# C# Advanced Lab - Algorithms

This document defines **algorithmic problems** from the ["Advanced C#" Course @ Software University](http://softuni.bg/courses/advanced-csharp/). You are presented with some problems and certain steps you need to take in order to accomplish the tasks.

## Largest Rectangle

Write a program to **find the largest rectangular area** **in a rectangular matrix** of strings. The area should hold equal cells at its **borders**. The area size is calculated by the classical formula **width \* height**.

### Input

The input comes as from the console. Each row of the matrix is on a **separate line**; **each cell is surrounded by commas (',') on both sides**. The input ends with the keyword "**END**".

### Output

The output should be printed on the console. **Border cells of the largest rectangle** should be enclosed in square brackets (**[]**) and colored in green. Each cell should be **padded 5 spaces to right**. Ensure all your cell data is correctly encoded as HTML (use the **SecurityElement.Escape** method).

### Constraints

* The input will always contain data for a matrix with a rectangular form.
* The minimal size of the matrix will be 1 x 1. The maximum matrix size will be 20 x 20.
* Allowed working time: 0.2 seconds. Allowed memory: 16 MB.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| ,xx,a,a,a,a,a,a,  ,a,a,z,z,a,php,a,  ,a,a,x,x,a,a,a,  ,xx,a,sql,a,a,js,a,  ,xx,a,a,a,a,a,a,  ,xx,a,z,z,a,php,w,  END | xx [a] [a] [a] [a] [a] [a]  a [a] z z a php [a]  a [a] x x a a [a]  xx [a] sql a a js [a]  xx [a] [a] [a] [a] [a] [a]  xx a z z a php w |