Stephen Belden

Meghan Haukaas

Chris Ruiz

**Project 4 Test Cases – Largest Submatrix of Ones**

1. A matrix of all 0’s

0 0 0

0 0 0

0 0 0

Expected Output: Largest Submatrix of Ones has area: 0

1. A matrix of all 1’s

1 1 1

1 1 1

1 1 1

Expected Output: Largest Submatrix of Ones has area: 9

1. A matrix with single 1 as the greatest 1’s rectangle

0 0 0

0 1 0

0 0 0

Expected Output: Largest Submatrix of Ones has area: 1

1. A matrix with a greatest 1’s square

0 1 1

0 1 1

0 0 0

Expected Output: Largest Submatrix of Ones has area: 4

1. A matrix with a greatest 1’s rectangle

0 1 1

0 1 1

0 1 1

Expected Output: Largest Submatrix of Ones has area: 6

1. A matrix with a single column as its greatest submatrix:

1 0 0

1 0 0

1 0 0

Expected Output: Largest Submatrix of Ones has area: 3

1. A matrix with a single row as its greatest submatrix:

1 1 1

0 0 0

0 0 0

Expected Output: Largest Submatrix of Ones has area: 3

1. A matrix with a single greatest 1’s rectangle

1 1 0

1 1 0

0 0 1

Expected Output: Largest Submatrix of Ones has area: 4

1. A matrix with two or more equal greatest 1’s rectangles

1 1 0 0

1 1 0 0

0 0 1 1

0 0 1 1

Expected Output: Largest Submatrix of Ones has area: 4

1. A matrix with two or more equal, overlapping greatest 1’s rectangles

1 1 0

1 1 1

1 1 1

Expected Output: Largest Submatrix of Ones has area: 6