9 b a c a 2 2 7 9 x b 7 a c c c c
a a 7 a a 9 9 b 2 2 a b 7 2 x a 7 2 x a
7 b x a 9 c a 2 9 2 9 a b c 2 9 a b 9 9
9 x c b 9 c c c x c 9 x 7 b a c 2 7 b b
2 9 x c 7 c x b c b c 7 2 7 2 2 b 9 x 9
x x 2 x a c 7 b b 7 2 2 2 x c 7 c 2 2 x
9 x 2 x 7 a b x b x 2 9 c x 2 7 b b b a
a 9 7 c c 9 b b b x a b b x c c 2 c 7 2
c 9 7 a 7 a x b a c a 9 2 2 2 x a c 7 a
a x c 7 x b a 7 x a c x 9 x a c a c c b
9 a c 7 b a 7 c b a 7 2 2 a c b b 7 7 b
9 a 2 2 2 c 9 9 c b 7 b 2 c b c 2 7 a a
9 c x b a a a b c x 7 9 b x a c 7 a a 2
c a a 7 7 a 7 x b b 2 c b 2 7 x 7 2 2 a
7 x 7 c 7 c x 9 7 a b c 7 7 b a 7 b 2 x
c 9 9 x b b a b a b a 9 2 b x 2 x x 9 b
a c c c 7 2 c x b x 7 9 a a b 2 2 a 9 a
```

Files Needed ::

`Grid.java`

`GridRunner.java`

```
--debugging code to help see if the algorithm is working--
--these println statements can be added to the max method--
```

```
a count is 70
b count is 60
c count is 61
7 count is 58
9 count is 43
x count is 58
2 count is 50
```

a occurs the most.

```
a 9 2 2 b a 9 a b 7
a 2 b x a 9 7 c 2 a
b 2 2 x c a 2 b 9 7
9 9 b 9 7 9 x x x c
b x b a 9 2 c x x 7
b 2 a a 9 c c x b b
b 2 7 x 2 9 c 7 9 x
7 b c 9 x 2 2 x 7 7
c a c x 7 x a 2 9 b
9 2 c x x 9 b 2 x b
```

x occurs the most.