Quiz 5

COMP9021 Principles of Programming

2013 session 1

Sample outputs

```
$ a.out 1 0
Here is the grid that has been generated:

        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0
        0 0 0 0 0 0 0 0 0 0

The widest largest rectangle made up of 1s in the grid
(so we maximise the area, and THEN we maximise the width)
has a size of 0 x 0
```

```
$ a.out 2 0
Here is the grid that has been generated:

    0 1 1 0 1 1 0 1 0 1
    0 0 0 0 0 0 1 1 0 0
    0 1 1 0 1 1 0 1 1 1
    0 1 0 0 0 0 1 0 0 0
    0 0 1 1 0 0 1 0 0 0
    0 0 0 0 1 0 1 1 1 0
    0 0 1 1 0 0 1 1 0 1
    1 1 0 0 1 1 0 0 0 1
    1 1 0 0 1 0 1 1 1 1
    0 1 0 1 1 0 0 1 1 1


The widest largest rectangle made up of 1s in the grid
(so we maximise the area, and THEN we maximise the width)
has a size of 3 x 2
$ a.out 2 1
Here is the grid that has been generated:

    1 1 1 0 0 0 0 0 1 1
    0 1 0 0 1 1 1 1 0 0
    1 1 1 1 0 1 1 0 0 1
    1 0 0 1 0 1 1 1 1 1
    1 0 1 0 1 1 0 1 0 1
    1 1 0 0 0 0 0 0 0 1
    0 0 1 0 1 1 1 0 0 1
    0 1 1 1 1 0 1 0 1 1
    1 0 1 1 1 1 1 0 1 0
    0 1 1 0 0 0 0 1 0 0


The widest largest rectangle made up of 1s in the grid
(so we maximise the area, and THEN we maximise the width)
has a size of 3 x 2
```

```
$ a.out 3 0
Here is the grid that has been generated:

    0 0 1 1 1 0 1 1 1 1
    1 1 1 0 0 1 1 1 0 0
    0 1 1 1 0 1 0 1 0 0
    1 1 1 1 1 1 1 1 1 1
    1 1 1 1 0 1 1 1 1 0
    1 1 1 1 1 1 1 0 1 1
    1 0 1 1 1 1 1 0 1 0
    0 1 0 0 0 1 1 1 1 1
    0 1 0 0 1 0 1 1 1 1
    1 1 1 1 1 0 0 0 1 1

The widest largest rectangle made up of 1s in the grid
(so we maximise the area, and THEN we maximise the width)
has a size of 4 x 3
$ a.out 5 0
Here is the grid that has been generated:

    0 1 0 1 1 1 0 1 1 1
    1 0 1 1 0 1 1 0 1 1
    1 1 1 1 1 1 1 1 1 1
    0 1 1 1 1 1 1 1 0 1
    1 0 1 1 1 0 1 1 1 1
    1 0 1 1 0 1 1 0 1 0
    1 1 1 0 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 0
    1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 0 1 1 1 0

The widest largest rectangle made up of 1s in the grid
(so we maximise the area, and THEN we maximise the width)
has a size of 9 x 2
```

```
$ a.out 5 2
Here is the grid that has been generated:

     1 1 1 1 1 1 1 1 1 1
     0 1 1 1 1 1 1 1 0 1
     1 1 1 1 1 1 1 1 1 1
     1 0 1 1 1 1 1 1 1 1
     1 1 1 0 1 0 1 0 1 1
     0 1 1 1 1 0 1 0 1 1
     1 0 1 1 0 1 1 1 1 1
     1 1 0 1 1 1 1 1 1 1
     1 1 1 0 1 1 1 1 0 1
     1 1 0 1 1 0 1 1 1 1

The widest largest rectangle made up of 1s in the grid
(so we maximise the area, and THEN we maximise the width)
has a size of 6 x 4
```