# Exercise 1: 24 pts

You are provided with a startup html of a bad looking website with BOXES of distinct colors.

You are given an example of HTML output for a given text file (input) that has the following format on each line: **A, className, B, C, D**

Where A, B, C and D are all numbers.

**A is the MAXIMUM number of boxes that the current row can hold.**

**B+C+D is the ACTUAL number of boxes that the row contains.**

|  |  |
| --- | --- |
| An illustration of a line mapping is the following: |  |

Your resulting HTML file is displaying B+C+D <span> elements on each row ONLY when B+C+D is smaller than A. If A is smaller than B+C+D, your HTML is showing the text “MAX LIMIT reached”.

Note: incomplete, empty or rows with more elements than what is specified above should lead to an error message stating, “Cannot parse this row”.

You are provided with an example text file AND its CORRECT corresponding HTML output as follows:

|  |  |
| --- | --- |
| Text file | Html output |
| 10, greenBox, 2,3,4  3, blueBox, 2,3,4  20, redBox, 2,3,3  10, redBox, 2,3,3,dsdas  dddd,323,33543,222  5, blueBox, 1,1,1 | <!DOCTYPE html>  <html lang="en">  <head>  <meta charset="UTF-8">  <meta http-equiv="X-UA-Compatible" content="IE=edge">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  <title>Document</title>  **<style>**  **.box {**  **display: inline-block;**  **width: 20px;**  **height: 20px;**  **}**  **.blueBox {**  **background-color: blue;**  **}**  **.greenBox {**  **background-color: green;**  **}**  **.redBox {**  **background-color: red;**  **}**  **</style>**  </head>  <body>  **<div> <span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **<span class="box greenBox"> </span>**  **</div>**  **<div>MAX LIMIT reached</div>**  **<div> <span class="box redBox"> </span>**  **<span class="box redBox"> </span>**  **<span class="box redBox"> </span>**  **<span class="box redBox"> </span>**  **<span class="box redBox"> </span>**  **<span class="box redBox"> </span>**  **<span class="box redBox"> </span>**  **<span class="box redBox"> </span>**  **</div>**  **<div>Cannot parse this row</div>**  **<div>Cannot parse this row</div>**  **<div> <span class="box blueBox"> </span>**  **<span class="box blueBox"> </span>**  **<span class="box blueBox"> </span>**  **</div>**  </body>  </html> |

A picture containing timeline

Description automatically generated

Your goal is to write the php code that will build the corresponding HTML output for ANY given text file.

**Steps:**

* Open the text file. 1pt
* Read the file, line by line and for each line: 1pt
  + Print the start of a <div> tag – 2 pts
  + Remove empty spaces in front and in the end of it. 1pt
  + Split it into an array using comma as delimiter. 2pts
  + Check the size of the array and: 2pts
    - If its NOT exactly 5 – display the message “Cannot parse this row” 3pts
    - When this size IS exactly 5: 1pt
      * Compute the sum B+C+D 1pt
      * If this sum is bigger than A -> display the message “MAX LIMIT reached” 3pts
      * When the B+C+D is smaller than A: 1pt
        + Make a loop that will run B+C+D times and inside this loop: 2pts

Print a **<span class=”box className”></span>** tag. 2pts

* + Print the end of a the div tag (</div>). 1pt
* Save the resulting file as “YourName-Ex1.php” where you need to replace “YourName” with your actual real name. 1pt

# Exercise 2: 12 pts

Create one simple webpage that will compute the following sum:

* Create an html form that will be submitted to the same PHP page, using a POST method. 1pt
* Your form must contain:
  + One select list with two items:
    - Display and compute sum.
    - Display reversed sum and compute it.
  + One input box for the n value.
  + One input box for the Start value.
  + One button stating “DO”
* When the form is submitted with all your elements filled in (existing), your above form should NO longer be displayed and:
  + Check if the Start value is smaller than n-1:
    - When the above is true, you MUST display the expanded sum either IN ORDER or in reversed order (starting from n-1 down to Start) according to the user selected choice.

Display in order: 2pts

Display reversed: 3pts

Computation: 4pts

**Examples:**

Start = 1, n = 4, Display and compute sum:

(1–2)\*(1+3) + (2-2)\*(2+3) + (3-2)\*(3+3) = 2

Start = 1, n = 4, Display reversed sum and compute it:

(3-2)\*(3+3) + (2-2)\*(2+3) + (1–2)\*(1+3) = 2

* + - When the Start value is bigger or equal to n-1, you must display the message: “Wrong input”. 1pts
* Save the resulting file as “YourName-Ex2.php” where you need to replace “YourName” with your actual real name. 1pt

# Exercise 3: 12 pts

* Implement a “History” of your computations from exercise 2. You must append EACH string that you display into a text file OR a session array item and display the contents of the text file/session array each time you load the page. 7pts
* Add one more form and button that will reset the contents of your history. 4pts
* Save the resulting file as “YourName-Ex3.php” where you need to replace “YourName” with your actual real name. 1pt