# DESIGN

UML

A screenshot of a computer

Description automatically generated

Main

# Output: "Enter the number of rows and columns in the array: "

# Initialize Scanner input

# int rows = input.nextInt()

# int columns = input.nextInt()

# double[rows, columns] array

# Output: “Enter the array”

# For loop: counter1=0; counter1<rows; counter1++

# For loop: counter2=0; counter2<rows; counter2++

# array[counter1][counter2] = input.nextDouble

# Location location = Location.locateLargest(array)

### Location.locateLargest(double[][] a) ###

# double maxValue = a[0][0]

# int row = 0

# int column = 0

# for loop: counter1=0; counter1 >= a.length; counter1++

# for loop: counter2=0; counter2 >= a[counter1].length; counter2++

# If a[counter1][counter2] > maxValue

# maxValue = a[counter1][counter2]

# row = counter1

# column = counter2

# return: new Location

# Output: “The largest element is " + location.maxValue

+ ", located at (" + location.row + ", " + location.column + ")

Diagram

A screenshot of a computer screen

Description automatically generated

# TEST PLAN

|  |  |  |
| --- | --- | --- |
| Test # | Input | Expected Output |
| 1 | rows and columns of the array: 3 4  Enter the array:  23.5 35 2 10  4.5 3 45 3.5  35 44 5.5 9.6 | The location of the largest element is at (1, 2) |
| 2 | rows and columns of the array: 5 5  Enter the array:  33.9 34.2 24.25 75.381 60  01.8 24.1 26.39 10.189 98  94.7 93.3 90.54 84.209 01  68.0 86.2 49.47 24.7 62  61.2 82.9 17.68 58.822 39 | The location of the largest element is at (1, 4) |
| 3 | rows and columns of the array: 8 5  Enter the array:  01.8 24.1 26.39 10.189 98  23.5 35 2 10 18  33.9 34.2 24.25 75.381 60  35 44 5.5 9.6 89  4.5 3 45 3.5 9  61.2 82.9 17.68 58.822 39  68.0 86.2 49.47 24.7 62  94.7 93.3 90.54 84.209 01 | The location of the largest element is at (0, 4) |

# SCREEN SHOTS

1

A screenshot of a computer program

Description automatically generated

2

A screenshot of a computer

Description automatically generated

3

A screenshot of a computer program

Description automatically generated