## **MATRIX SEARCH**

**Lab Goal:** This lab was designed to review basic class creation, method creation, matrices, nested loops, and searching.

**Lab Description:** Write a class that will randomly load a matrix with integer values that range from 1 to an upper bound, inclusive of the upper bound. Write methods to count the odds, evens, and primes.

## Sample Data:

```
20, 20, 25
10, 10, 50
7, 7, 100
```

## Sample Output:

```
9 16 4 24 23 22
1 10 10 8 17 21
                   6 13 20 19 22 22 19 7
                                             8
                21 15 20 25
                                22
                                      23 15
                             6
                                              3
14 12 13
                      1 11 10 16 12
         9 20
                25
                                      4 17
                   4
   6 8 19 22 16 23 8 19
                            6 19 15 14
21 15 24 25
            16 15 14
                      1 18
                                   13 22 15
                             6
                                6
                                             24
                8 11 12
                          4 10 23 19
23
   1
      5
          9
            21
                                      19 13
                                             17
   4 18 2 23
               5 17
                      3 10
                                3
                                   4 15
11
                             6
                                            15
16 13 21 5 24 2 20 13 7 25 18 2
                                      1 14 21
16 25 23 20
            8
                3
                   15
                      13
                             3
                                5
                                    4
                                      16 19
                                             10
                      3 9 10 18
                24 10
         4 19
   9 21
                                      13 11
15 20 16 14 21 10 23
                      1 8 21 14
                      8 16 17
7 9 22
   9 5 22
11 3 3
               22 21
10 24
                                   15 12 12 13
21 25 1 14
2.0
             7
                                11
          3 16
21 11
                             22
                                10
10 19 14 25 8 19 22 5 12 21
                                9 20 22 11 25
      3 12 6 4 13 6 20 22 15 11 11 3 16
2 25
```

Odd count = 119 Even count = 106 Prime count = 82

```
    20
    46
    21
    33
    9
    14
    42
    15
    28

    25
    8
    44
    13
    21
    26
    14
    6
    10

                                6 10 15
17 44 48 7
                  3 21 17 14
21 49 35 46 23 47 17
                                29 42 45
5 24 45 38
                  29
                       24 14
                                50
41 42
             2 14 39 37
                                11 15 37
19 43
        1 14 34 12 22 47 24 12
6 38 41 21 32 7
16 37 39 15 42 47
                        7 38
                                20
                                     34
                                     24 25
                            1 22
 3 32 47 1 14 22 13 37 26 42
```

Odd count = 51 Even count = 49 Prime count = 32

```
65 10 73 42 69 23 24
28 86 79 82 54 46 52
11 63 88 20 69 28 93
35 84 89 22 4 1 53
83 2 49 61 46 95 72
62 69 32 77 49 54 73
39 58 15 10 65 68 58
```

Odd count = 24

## Files Needed ::

MatrixSearch.java MatrixSearchRunner.java Even count = 25 Prime count = 11